Conference Proceeding
Of
AU Virtual International Conference 2021
Entrepreneurship and Sustainability in the Digital Era
Assumption University of Thailand
19 October 2021
Co-Hosted By
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ABOUT ASSUMPTION UNIVERSITY (AU)

The St. Gabriel Foundation, a worldwide organization founded in France in 1705, is responsible for the establishment and administration of Assumption University. The Foundation has been dedicated to education and philanthropic activities in Thailand for more than 100 years and it now operates 14 educational institutions providing all levels of education. Assumption School of Business was initially founded in 1969, and in 1972 it became Assumption Business Administration College (ABAC). In 1975 the Ministry of University Affairs accredited ABAC and later in 1990 it was accredited as a fully-fledged university, and renamed as Assumption University (AU). The University is administered by a Council which takes policy initiatives and provides guidance for long-term planning and the formulation of control procedures.

Today, AU is considered the leading private university in Thailand in the fields of Business, Management and Information Technology as demonstrated by the placement of many of its graduates in key management and technological positions in industry, government, banking and multinational conglomerates worldwide. The University’s curriculum is patterned after the American semester hour credit system and most textbooks are similar to those used in international universities. Graduates receive an education that is both globally marketable and flexible, leading to highly productive careers within the various sectors of society from which the students come and to which they aspire to be.

CAMPUSES
Assumption University maintains three campuses: the original campus located at Hua Mak, the new campus at Suvarnabhumi

Hua Mak Campus
The original campus is a compact, vertical campus comprising 17 buildings with the tallest having a total of 16 floors. A small lake surrounded by lush gardens and seating is a focal point of beauty and tranquility. Food, convenience and service shops to support student needs surround the campus. This will become the home of postgraduate faculties in the near future.

The Suvarnabhumi Campus
The Suvarnabhumi Campus, constructed as a “University in a Park”, comprises 200 acres of a beautifully landscaped assembly of mixed architecture surrounded by lush, tropical gardens and trees. Designed to host the university’s undergraduate degree programs, it offers everything: a meeting/exhibition center, hotel, non-coeducational dormitories, a magnificent chapel, a museum, three academic halls, and much more.

The centerpiece of the campus is the Cathedral of Learning, a 39-storey tower which houses student support services, the library, reception halls, seminar rooms and offices. Transportation between the two campuses is convenient and inexpensive. Shuttles run throughout the day between various points in Bangkok and the Suvarnabhumi Campus
ABOUT THE BHOPAL SCHOOL OF SOCIAL SCIENCES (BSSS)

The Bhopal School of Social Sciences was founded in the year 1972-at the initiative of Most Rev Dr. Eugene D’ Souza, the then Archbishop of Bhopal-in response to the need of the time for a broad-based, job-oriented curriculum with an initial focus on social service and entrepreneurship. The institution is supported and managed by the Archdiocese of Bhopal through the BSSS Foundation Society chaired by the Archbishop of Bhopal.

Since its inception, the College has adopted an integrated and comprehensive approach to learning in order to achieve academic excellence. This vision has been the cornerstone of our growth in the last 49 years as we gradually adopted new programs, initiated innovative learner strategies, and took bold steps to go beyond the prescribed curriculum with a view to transform knowledge into affirmative action.

Initially known for its Social Sciences and Management courses, the College grew and diversified with the introduction of courses in Commerce, Information & Technology, Science and Physical Education. Catering to the high demand for Commerce subjects, the College offers a wide range of options including an honours course as well as specializations in Foreign Trade, Travel and Tourism, Banking and Insurance, Taxation, Computer Applications, Advertising, Sales Promotion & Sales Management. Subsequently, post graduate courses in Social work, English Literature, Commerce, Economics, Computer Applications, Sociology, Political Science, Psychology and Business Administration followed. Presently, our Humanities portfolio includes 4 undergraduate honours programs in Social Work, Economics, English literature and Psychology. The College also runs two international MBAs through collaboration with Assumption University, Bangkok and Under Graduate Courses in collaboration with Concordia College, USA. We also have tie-up with IMA, US and ACCA, UK.

With the objective of widening the educational experience of our students as well as to encourage inter-disciplinary learning, the College offers 41 certificate courses and 6 diploma courses. The Business English Certificate course of Cambridge University offered at three levels: Preliminary, Vantage and Higher further enhance the value of the degree courses.

The strength of our ideology was put to a litmus test, first in 2006, and subsequently in 2012 and 2017 by NAAC. On all the three occasions, our claim to excellence was validated through an 'A' Grade certificate. The College has already been granted autonomy in May 2013 and extension of autonomy in 2019 for another term of five years.

Our endeavors have always been encouraged and guided by our Chairman, Most Rev. Dr. Leo Cornelio, the Archbishop of Bhopal Diocese. Spearheaded by his vision of global education, peaceful resolution of conflict, social equality and high standards of personal conduct, we hope to scale new heights in the world of academia and create a conducive environment for intellectual, social, moral and spiritual growth of the world we live in.
ABOUT RAJAGIRI CENTRE FOR BUSINESS STUDIES

Rajagiri College of Social Sciences (RCSS) was the first institution established under the banner of Rajagiri Vidyapeetham. Envisaged as a centre of excellence in the field of higher education, RCSS currently provides high quality education, research, training and consultancy in the area of Social Work, Management, Computer Science and Library Science. RCSS began as the Department of Social Work at Sacred Heart College, Thevara in 1955.

Initially the Department was offering one-year Diploma in Social Services (DSS), affiliated to Madras University, subsequently two year Masters Degree programme in Social Work (MSW) with specialization in Community Development, Medical & Psychiatric Social Work, Family and Child Welfare, Social Work Administration and Personnel Management and Industrial Relations was introduced. The Department of Social Work was relocated to Hill Campus at Kalamassery, in 1967 and in the year 1980 the Department was elevated to the status of an independent college affiliated to Kerala University. As per the recommendations of the University Grants Commission (UGC), in 1984 the specialization of Personnel Management and Industrial Relations was delinked from MSW course and was offered as a full fledged two year post graduate management programme, M.A (PM&IR).

This programme was later revamped and rechristened as Master of Human Resource Management (MHRM). To meet the growing demand for quality management education in Kerala the College offered Master of Business Administration (MBA), with affiliation to Mahatma Gandhi University, Kottayam in 1995. This was followed by Rajagiri International School for Education and Research (RISER) in 1998, three years postgraduate programme in Computer Applications (MCA) in 2001, Bachelor of Social Work (BSW) in 2002, and Bachelor of Library Science (BLiSc) in 2005. From the Hill Campus in Kalamassery the Departments of Human Resource Management and Business Administration of RCSS was shifted to the sprawling and picturesque Valley Campus in Kakkanad in 2001.
ABOUT HEILONGJIANG INTERNATIONAL UNIVERSITY

Heilongjiang International University (HIU) was first established in 1993 as Harbin Star Foreign Language College, the first institute in Heilongjiang to develop Sino-foreign co-operation in education. Since April 2011, it has been known as Heilongjiang International University, the leading private university in the province of Heilongjiang, which is a university passionate about languages and international studies.

HIU has 10 faculties and schools and 30 bachelor degree programmes, covering the filed of foreign languages, international business, accounting and finance, hospitality management, art and design and computing science etc. There are 10180 full-time students and over 600 teachers at HIU. With celebrating 27 years of teaching excellence, we have taught over 20,000 students inspired 5,000 students to study abroad. The latest student’s satisfaction rates were 90%, well above the national average, and our employable rate was a 93%. We are proud to be ranked 26th and a five-star university in the national private universities table.

HIU is a friendly and welcoming university with a diverse mix of nationalities from all over the world. We have a strong emphasis on delivering education with an international perspective. We have much to offer our international students with an excellent choice of courses available for students in a variety of languages and flexible durations. In the last two years, over 1000 students have gone abroad to study or work in internships with one of HIU’s 104 partners in 32 countries.

HIU is a recognized language testing centre for a number of foreign language examinations such as Cambridge English MSE, TestDaf, DELE, CELI, Russian language test etc. We are also a proud of member of international alliances and networks, such as Network of International Business Schools, Association of Asian Universities etc. HIU also has collaboration with University Quisqueya in Haiti to co-build the Confucius classrooms , which supports with Chinese language and culture teaching.
MESSAGE FROM ASSUMPTION UNIVERSITY

The theme of the International Conference on Entrepreneurship and Sustainability in the Digital Era (ICESDE) truly reflects the principle of the upcoming Thailand’s Ninth National Policy and Strategy for Research (2017 – 2021). From its current principle emphasizing the quality research works for balanced and sustainable development, the new national policy and strategy for research will soon focus on situating Thai educational system onto the community of intellectuality and learning, congruent with the country’s economic, socio-political, and cultural mechanism. Such should be managed with efficient manners and potentials, competitive in the international arena.

As the Kingdom’s pioneer of international learning module, Assumption University has always been aware of what academic and research works would bring to the institute and the community alike. Not only does a creation of research study form a principal mission of an institute, it also paves ways toward academic innovation. Creation of academic research means opportunity and inspiration for all concerned to act and react towards dynamism of their consumption, interaction at home and abroad, through which digital culture intertwines within ones’ livelihood. The gathering of academics’ members, graduate students, and scholars alike at this conference therefore bring about greater learning stages and true exchanging of knowledge principles.

Assumption University wishes to extend a warm welcome to all participants of this conference at our Hua Mak Campus. Our appreciation goes to the participating institutes, organizations, students and committees who make this event possible. May this conference lead to broader benefits for individuals, organizations, and society at large in a truly sustainable outcome.
MESSAGE FROM THE DEAN OF GRADUATE SCHOOL
ASSUMPTION UNIVERSITY

It is indeed a great privilege for the Graduate School of Business, Assumption University, to host the International Conference on Entrepreneurship and Sustainability in the Digital Era (ICESDE). The conference marks not only an important milestone of Assumption University, but also a significant event on which selective papers from both domestic institutes and international institutes would be presented and discussed. Such works reflect great efforts, endurance and integration of comprehensive perspectives.

We wish to extend our appreciation and our heartfelt thanks go to the scholars, professors, experts, and faculty members for their insightful selection of the research papers and for their suggestions. The Graduate School of Business owes it a great deal to the kindness, generosity, and guidance of the Executives of Assumption University, Deans and Directors of all schools concerned with the making of the conferences. A big thank is offered to all sub-committee members and the staff for their contribution and tireless assistance to have made this event possible.

As an interdisciplinary forum, the conference brings together scholars, practitioners, and graduate students from the region and beyond to discuss their research findings on how environmental-friendly and socially-inclusive growth and success can be sustained in the digital era, in Thailand in particular as it recently embarked on Industry 4.0. Keynote and feature speakers will provide a variety of perspectives on the conference themes. I strongly wish that such creation of new knowledge at this forum—be it from the papers being presented or from the exchange and discussion over the presentations—would produce the added values on our mutual quest for knowledge, thereby benefiting our respective communities and countries.

Asst. Prof. Dr. Kittiphathikitti
Dean, Graduate Studies
Dean, Graduate School of Business and Advanced Technology Management
Assumption University of Thailand
ABOUT ICESDE 2021

AU Virtual International Conference 2021 “Entrepreneurship and Sustainability in the Digital Era” Assumption University of Thailand
October 19, 2021

www.auconference.au.edu

The Graduate School of Business and Advanced Technology Management, Assumption University is hosting an International Conference on Entrepreneurship and Sustainability in the Digital Era (ICESDE) on 19 October 2021.

As an interdisciplinary forum, the conference will bring together scholars, practitioners, and graduate students from the region and beyond to discuss their research findings on how environmental-friendly and socially-inclusive growth and success can be sustained in the digital era, in Thailand in particular, as it recently embarked on Industry 4.0. Keynote and feature speakers will provide a variety of perspectives on the conference themes.

Amid the use of electronics and information technology in the digital community, people are living at an exponential pace, disrupting almost every industry in every country. The breadth and depth of the digital economy has transformed the entire business systems, ranging from production, management to governance.

Billions of people connected by mobile devices, with unprecedented processing power, storage capacity, and access to knowledge, are unlimited, multiplied by emerging technology breakthroughs in fields such as artificial intelligence, robotics, the Internet of Things, autonomous vehicles, 3-D printing, nanotechnology, materials science, energy storage, and quantum computing.

Objectives

Sustainable entrepreneurship or social entrepreneurship is a business that solves problems related to social and environmental sustainability with good causes to turn world problems into business opportunities through sustainable innovation.

As an interdisciplinary forum, the conference will bring together scholars, practitioners, and graduate students from the region and beyond to discuss their research findings on how environmental-friendly and socially-inclusive growth and success can be sustained in the digital era, in particular in Thailand, as it recently embarked on Industry 4.0. Keynote and feature speakers will provide a variety of perspectives on the conference themes.
Challenges and Opportunities

Most large corporations or organizations gain from the digital economy by having direct and fast access to their customers or clients to raise their global revenues, reduce the cost of business operations, and improve the quality of life for populations around the world.

The challenges are that the Small and Medium-sized Enterprises (SMEs), or newly established and fast-growing businesses (Start-up) must be digitalized and transformed to quickly meet a market place need, improve communication channels with their customers or clients, and offer innovative products, processes, or services. They also need to create their own sustainable digital transformation to serve any new customers' needs, significantly disrupting existing industry value chains with agility, novelty, mobile digital platforms, digital marketing research and development, quality and delivery speed of products/processes/services, and competitive price.

The opportunities for SMEs or start-ups are that their customers or clients have access to affordable products, processes, and services on the digital planet. The possible opportunities are to create a niche market, a small market segment, to satisfy specific market needs, an affordable price range, high-quality products/services, and demographics. For example, the Grab taxi mobile application, online flight booking, product/service testing before actual purchase via the online store website, etc.

Call for Paper

The ICESDE organizing committee invites presenters and participants to submit their papers and attend the conference, which will enable them to earn academic credentials, exchange views with personalities from a broad range of disciplines, share common interests in current issues, and help to build the breadth and depth of knowledge necessary for creating a sustainable environment.

Research Papers accepted for presentations will be published in the online ICESDE Proceedings and good quality papers will be considered to be published in the Assumption University’s Edited Proceed Book or AU-HIU International Multiple Disciplinary-Journal.

Paper Submission

Submit your paper on-line at : www.assumptionjournal.au.edu/index.php/ICESDE

Recommended Topics

- Business Management
- Social Sciences
- Health Care Management
- Hospitality and Tourism Management
- Organization Development
- Innovative, Creative and Technology Management
• Educational Administration and Leadership
• Curriculum and Instruction

IMPORTANT DATES
15 July 2021 – 30 September 2021 Call for papers
15 July 2021 - 15 October 2021 Payment to proceed to peer review after Editorial initial decision
10 October 2021 Deadline for submission for revised Qualified paper and PowerPoint presentation
15 October 2021 Registration to attend Conference Without paper submission
19 October 2021 Conference and Presentations

REGISTRATION FEE / PAPER
AU Virtual International Conference Publication Fee of 2,000 THB for Thai participation, 70 USD for International participants & 500 THB for current students of GS-BATM per article.

CONFERENCE AGENDA
AU Virtual International Conference 2021 “Entrepreneurship and Sustainability in the Digital Era” Assumption University of Thailand

October 19, 2021
12.45 to 13.00 Registration
13.00 to 13.15 Assumption Anthem and House Keeping announcement
13.15 to 13.30 Speech by the Dr. Kitti Phothikitti, Dean of Graduate School of Business, Assumption University, Bangkok, Thailand
13.30 to 14.30 Panel Discussion: Breakpoint and Beyond Panelist:
• Prof. Dr. hc. Sander SCHROEVERS, Heilongjiang International University, Harbin, China
• Rev. Dr. Francis Sebastian, Asst. Director – Rajagiri Valley Campus, Rajagiri College of Social Science and business school
• Rev. Dr. Fr. John P.J, Principal, Bhopal School of Social Sciences
• Dr. Kitikorn Dowpiset, Associate Dean, Graduate School of Business and Advanced Technology Management

14.45 to Onwards Virtual Conference Paper presentation as per room allocation
VIRTUAL PRESENTATION SCHEDULE
AU Virtual International Conference 2021
Room Name: Assumption Room  
Panel Chairperson: Asst. Prof. Dr. Sirion Chaipoopirutana  
Panel Member: Dr. Somchai Tantasanee  
Panel Member: Dr. Papitchaya Wisankosol  
Room Controller: Ms. Wanatchaporn Laoha

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A Study of the Relationship Between Teachers’ Leadership Capacity and Teachers’ Decision-Making Styles in Gangbei Construction Primary School, Guigang, Guangxi Province, China

Xinyi Zhang

17.10 to 17.30

Educational Administration and Leadership

Remark: Paper CODE 5757 will be presented by video presentation after other authors presented done.
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Panel Member: Dr. Aaron Loh  
Panel Member: Dr. Seongdok Kim  
Room Controller: Mr. Thanat Iamsang

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CONFERENCE PROCEEDINGS
AU Virtual International Conference 2021
The Relationship between Working Capital Management and Business Performance in Publicly Listed Thai Automotive Companies

Rakchanan Pradapsin

Abstract

Thailand’s automotive industry has a tendency to grow because it is a group of industries that the Thai government has continuously promoted and the main industry for the country’s export products. Therefore, companies in the automotive industry should have good working capital management. This is because it is an industry that purchases raw materials to produce products, stores finished goods for sale, and sells them to both domestic and international markets. This process involves buying on credit, storing goods, selling on credit, and investing the money. These processes will affect business performance if the company spends too much or too little time collecting receivables, stocking up inventories, and paying creditors. Therefore, the purpose of this study is to investigate the relationship between working capital management (WCM) and business performance of 17 companies in the automotive industry listed in The Stock Exchange of Thailand (SET) by using the financial statements from 2016-2020. This study uses a quantitative method using Multiple Regression Analysis tools on panel data. Results of this study found that working capital management has a relationship with business performance in the automotive industry listed in the SET.

Keywords: Working Capital Management, Business Performance, Automotive industry

1. Introduction

Business is an organization established to profit from producing products or providing services to meet customer satisfaction. Moreover, the business plays a vital role in helping the country’s economy progress and stabilize. People have a better living situation because of employment. Therefore, the enterprise must maintain the sustainability of their business by controlling a working capital management (Mulyono, Djumahir & Ratnawati, 2018).

Working capital management (WCM) refers to the activity of planning and controlling current assets and liabilities by exterminating the risk of being unable to meet short-term liabilities and avoiding excessive investment in asset flows. (Eljelly, 2004). In the past, companies paid no attention to working capital, but are concerned with raising and using debt and equity capital, selecting information and manufacturing technology to operate their businesses and endeavoring to develop national and global markets for selling the products.

Working capital is generally considered a positive component of business management, while the modern view is that working capital is unpleasing in that it constitutes financial performance because current assets do not provide capital returns, hinder company performance, hides obsolete inventory that may not be sold and accounts receivable that may not be recovered. (Working Capital Management, pg 26). Therefore, management should focus on WCM in accordance with the main business goals, whether it be financial planning, investment proportion and length of storage of inventories or the period of lending to the debtor that will not cause problems or interruption to the operations of the business. Business operations require planning for a reasonable amount of cash that is sufficient for the operation of the business and sufficient to pay off trade payables. But if there is too much cash, the business will lose the opportunity to generate returns. In addition, the time to reserve the merchandise is also important because if the business reserves too little, it will cause the business to suffer from insufficient products to meet the needs of customers but if the company stocks the inventories too
much that makes the product become obsolete. Furthermore, the timing of lending to the debtor is another important factor. If the business does not have a debtor or credit sale that impacts the revenues of businesses and the ability to compete with competitors in the same industry (Sangbua, 2016).

The Thai economy is a mixed economy rather than a capitalist, giving the private sector a more productive role than the government. The private sector has the right to property and inputs. They have the freedom of economic activity and competition to improve the quality of their products. Thailand exports their products abroad in 2020 with agricultural products 9.14%, agricultural industry products 7.80%, industrial products 80.23% and mineral and fuel 2.83%. In 2020, the major export markets of Thailand are the United States with an export value of 1,065,922.29 million baht, China 924,857.88 million baht and Japan 709,388.89 million baht respectively (The Customs Department, 2020). Most exported products are computers, electrical machinery and equipment, vehicles, rubber and plastic. Hence, industrial businesses are important to the economy of Thailand. In the manufacturing industry, the company purchases raw materials by credit which generates trade account payables and uses raw materials to produce products and sell with credit that creates trade accounts receivable. After the receivables are paid, the company will get cash. This cycle known as working capital management (WCM), is an integral part of running a business (Utia, Sutisna & Dewi, 2018).

2. Literature Review

This chapter describes the work of various researchers who are studying the relationship between working capital management and business advantages. The most common way to investigate working capital management’s efficiency is through the Cash Conversion Cycle (CCC) (Tobias, Victor & Martin, 2020).

Deloof (2003) studied the relationship between WCM and corporate profitability from a sample of 1,009 out of 1,637 large Belgian non-financial companies from 1992 to 1996, excluding energy, water, banking, and financial companies, insurance, business services and leasing companies, and companies with missing data. This study adopts the methods of correlation analysis and regression analysis. From the results of the two methods, there is a significant negative correlation between the Belgian company’s total operating income and accounts receivable, accounts payable and inventory turnover days. Therefore, the company must reduce the number of days for accounts receivable and inventory to a reasonable number of days. In addition, there is an inverse relationship between accounts payable and profits.

Ponsian, Chrispina, Tago & Mkiibi (2014) collected data from 30 manufacturing companies listed on the Dar es Salaam Stock Exchange (DSE) from 2002 to 2012 to study the impact of working capital management (WCM) on profitability. This study uses regression analysis, especially Ordinary Least Squares (OLS), to discover the relationship and extent of the impact of WCM variables on profitability. Taking the gross operating profitability (GOP) as the dependent variable and the average collection period (ACP), inventory turnover days (ITD), average payment period (APP) and cash conversion cycle (CCC) as the independent variables, the regression results show that the ACP coefficient and the company's profitability are negative. Since APP's company profit coefficient is positive, the average payment cycle is positively correlated with the company's profitability. With the extension of the payment period, the company's profitability has increased. In addition, regression leads to a positive correlation between CCC and operating profitability, while ITD is also negatively correlated with profitability. Ghanbari (2014) investigated a relationship between working capital and profitability for 68 firms of Tehran Stock Exchange whose financial performances were chosen during 2008 - 2013. This research used linear regression to determine the relation between independent and dependent variables. In the part of the dependent variable, they used operational profit (NOP) for the model research while receivable accounts period (ACP), inventories flow (ITID), operation cycle (CCC) and debit payment period (APP) are used as independent variables. The aftermath obtained from this research is that NOP is incoherent with ACP, ITID and CCC. In other words, if ACP, ITID and CCC are increased the NOP will drop. On the other hand, the relationship between NOP and payable accounts...
period is positive. If the payable accounts period is increased, the operation profit will be increased.

Iqbal, Ahmad & Riaz (2014) inspected the relationship between Working Capital Management and Profitability: Evidence from Pakistan, by selecting 50 financial reports of the companies listed in the Karachi Stock Exchange (KSE) that were public between 1 January 2009 and 31 December 2009. They used gross operating profit for the dependent variable and Number of days accounts receivable, Number of days accounts payable, Number of days inventory, Cash Conversion Cycle (CCC), debt ratio and fixed financial assets ratio for independent variables. Iqbal, Ahmad & Riaz found from a sample of Pakistani listed corporations on KSE, there is a significant negative correlation between net operating profitability and days of accounts receivable, days of inventory, and CCC. Therefore, they concluded that WCM has a significant impact on the profitability of the sample enterprises listed in KSE and plays a key role in creating shareholder value.

Toan, Nhan, Anh & Man (2017) studied the Relationship between Working Capital Management and Profitability: Evidence in Vietnam by choosing 34 of 53 construction companies listed in the Vietnam Stock Exchange. They selected from 306 financial reports that were announced to the public between 1 January 2007 to 31 December 2015. The research shows the empirical results that accounts receivable period (ARP), accounts inventory period (AIP), accounts payable period (APP) and cash conversion cycle (CCC) have significant negatives with profitability. In contrast, financial debt ratios (FD) have significant positives with the profitability of a company, which means that when leverage of the business increment, the company benefit will upturn too. In addition, the coefficient of sales growth (GROWTH) is significantly positive. In other words, when the revenue of an enterprise increases, it will increase the corporation’s profit as well.

Mabandla, Makoni (2019) used 12 of the 18 food and beverage companies listed in the Johannesburg Stock Exchange (JSE) in South Africa from 2007 to 2016 as a sample to study the relationship between working capital management and company financial performance. This research used return on assets (ROA) as the dependent variable while the independent variables are inventory conversion period (ICP), average collection period (ACP), average payment period (APP) and control variables as the size of the company, the current ratio (CAR) and the GDP. The output implies that there is a positive correlation between return on assets (ROA) and inventory conversion period (ICP), which means that the sales turnover between assets and merchandise of the companies is very high. Furthermore, average payment period (APP) has significant positive return on assets (ROA), indicating the more time the companies take to pay bills that makes the business profitables are increased. There is a negative relationship between average collection period (ACP) and return on assets (ROA), implying that the corporations have a short time to collect cash from the customers.

Puriboriboon (2020) examines the relationship of the listed firms in the Stock Exchange of Thailand that are in the SET 50 Index by using a panel data of annual reports during 2014 to 2018 between working capital (Cash Conversion Cycle and Quick ratio) and profitability as measured by Return on Assets (ROA) and Return on Equity (ROE), and the relationship between working capital and market value as measured by Price Earnings ratio (P/E) and Price per Book Value ratio (P/BV) by applying multiple regression analysis method. The quick ratio has a positive significant relationship with ROA, meaning a business that has a high working capital is also highly liquid. In addition, the CCC has a significant relationship with ROA, which means the business has a short CCC which will make the company more profitable. Furthermore, CCC has a negative significant relationship to P/BV and CCC has an inverse relationship to P/E, which means that when a business has a shorter CCC, it makes the P/BV increase. As sales growth increases, it makes P/E increase too.

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3. Research Methodology

3.1 Research Methodology

The study applied a multiple regression model to analyze panel data where net profit is the dependent variable and cash conversion cycle, quick ratio, accounts receivable turnover in days, accounts payable turnover in days and inventories turnover in days are the independent variables. Moreover, size and sales are used to control the variables.

**Multiple Regression Model:**

\[
NP = \beta_0 + \beta_1 (CCC_{it}) + \beta_2 (QR_{it}) + \beta_3 (ARD_{it}) + \beta_4 (APD_{it}) + \beta_5 (ITD_{it}) + \beta_6 (SIZE_{it}) + \beta_7 (SALES_{it}) + \epsilon_{ij}
\]

Where:
- \(NP\) = Net profit
- \(CCC\) = Cash conversion cycle
- \(QR\) = Quick ratio
- \(ARD\) = Accounts receivable turnover in days
- \(APD\) = Accounts payable turnover in days
- \(ITD\) = Inventories turnover in days
- \(SIZE\) = Size (Total assets)
- \(SALES\) = Sales
- \(\beta\) = Constant term
- \(\epsilon\) = Error
- \(i\) = Target companies
- \(j\) = Times

**Hypothesis:**

**Hypothesis 1: Cash Conversion Cycle**

Ho: There is no relationship between CCC and Net profit.
Ha: There is a relationship between CCC and Net profit.

**Hypothesis 2: Quick ratio**

Ho: There is no relationship between QR and Net profit.
Ha: There is a relationship between QR and Net profit.

**Hypothesis 3: Accounts receivable turnover in days**

Ho: There is no relationship between ARD and Net profit.
Ha: There is a relationship between ARD and Net profit.

**Hypothesis 4: Accounts payable turnover in days**

Ho: There is no relationship between APD and Net profit.
Ha: There is a relationship between APD and Net profit.
Hypothesis 5: Inventories turnover in days
Ho: There is no relationship between ITD and Net profit.
Ha: There is a relationship between ITD and Net profit.

Hypothesis 6: Size
Ho: There is no relationship between SIZE and Net profit.
Ha: There is a relationship between SIZE and Net profit.

Hypothesis 7: Sale
Ho: There is no relationship between Sale and Net profit.
Ha: There is a relationship between Sale and Net profit.

4. Results and Data Analyst

The intention of this research is to consider the connection between working capital management and business performance by using the financial report from 2016 to 2020 on 17 companies, with a total of 85 samples, applying Multiple Regression analysis to analyze the panel data. This study started with the Unit Root test by PP-Fisher Chi-Square and PP Choi Z-test. After which, the test for Multicollinearity by the Correlation Matrix Method was used. The dependent and independent variables in the model are used to estimate by using the Panel OLS method.

4.1 Descriptive statistics of variables

Statistics are used as a tool to characterize variables such as Mean, Standard Deviation, Minimum and Maximum expressed as description statistics.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Maximum</th>
<th>Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>NP</td>
<td>290 MTHB</td>
<td>451 MTHB</td>
<td>2,000 MTHB</td>
<td>-353 MTHB</td>
</tr>
<tr>
<td>CCC</td>
<td>81.51 Days</td>
<td>59.32 Days</td>
<td>209.19 Days</td>
<td>-5.11 Days</td>
</tr>
<tr>
<td>QR</td>
<td>2.09 Times</td>
<td>2.12 Times</td>
<td>9.94 Times</td>
<td>0.12 Times</td>
</tr>
<tr>
<td>ARD</td>
<td>63.01 Days</td>
<td>21.86 Days</td>
<td>115.91 Days</td>
<td>6.91 Days</td>
</tr>
<tr>
<td>APD</td>
<td>85.14 Days</td>
<td>28.45 Days</td>
<td>143.05 Days</td>
<td>20.62 Days</td>
</tr>
<tr>
<td>ITD</td>
<td>83.64 Days</td>
<td>57.89 Days</td>
<td>209.64 Days</td>
<td>23.85 Days</td>
</tr>
<tr>
<td>SIZE</td>
<td>5,490 MTHB</td>
<td>4,920 MTHB</td>
<td>22,700 MTHB</td>
<td>895 MTHB</td>
</tr>
<tr>
<td>SALE</td>
<td>4,430 MTHB</td>
<td>4,260 MTHB</td>
<td>18,400 MTHB</td>
<td>490 MTHB</td>
</tr>
</tbody>
</table>

From Table 4.1 shows the mean of the dependent variable, independent variables and control variables from a sample of 85 groups of companies in the automotive industry which can be described as follows: the average of net profit is 290 million baht, the average of cash conversion cycle is 81.51 days, the average of quick ratio is 2.09 times, the average of accounts receivable turnover in days is 63.01 days while the average of accounts payable turnover in days and inventory turnover in days is 65.14 and 83.64 days respectively. In terms of size, the average is 5,490 million baht and the average of sale is 4,430 million baht.

The automotive industry has a longer cash conversion cycle than other business groups. This is because it is a business group with a long inventory turnover period. The company purchases raw materials, which are then transformed to semi-finished goods and finished goods. Furthermore, some companies have original equipment manufacturers (OEM) that make the company procure more raw materials to produce products according to customer orders. For accounts receivable, there is a long period due to the automotive industry having many and diverse customers in both the automotive and other industries such as furniture with domestic and international customers.

4.2. Panel Unit Root Test

All variables are tested for stationary data to ensure that the qualification of time series does not change over time, which is an essential condition of times series data by testing Panel Unit Root test with PP-Fisher Chi-Square and PP Choi Z-Test.
Table 4.2 shows the stationary test of Net profit (NP) by PP-Fisher Chi-Square and PP Choi Z-test at level stage. The statistics that were received from the test of the net profit does not cause the Unit root. That means the net profit is stationary at level stage while cash conversion cycle (CCC), Quick ratio (QR), Accounts Receivable turnover in days (ARD), Accounts Payable turnover in days (APD), Inventory turnover in days (ITD), Size and Sale are non-stationary at level stage. Therefore, all variables have to be tested for unit root again by the 1st difference method so that all variables do not have unit root.

Table 4.3 The output of testing stationary of data at 1st difference with Panel Unit Root

<table>
<thead>
<tr>
<th>Variables</th>
<th>PP – Fisher Chi-Square</th>
<th>PP Choi Z-test</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>NP</td>
<td>60.8975**</td>
<td>-2.93855**</td>
<td>Stationary</td>
</tr>
<tr>
<td>CCC</td>
<td>65.6830**</td>
<td>-3.95551**</td>
<td>Stationary</td>
</tr>
<tr>
<td>QR</td>
<td>93.6414**</td>
<td>-5.43745**</td>
<td>Stationary</td>
</tr>
<tr>
<td>ARD</td>
<td>65.6912**</td>
<td>-3.22184**</td>
<td>Stationary</td>
</tr>
<tr>
<td>APD</td>
<td>89.1762**</td>
<td>-4.89847**</td>
<td>Stationary</td>
</tr>
<tr>
<td>ITD</td>
<td>76.1016**</td>
<td>-4.08901**</td>
<td>Stationary</td>
</tr>
<tr>
<td>SIZE</td>
<td>61.7833**</td>
<td>-3.7816**</td>
<td>Stationary</td>
</tr>
<tr>
<td>SALE</td>
<td>60.1234**</td>
<td>-2.78991**</td>
<td>Stationary</td>
</tr>
</tbody>
</table>

Sources: Calculation

Remark: *, ** Significant at the 0.05 and 0.01 level respectively.

From Table 4.2, as the researcher found that there are seven variables that are non-stationary at level stage I(0), all variables are tested at the order of integration 1 or I(1) using the first difference. All variables (CCC, QR, ARD, APD, ITD, SIZE and SALE) are found to have no unit root which shows the data are stationary at the first difference stage as shown in Table 4.3. When all the data are stationary, they are put into the regression equation to find the relationship between the variables.

4.3 Pearson Product Moment Correlation

Pearson Product Moment Correlation (r) is used to examine the direction of the relationship between the variables to find out if they are correlated or not, which is known as Multicollinearity. Multicollinearity is tested by considering the coefficient of correlation must be in a range of -1 to 1, where values which are closer to -1 or 1 means that the independent variables have relationships that make parameter problems.

There is an error and no statistical significance, resulting in the conclusions obtained from the model to being inaccurate.

Table 4.4 The results of the analysis of the correlation coefficient of the independent variables.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>D(CCC)</td>
<td>1.000</td>
<td>0.154</td>
<td>0.356</td>
<td>-0.255</td>
<td>0.756</td>
<td>-0.098</td>
<td>-0.382</td>
</tr>
<tr>
<td>D(QR)</td>
<td>0.154</td>
<td>1.000</td>
<td>0.231</td>
<td>-0.051</td>
<td>0.056</td>
<td>-0.166</td>
<td>-0.422</td>
</tr>
<tr>
<td>D(ARD)</td>
<td>0.356</td>
<td>0.231</td>
<td>1.000</td>
<td>0.294</td>
<td>0.163</td>
<td>-0.149</td>
<td>-0.563</td>
</tr>
<tr>
<td>D(APD)</td>
<td>-0.255</td>
<td>-0.051</td>
<td>0.294</td>
<td>1.000</td>
<td>0.165</td>
<td>0.133</td>
<td>-0.176</td>
</tr>
<tr>
<td>D(ITD)</td>
<td>0.756</td>
<td>0.056</td>
<td>0.183</td>
<td>0.165</td>
<td>1.000</td>
<td>0.022</td>
<td>-0.316</td>
</tr>
<tr>
<td>D(SIZE)</td>
<td>-0.098</td>
<td>-0.166</td>
<td>-0.149</td>
<td>0.133</td>
<td>0.022</td>
<td>1.000</td>
<td>0.586</td>
</tr>
<tr>
<td>D(SALE)</td>
<td>-0.382</td>
<td>-0.422</td>
<td>-0.563</td>
<td>-0.175</td>
<td>-0.316</td>
<td>0.586</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Sources: Calculation

From the analysis using Pearson's correlation, it is found that there is no relationship between the variables. There are no pairs of variables that get close to -1 or 1 which means all independent variables are independent. Therefore it can be concluded that there is no multicollinearity.

4.4 Multiple Regression Analysis

Testing for the relationship between the independent and dependent variables with multiple regression from the model created with Panel OLS method as shown in Table 4.5
Table 4.5 The results of Multiple Regression Analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>212.0642</td>
<td>11.9649</td>
<td>17.7239</td>
<td>0.0000**</td>
</tr>
<tr>
<td>(CCC)</td>
<td>306.8843</td>
<td>149.3708</td>
<td>2.0545</td>
<td>0.0459*</td>
</tr>
<tr>
<td>(QR)</td>
<td>0.6933</td>
<td>17.5829</td>
<td>0.0394</td>
<td>0.9887</td>
</tr>
<tr>
<td>(ARD)</td>
<td>-302.4474</td>
<td>148.8835</td>
<td>-2.0314</td>
<td>0.0483*</td>
</tr>
<tr>
<td>(APD)</td>
<td>305.4824</td>
<td>148.2434</td>
<td>2.0607</td>
<td>0.0453*</td>
</tr>
<tr>
<td>(ITD)</td>
<td>-307.5240</td>
<td>149.1615</td>
<td>-2.0617</td>
<td>0.0452*</td>
</tr>
<tr>
<td>(SIZE)</td>
<td>0.2184</td>
<td>0.0530</td>
<td>3.9713</td>
<td>0.0003**</td>
</tr>
<tr>
<td>(SALE)</td>
<td>0.0945</td>
<td>0.0215</td>
<td>4.3913</td>
<td>0.0001**</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.9265</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted R-</td>
<td>0.8880</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F-statistic</td>
<td>24.1075</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prob(F-statistic)</td>
<td>0.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Durbin-Watson</td>
<td>2.0985</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>stat</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Observation: 68

Sources: Calculation

Remark: * ** Significant at the 0.05 and 0.01 level respectively.

From Table 4.5, the equation can be written as

\[ NP = 212.0642 + 306.8843CCC + 0.6933QR - 302.4474ARD + 305.4824APD - 307.5240ITD + 0.2184SIZE + 0.0945SALE \]

The R2 shows that Cash conversion cycle (CCC), Quick ratio (QR), Accounts receivable turnover in days (ARD), Accounts payable turnover in days (APD), Inventories turnover in days (ITD), Size and Sales can be described by the net profit (NP) variance which is 92.65% and the F-test is a statistic for testing the reliability of the whole equation. The result of F-statistics is 24.1075 and Prob. is 0.0000. A calculated Prob. less than 0.01 indicates that at least one independent variable influences Net profit (NP). The Durbin-Watson value is 2.0985 and compared to the Durbin-Watson from the table at the significance level 0.1 with a sample size of 85 and independent variable 7 \((k = 7, n = 85)\), \(dL = 1.337\) and \(dU = 1.685\).

The result from calculation is between \(dU\) and 4 - \(dU\) or 1.6585 < 2.0985 < 2.315 which indicates that the model does not have a problem with Autocorrelation. Then the relationship between dependent and independent variables can be described as follows:

1. Cash Conversion Cycle’s (CCC) coefficient value is 306.8843. If the cash conversion cycle increases 1 unit, it impacts net profit to increase by 306.8843 units. Cash conversion cycle has statistical significance at 95% because the t-Statistic is 2.0545 and Prob. is 0.0459. So it can be concluded that the cash conversion cycle correlates with net profit in the same direction.

2. Quick ratio’s (QR) coefficient value is 0.6933. Thus, if the quick ratio rises to 1 unit, it affects net profit to increase by 0.6933 units. But the quick ratio does not have statistical significance at 95% because the t-Statistic is 0.0394 and Prob. is 0.9887. In conclusion, quick ratio does not correlate with net profit.

3. Accounts receivable turnover in days’ (ARD) coefficient value is -302.4474. Therefore, if accounts receivable turnover in days increases 1 unit, it affects net profit to decrease by 302.4474 units. Moreover, Accounts receivable turnover in days has statistical significance at 95% because the t-Statistic is -2.0617 and Prob. is 0.0453. So it can be concluded that accounts receivable turnover in days correlate with net profit in the inverse direction.

4. Accounts payable turnover in days’ (APD) coefficient value is 305.4824. Thus, if accounts payable turnover in days increases 1 unit, it affects net profit to increase by 305.4824 units. Accounts payable turnover in days has statistical significance at 95% because the t-Statistic is 2.0607 and Prob. is 0.0453. So it can be concluded that accounts payable turnover in days correlate with net profit in the same direction.

5. Inventories turnover in days’ (ITD) coefficient value is -307.5240. Therefore, if inventory turnover in days increases by 1 unit, it affects net profit to reduce to 307.5240 units. Inventories turnover in days has statistical significance at 95% because the t-Statistic is -2.0617 and Prob. is 0.0452. So it can be concluded that inventory turnover in days correlates with net profit in the inverse direction.

6. Size is found to have a coefficient value of 0.2184. Therefore, if size increases by 1 unit, it affects net profit to escalate by 0.2184 units. Size has statistical significance at 91% because the t-Statistic is 3.9713 and Prob. is 0.0003. So it can be concluded that size correlates with net profit in the same direction.

7. Sales is found to have a coefficient value of 0.0945. Therefore, if sales increases by 1 unit, it affects net profit to increase by 0.0945 units. Sales have statistical significance at 91% because the t-Statistic is 4.3913 and
Prob. is 0.0001. So it can be concluded that sales correlate with net profit in the same direction.

Table 4.6 Summary of directional hypothesis, relationship of independent variable to dependent variable

<table>
<thead>
<tr>
<th>Variable</th>
<th>Directional Hypothesis</th>
<th>Test Statistic Results</th>
<th>Research Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash conversion cycle (CCC)</td>
<td>+</td>
<td>Significant*</td>
<td>+</td>
</tr>
<tr>
<td>Quick ratio (QR)</td>
<td>+</td>
<td>Non - Significant</td>
<td>+</td>
</tr>
<tr>
<td>Accounts receivable turnover in days (ARD)</td>
<td>+</td>
<td>Significant*</td>
<td>-</td>
</tr>
<tr>
<td>Accounts payable turnover in days (APD)</td>
<td>+</td>
<td>Significant*</td>
<td>+</td>
</tr>
<tr>
<td>Inventories turnover in days (ITD)</td>
<td>+</td>
<td>Significant</td>
<td>-</td>
</tr>
<tr>
<td>Size (Total assets) (SIZE)</td>
<td>+</td>
<td>Significant**</td>
<td>+</td>
</tr>
<tr>
<td>Sales (SALE)</td>
<td>+</td>
<td>Significant**</td>
<td>+</td>
</tr>
</tbody>
</table>

5. Conclusion, Discussion and Recommendation

5.1 Conclusion

The study investigates the relationship between working capital management and corporate performance of 17 companies in the automotive industry listed in the Stock Exchange of Thailand using the financial statement information disclosed in the Securities and Exchange Commission’s website from the period 2016 - 2020 with a total of 85 observations. The data was analyzed to find the relationship of working capital management and net profit in any direction. From the output, it was found that the elements of working capital management, such as cash conversion cycle, accounts receivable turnover in days, accounts payable turnover in days, inventory turnover in days have correlation with net profit including the control variables: size and sales have relationship with net profit also. Therefore, the management should focus on working capital management because if working capital management has more liquidity, it will lose the opportunity for investment or inversely, if they lack liquidity it will impact on the operation of the business.

5.2 Discussion

1. The variables are significantly correlated with the dependent variable.

Cash conversion cycle (CCC) has a positive significant correlation with the net profit of companies in the same direction. It can be explained that when the cash conversion cycle increases the net profit of business also increases. Which is consistent with the research of Ponsian, Chrispina, Tago & Mkiibi (2014) who believed that the positive connection between corporate cash conversion cycle and profitability can be explained by the fact that increasing the investment in current assets can help in increasing the advantage.

Accounts Receivable turnover in days (ARD) has a negative significant relationship with net profit. If accounts receivable turnover either increases or decreases, it will have an opposite effect to the business profitability. Therefore, the management should reduce the number of days for accounts receivable to inflate the net profit of an enterprise in accordance with the research of Deloof (2003) and Toan, Nhan, Anh & Man (2017).

Accounts Payable turnover in days (APD) has a positive significant relationship with net profit. If accounts payable turnover in days increases or declines, the net profit will increase or decrease in the same direction. Thereby, managers should take more time to pay their bills for more profit that is consistent with the research of Mabandla & Makoni (2019).

Inventory turnover in days (ITD) has a negative significance with net profit. If inventory turnover in days increases or decreases, the net profit will increase or decrease in the opposite direction. Ponsian, Chrispina, Tago & Mkiibi (2014) stated that if the time required to convert raw materials into finished products and sell the products is reduced, profitability will increase. Although manufacturing companies have a lot of inventory, companies need to sell products quickly to make a profit.

Size (total assets) has a positive significant correlation with net profit. If size increases or decreases, the net profit will increase or decrease in the same direction. Bayyurt, (2007: 582) said that in areas where competition is required, large companies are more competitive than small companies. Because they have a larger market share, the large companies have the opportunity to make more profit. In addition, large companies can take advantage of opportunities to work in areas that require high capital rates because they have greater resources, a situation that gives them
opportunities to work in areas with less competition and higher profits.

Sales has a positive significant relationship with net profit. If sales increase or decrease, the net profit will increase or decrease in the same direction. For instance, a company's expenses exceed its revenue, then it experiences a loss rather than earning a profit (Infobloom: Nicole Madison, 2021).

2. The variable is not significantly correlated with the dependent variable.

Quick ratio (QR) has no significant relationship with net profit. This means that if the quick ratio increases or decreases, it does not affect the company performance. Because the quick ratio measures the ability of a company to pay all of the outstanding liabilities by using the current asset excluding inventory to convert to cash. Thus, quick ratio is a measure of a company’s short term liquidity and cannot explain that if the business has high or low quick ratio will make their profitability high or low too.

5.3 Recommendations

The research findings can give recommendations for 2 groups. Firstly, the small companies should follow the large companies practice by controlling the number of days of payments, collection and storage inventory in a proper time and maintain the liquidity of the business appropriately because these things affect the company performance. Secondly, for the next study, the researcher should study working capital management for the automotive industry in comparison with the world's top automotive export countries. Moreover, the researcher should also study the relationship of working capital management to other variables such as local and global GDP, interest rate, exchange rate, productivity index, fix and variable cost. For independent and dependent variables having different unit counts, it may affect the use of multiple regression, causing discrepancies such as net profit. Therefore, in the next study, the financial ratio data should be used as variables.

References


Factors Influencing Generation Y Investors When Choosing a Broker Firm

Kamonchanok Pipatvanit

Abstract

This research examined the factors influencing generation Y investors when choosing a broker firm of generation Y in Bangkok. The researcher used multiple linear regression and the Pearson correlation coefficient for statistical tests to test the relationships and differences between dependent and independent variables. Therefore, the research used questionnaires to collect data from generation Y investors. The sample for the study consisted of 290 generation Y investors. There are two variables considered, the dependent variable is generation Y investors’ decisions, and the independent variables are credibility, reliability, understanding clients, scale of the firm, and service offers. The results of multiple linear regression analysis showed that these four factors, credibility, reliability, understanding clients, and service offers, have a statistically significant influence towards generation Y investors’ decisions. They indicate that credibility, reliability, and understanding of clients are significant, whereas the scale of the firm is not significant. Lastly, the results of the Pearson correlation coefficient showed that there is a statistically significant correlation between these four factors, credibility, reliability, understanding clients, scale of the firm, and selecting a brokerage. Then, there is a relationship between and selecting a brokerage firm. However, there is no relationship between the scale of the firm and selecting a brokerage firm.

Keywords: Working Capital Management, Business Performance, Automotive industry

1. Introduction

In the past few years, it has become more and more evident for Millennials not to trusted on a single job (Rodgers, 2017) dual income is in trend as, the cost of living which included food, housing, education and medical costs, and fuel expense is rising higher inevitably. Therefore, it might be a good idea for them to start looking for another job or they might think about starting their own business. Moreover, the Millennials have the concept that they would like to earn more money, they also have a plan to generate passive income or let money work for them. Besides, they consider taking up a temporary job instead of their full-time job. This passive income concept is very well-known and challenge to the Millennials. (Mint,2020)

Nowadays, the Millennials are very interested in passive income such as earning received from a rental property, limited partnership, not involved in active participation (Bhavana,2021). A few analyses determined about interest and dividend would be passive income. In another way, it is a term of progressive income in which the earner takes little effort to generate income. Furthermore, they plan and monitor their financial plan for the future.

The Millennials called as generation Y, was born between 1980 and 2000. Generation Y is flexible, style-conscious, (Hyler, J. N. 2013). Moreover, generation Y concentrate on the relationship between themselves, their work and their life. They are quite independent, confident and this young generation are surrounded by technology, internet, social media and computer. (Islam, Cheong, Yusuf, Desa, 2011).

Nowadays, generation Y and Millennials carry their own ambitions, needs and dreams (Bhavana,2021). They are interested in investments such as stock, fund, fixed income in the market in order to make more money from investment. Generation Y tries to gain knowledge, study and learn how to enter and make profit in investment markets the market. Therefore, they probably look for the broker on behalf of them and be serviced by the broker. As a result, the broker firms should concern more about generation Y. Generation Y are the largest group of consumers and likely to going forward while other generations are slowing down.
around the world. (Poudpongpaiboon Mintarkhin, Arakvichanun, 2014). In Thailand, the Thai population of generation Y has the presently account is about 28% and there are the most of other generations. Moreover, they still remain as the biggest. (Poudpongpaiboon, Mintarkhin, Arakvichanun, 2014).

2. Literature Review

Overall, this chapter aims to summarize theories and research this study that concerned with two main types of variables. The first type is independent variables that are the factors that would be the characteristics of brokers such as credibility, reliability, understanding clients, scale of the firm, and service offer. The second type is dependent variable that focuses on generation Y investors’ decisions. For final part of this chapter, the research will propose a conceptual framework with research hypotheses.

Independent Variables

Credibility

Credibility is the term of the quality that is trusted and believed and also the quality that somebody makes people believe or trust them. Furthermore, it includes trustworthiness, believability, and honesty. In order to have a great reputation for the broker firm, good financial status is required and they need to have enough funds to support any risks and can solve any problems related with their business (Wannaklang, 2006). In addition, credibility is a subject which can be measured by perceived quality and people's limits based on the collaboration of various factors (Andersson, Kreegimäe, Niiranen, 2019). Nowadays, the organization’s perceived credibility might differ from the same organization if it was compared with the organization’s perceived credibility in future. Furthermore, the past actions can be used the past actions to predict future behaviors. (Poon, Koehler, Buehler, 2014). In term of the broker firm, they have effective systems, internal audit and good operational standards with qualified. The staff must not have bad performance about corruption or take advantage of clients. The staff should be honest in dealing with the assigned transactions. (Wannaklang, 2006).

Reliability

The reliability is about the term of consistency between dependability and performance. (Wannaklang, 2006). For the information measures of reliability performance to improve in achieving high-reliability and the performance denotes that the transaction has demonstrated the information which is accurate and enabled preventing the errors that could lead to disasters. (Ghaith and Ma, 2021). It means that the broker firm perform very good performance, behave the right performance, then the firm honor its promises (Wannaklang, 2006). Furthermore, for the preprocessing of reproducible information, in order to solve the problem of repeated data, some studies have considered the evolution of data over time and considered its freshness value. (Zayani, Ghorbel and Amous, 2018). Moreover, the broker should have related educational background such as Business Administration in economics, finance, accounting and marketing so they have good analysis, communication skills, good ability to describe market and investment situation and always update information of transaction to the buyer on time. (Wannaklang, 2006). The broker must be available in critical time for prompt service, providing accurate transactions and trading efficiently, make sure the securities trading account is always correct (Wannaklang, 2006).

Understanding Clients

Due to the high level of understanding and contact with the client, this form of service is considered the most intangible (Walsh, Gordon, 2010). The broker firm understands customers and they know what customers need and want, then they can provide services to make customers satisfied by using several strategies (Wannaklang, 2006). As a result of understanding clients, the broker can help the investor by following their goals. The broker must know investor needs, and wants based on the information provided, then they can provide services to make customers satisfied by using several strategies. In addition, the broker should service online- news from Bloomberg, Reuters, or Technical analysis (Wannaklang, 2006).

Scale of the firm

Scale of the firm is the size of the company refers to the size of the organization. Otherwise, you can explain the dimensions of the management or organization, such as total capital investment, high service categories, (Wannaklang, 2006). In addition, the broker firm typically receive compensation by means of commission or fees that
are charged once the transaction has successfully completed (Hayes, 2021). For the large size firm means Top Ten in highest investment among broker firms and provides margin service to investors by allowing them to borrow money from a broker. (Wannaklang, 2006).

Service offer

Service offer is the term for a full-service broker. It is a licensed financial broker trading company that provides its clients with a wide range of services, including research and advice. (Kagan, 2020). Moreover, the purpose of service is that the broker can provide services beyond the customer’s expectation. (Wannaklang, 2006). For instance, the broker needs to analyze market situations, provide report documents, and update accurate investment data and information. Then, the broker should help investors to make better investment decisions (Wannaklang, 2006). Furthermore, the broker will service you by alerting and concerning any critical situation such as political situation, exchange rate, interest rate, etc.

Dependent Variable

Generation Y investor’s decision

Generation Y investor’s decision is the term of an investor’s judgment to select the brokerage firms. This research concludes both generation Y who intend to choose a broker and who already use the service of brokers or already invest in the stock market.

Conceptual Framework

Based on the conceptual framework of the study for generation Y investors as figure 1 below, there are five hypotheses examined as shown below.

![Conceptual Framework](image)

### Hypothesis 1: Credibility

- **H0**: There is no relationship between credibility and generation Y investor’s decision.
- **Ha**: There is a relationship between credibility and generation Y investor’s decision.

### Hypothesis 2: Reliability

- **H0**: There is no relationship between reliability and generation Y investor’s decision.
- **Ha**: There is a relationship between reliability and generation Y investor’s decision.

### Hypothesis 3: Understanding clients

- **H0**: There is no relationship between understanding clients and generation Y investor’s decision.
- **Ha**: There is a relationship between understanding clients and generation Y investor’s decision.

### Hypothesis 4: Scale of the firm

- **H0**: There is no relationship between the scale of the firm and generation Y investor’s decision.
- **Ha**: There is a relationship between the scale of the firm and generation Y investor’s decision.

### Hypothesis 5: Service Offers

<table>
<thead>
<tr>
<th>No.</th>
<th>Variables</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Credibility</td>
<td>Andersson, Kreegimae, Niiranen (2019), Poon, Koehler, Buehler (2014),</td>
</tr>
<tr>
<td>2</td>
<td>Reliability</td>
<td>Ghaith and Ma (2021), Zayani, Ghorbel and Amous (2018), Wannaklang (2006),</td>
</tr>
<tr>
<td>3</td>
<td>Understand clients</td>
<td>Walsh, Gordon (2010),</td>
</tr>
<tr>
<td>4</td>
<td>Scale of the firm</td>
<td>Hayes (2021), Wannaklang (2006),</td>
</tr>
<tr>
<td>5</td>
<td>Service offer</td>
<td>Kagan (2020),</td>
</tr>
</tbody>
</table>
H0 | There is no relationship between service offer and generation Y investor’s decision.  
Ha | There is a relationship between service offer and generation Y investor’s decision.

Summary

This literature review proposes to identify definitions and explanations of factors influencing independent variables such as credibility, reliability, understanding clients, scale of the firm and service offer. Overall, the literature review indicated factors which are likely to influence generation Y investor’s judgment to select the broker’s firms.

3. Research Methodology

Research Design

In order to get the primary data for analyzing the hypotheses, questionnaire survey is used as research design because it is quick, inexpensive, flexible, efficient and accurate. It is very quick and flexible because questionnaire surveys can be taken anywhere that willing to collect the data and the question in the questionnaire is flexible to answer. Furthermore, it is inexpensive when compared with other methods of survey such as telephone interviews. It is also efficient and accurate because nowadays people in generation Y are interested in trading stock, they try to learn and trade stock and this research sample of generation Y around Bangkok as the target population. That’s why this research uses the questionnaire survey as research design.

Population, Sampling Technique, and Sample size

For sampling the target population – generation Y around Bangkok, this research uses a non-probability method as a sampling technique. However, there are several types of non-probability so convenience sampling is used because the researcher selects the easiest population members from which to obtain information. In addition, this research also samples the sample size of the respondents, about 290 respondents.

Cochran's formula (1977)

Cochran's sample size formula. We normally use an alpha level at .05(error of 5%). Where n₀ is the sample size, p is the estimated proportion of population, 1-p is the estimate of variance, Z is the value for the selected alpha level (1.96 for 0.25 in each tail) and a 95 percent confidence level and e is the acceptable error.

Sample size: we use Cochran's formula (1977) as below,

\[ n_0 = \frac{Z^2p(1-p)}{e^2} \]

\[ = 267 \quad \text{Sample size} \]

Reliability Test

For calculating Cronbach Alpha scores with 30 sets of pilot questionnaires is calculated with the correlation between all pairs of elements, and generally accepted rules greater than 0.7 indicate an acceptable level of reliability, and 0.8 or higher indicates a very good level. However, for this study all the test results of independent variable were more than 0.7 (Cronbach, 1951) as result below.

Table 3 : Reliability Test

<table>
<thead>
<tr>
<th>Variables</th>
<th>Cronbach’s Alpha</th>
<th>Number of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credibility</td>
<td>0.8756</td>
<td>7</td>
</tr>
<tr>
<td>Reliability</td>
<td>0.7982</td>
<td>4</td>
</tr>
<tr>
<td>Understanding clients</td>
<td>0.7075</td>
<td>4</td>
</tr>
<tr>
<td>Scale of the firm</td>
<td>0.7703</td>
<td>2</td>
</tr>
<tr>
<td>Service offer</td>
<td>0.7929</td>
<td>4</td>
</tr>
</tbody>
</table>

Multiple Regression Model:

\[ IVD = \beta_0 + \beta_1 \times (CDB) + \beta_2 \times (RLB) + \beta_3 \times (UDC) + \beta_4 \times (SCF) + \beta_5 \times (SVO) + \epsilon_i \]
Where $\beta_i$ are the estimated parameters, $\beta_0$ represents a parameter times x-variable, x-variable can be a predictor and $\epsilon_i$ is an error term.

- IVD = Generation Y investor’s decision
- CDB = Credibility
- RLB = Reliability
- UDC = Understanding clients
- SCF = Scale of the firm
- SVO = Service offer

4. Data analysis and Results

For this research on factors influencing investors when choosing broker firms, with generation Y investors of the stock market in the Bangkok area through an online platform. The data were collected from 290 questionnaires. The detail of the demographic of the respondents was shown in part one sample profile. The data received from questionnaires were analyzed by using multiple regression analysis. The statistical application program was used by the SPSS Program.

Demographic Profile Summary

The first part of a generation Y investor consists of five demographic variables such as gender, age level, education level, occupation, and income per month. They examined the data of 290 respondents of generation Y who lived in Bangkok as table 4 below.

Table 4: Demographic profile

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Characteristics (N=290)</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Female</td>
<td>179</td>
<td>61.72</td>
</tr>
<tr>
<td>Age</td>
<td>20 - 30 years old</td>
<td>173</td>
<td>59.66</td>
</tr>
<tr>
<td>Education</td>
<td>Bachelor’s degree</td>
<td>240</td>
<td>82.76</td>
</tr>
<tr>
<td>Occupation</td>
<td>Private sector employee</td>
<td>127</td>
<td>43.79</td>
</tr>
<tr>
<td>Monthly Income</td>
<td>15,001 - 30,000 Baht</td>
<td>142</td>
<td>48.97</td>
</tr>
</tbody>
</table>

For overall above, the respondents are 38.28 % male and 61.72% female. For age, the majority is 20 - 30 years old which is 59.66 %, followed by 31- 40 years old which is 40.34%. For education background, the majority is bachelor’s degree with 82.76%, followed by Master’s degree or higher is 15.86%. For occupation, the majority is private sector employees (43.79 %) followed by business owners (21.38%), government officers (19.31%). The majority monthly income ranges are 15,001 - 30,000 Baht (48.97%), followed by 30,001 - 45,000 Baht (23.1 %) respectively.

Multiple linear regression analysis and results

Table 5: Result of MLR for H1-H5 with generation Y investor’s decision as dependent variable

<table>
<thead>
<tr>
<th>Variables</th>
<th>Standard Coefficient ($\beta$)</th>
<th>t Stat</th>
<th>P-value (tailed)</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credibility</td>
<td>0.1898</td>
<td>2.5370</td>
<td>0.0117*</td>
<td>Reject Ho</td>
</tr>
<tr>
<td>Reliability</td>
<td>0.2134</td>
<td>3.6499</td>
<td>0.0005**</td>
<td>Reject Ho</td>
</tr>
<tr>
<td>Understanding clients</td>
<td>0.2767</td>
<td>3.8599</td>
<td>0.0002**</td>
<td>Reject Ho</td>
</tr>
<tr>
<td>Scale of the firm</td>
<td>-0.0411</td>
<td>-0.8223</td>
<td>0.4116</td>
<td>Accept Ho</td>
</tr>
<tr>
<td>Service offers</td>
<td>0.3017</td>
<td>4.8174</td>
<td>0.0000**</td>
<td>Reject Ho</td>
</tr>
<tr>
<td>R Square</td>
<td></td>
<td></td>
<td>0.4818</td>
<td></td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td></td>
<td></td>
<td>0.4727</td>
<td></td>
</tr>
</tbody>
</table>

*represents the correlation which is significant at the 0.05 level (1-tailed).

**represents the correlation which is significant at the 0.01 level (2-tailed).

For this hypothesis, it is used multiple regression method is used. The data tested about the relationship between five independent variables: credibility, reliability, understanding clients, scale of the firm, service offers and generation Y investor’s decision. It shows that they exhibit statistically significant relationships towards generation Y investor’s decisions at 95% confidence level. Furthermore, the p-value for four factors out of five is less than 0.05. They are credibility, reliability, understanding of clients and service offers are less than 0.05 and scale of the firm which p-value
is more than 0.05 that is 4.817. Therefore, it means that the four factors are significantly related to a generation Y investor’s decision. They are indicated that credibility, reliability, understanding of clients and service offers are significant whereas scale of the firm is not significant.

Descriptive Analysis

Descriptive analysis refers to transforming raw data in a way that is easy to understand and explain. The first form of analysis is describing responses. The descriptive statistics consists of calculating, frequency distributions, and percentage distributions in order to describe each variable that is associated with respondents’ data. The demographic characteristics were summarized in the form of simple descriptive statistics. The demographic profile is summarized and exhibited in the table below.

Pearson’s correlation coefficient

The Pearson correlation coefficient is used to test statistics that measure the relationship between two variables and it is considered the best method to measure the association between the variables of interest. It provides details and information about the correlation as well as the direction of the relationship.

Table 6: Pearson’s Correlation Matrix

<table>
<thead>
<tr>
<th>Variable</th>
<th>Correlation</th>
<th>N</th>
<th>IVD</th>
<th>CDB</th>
<th>RLB</th>
<th>UDC</th>
<th>SCF</th>
<th>SVO</th>
</tr>
</thead>
<tbody>
<tr>
<td>IVD</td>
<td>Pearson Correlation</td>
<td>1</td>
<td>.306*</td>
<td>.512*</td>
<td>.514*</td>
<td>-.049</td>
<td>.528*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig (2-tailed)</td>
<td></td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>.403</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>CDB</td>
<td>Pearson Correlation</td>
<td>.306*</td>
<td>1</td>
<td>.260*</td>
<td>.306*</td>
<td>-.027</td>
<td>.260*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig (2-tailed)</td>
<td></td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>.052</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>RLB</td>
<td>Pearson Correlation</td>
<td>.512*</td>
<td>.260*</td>
<td>1</td>
<td>.556*</td>
<td>.055</td>
<td>.538*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig (2-tailed)</td>
<td></td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>.348</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>UDC</td>
<td>Pearson Correlation</td>
<td>.514*</td>
<td>.306*</td>
<td>.536*</td>
<td>1</td>
<td>.026</td>
<td>.497*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig (2-tailed)</td>
<td></td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>.059</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>SCF</td>
<td>Pearson Correlation</td>
<td>-.049</td>
<td>-.027</td>
<td>.055</td>
<td>.026</td>
<td>1</td>
<td>.014</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig (2-tailed)</td>
<td></td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>.059</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>SVO</td>
<td>Pearson Correlation</td>
<td>.528*</td>
<td>.261*</td>
<td>.536*</td>
<td>.407*</td>
<td>.014</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig (2-tailed)</td>
<td></td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>.059</td>
<td>0.00</td>
<td></td>
</tr>
</tbody>
</table>

Note: * represents the correlation which is significant at the 0.01 level (2-tailed).

Based on Pearson’s Correlation Matrix above, there are four factors, credibility, reliability, understanding clients, service offers that have a relationship with selecting a brokerage firm and there is no relationship for scale of the firm with selecting a brokerage firm. From the result shows that there is a statistically significant correlation between these factors, credibility, reliability, understanding clients, service offers and selecting a brokerage firm with a 2-tailed significance of 0.000, which is less than 0.01. Therefore, the null hypothesis is rejected which means that there is a relationship between credibility, reliability, understanding clients, service offers and selecting a brokerage firm at 0.01 significant levels. However, there is no significant correlation between the scale of the firm and selecting a brokerage firm with a 2-tailed significance of 0.403, which is greater than 0.01 because the null hypothesis is accepted which means that there is no relationship between scale of the firm and selecting a brokerage firm.

5. Discussion and Conclusion

This research had explored the influence of credibility, reliability, understanding clients, scale of the firm and service offer on the generation Y investor’s decision in Bangkok. This study explains more about the academic work of demographic differences of investors, and relationships of brokerage firm’s characteristics and investors’ decision (2006) to research more about the insight of generation Y’s investors. This research demonstrates the result of the hypothesis testing for the first part. The second part obtains discussion and conclusion. The final part is composed of limitations and recommendations.

For the previous study, the results from hypothesis testing found that there is just only one factor which is significant. It is credibility. Based on the results from this present hypothesis testing, we use multiple regression and Pearson correlation method for five hypothesis testing. For the result from multiple regression method, the data is tested about the relationship between five independent variables which are credibility, reliability, understand clients, scale of the firm, service offers and generation Y investor’s decision. It shows that these four factors are significantly related to a generation Y investor’s decision. They are indicated that credibility, reliability, understanding of clients and service offer are significant whereas scale of the firm is not significant.
The result from Pearson correlation coefficient analysis shows that there is a statistically significant correlation between credibility, reliability, understanding clients, and service offer and selecting a brokerage firm with a 2-tailed significance of 0.000, which is less than 0.01. Therefore, the null hypothesis is rejected which means that there is a relationship between these four factors.

**Limitations of this research**

For the limitation, the researcher studies and focuses only on five independent variables, credibility, reliability, understanding clients, scale of the firm and service offers which influence on generation Y investor’s decision separately.

**Practical Implication**

Nowadays, the marketer and brokerage firm try to better service to customers. They try to understand and find more the strategy to attract generation Y customers. Furthermore, the findings of this study would help them to have effectively strategy to service customers in order to provide service and solve the problems systematically. The results show that these four factors, credibility, reliability, understanding clients, service offer are statistically significant. These four factors are significant. The findings of this research suggest that the marketers of brokerage firm should concern and consider about these four factors of the characteristics of brokerage firm because these four factors are very important from the perspective of investors than the other factors.

**Recommendation for practices**

Firstly, this research will be useful for further study because they can be used to apply and test for across different generations such as generation x, people who were born between 1965-1980 after the baby boomers were born 1946-1964. and generation z who is the newest generation, born between 1997 and 2012 (kasasa,2021)

Secondly, this research will be useful for further study due to collecting data from questionnaires, the questionnaires in this research was collected from investors of generation Y around Bangkok. Thus, the research findings were limited the area. According to this limitation, it is recommended the further research should extend the area of the study for a broadly range such as Southern area, Northern area.

**References**


Sasinan Ek Vejwit (2020). A study of factors and values affecting the decision to use brokerage services of young investors by using psychological hierarchical theory_STUDY OF YOUNG INVESTORS’DECISION MAKING IN STOCK BROKER SELECTION USING MEANS-END CHAIN APPROACH.


Adoption of Online Classes During COVID-19:  
An Institution’s Investigation on Perception & Behavioral Intention

Lester Naces Udang

Abstract

In the advent of COVID-19, an institution revisits the revised UTAUT in its interest in identifying factors encouraging positive perception and behavioral intention towards adoption of online classes among its learners and lecturers. In doing so, a non-experimental, non-probabilistic, quantitative study gathered online surveys from voluntary 580 samples. Data was later evaluated through the Exploratory Structural Equation Model (ESEM). Results suggested that Performance Expectancy & Facilitating Conditions influenced Attitude, and Effort Expectancy & Social Influence influenced Behavioral Intention – in both groups. Performance Expectancy over Behavioral Intention and Social Influence over Attitude were especially significant among learners; while, Effort Expectancy on Attitude was particularly significant among lecturers. Also, surprisingly, a disconnect among Facilitating Conditions & Behavioral Intention; Attitude & Behavioral Intention were shown in this study. Furthermore, their current adoption was implored. Both groups felt that the current policy was necessary, beneficial but, to an extent, not practical. Both groups believed challenges were related to paucity and capacity in running online classes. Learners specifically addressed future issues in online learning related to its effectiveness, and lecturers emphasized its equity in online teaching if classes were to resume. Practical implications on technology acceptance would contribute significantly towards better adoption of online classes during this outbreak.

Keywords: Unified Theory of Acceptance and Use in Technology, UTAUT, revised UTAUT, Technology Acceptance Model, User Acceptance

JEL Classification Code: I23, I28, O32, O33, O38

1. Introduction

The adoption of online classes caused by the sudden disruption of COVID-19, has become front and center for many recent studies on technology acceptance in education. Whether or not certain factors encourage learners to positively perceive, intend, or adopt online learning; and, educators to positively perceive, intend, or adopt online teaching – had become especially intriguing.

Various technology acceptance models, previously theorized or currently developed, have sought to establish relevant factors leading to user acceptance. And, however they may vary in structure, these models have followed the same basic premise: that external factors cause individual reactions, that individual reactions cause intentions, and that intentions cause actual usage of technology (Venkatesh, Morris, Davis, & Davis, 2003).

Pre-pandemic publications in higher education (Tseng, Lin, Wang, & Liu, 2019; Mosunmola, Mayowa, Okuboyejo, & Adeniji, 2018; Mei, Brown, & Teo, 2018) have consistently established significant results by empirically validating factors that lead university learners and lecturers to eventually adopt online classes. Likewise, recent publications, in the context of the pandemic, have been accounted for in producing positive relationships among theorized factors toward attitude (Lazim, Ismail, & Tazilah, 2021), intention (Tiwari, 2020), and actual use of technology (Samat, Awang, Hussin, & Nawi, 2020). Moreover, there were also publications that have not entirely reached the same theoretical implications. There were conclusions suggesting that some theorized factors had
nothing to do with the individual’s attitude (Sangeeta & Tandon, 2020; Sukendro, Habibi, Khaeruddin, Indrayana, Syahruddin, Makadada, Hakim, 2020), no connection with their intention (Asvial, Mayangsari, & Yudistriansyah, 2021; Raza, Qazi, Khan, & Salam, 2021; Chayomchai, 2020), and no credibility towards their actual use of technology (Chayomchai, Phonsiri, Junjit, Boongapim, & Suwannapusit, 2020; Sangeeta & Tandon, 2020) during this pandemic.

Majority of these studies adopted The Unified Theory of Acceptance and Use of Technology model (UTAUT) (Venkatesh et al., 2003) for being able to integrate factors from many previous acceptance theories and conveniently organizing them to similar constructs. This model was finalized having four exogenous variables (Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions), significantly influencing two endogenous variables (Behavioral Intention, Actual Use), and being affected by four moderators (Gender, Age, Experience, Voluntariness of Use). And from this, iterations such as the extended UTAUT (Venkatesh, Thong & Xu, 2012), and revised UTAUT (Dwivedi, Rana, Jeyaraj, Clement, and Williams, 2019) would become varying models depending on specific contexts.

The researcher was able to develop his own theoretical model, basing it from the revised UTAUT for its suitability in mandatory settings and for being able to empirically establish: 1. that Attitude should be incorporated (Fishbein & Ajzen, 1975) – as it was equally found important along with Behavioral Intention, 2. that moderators should be dropped (Tandon & Kiran, 2019; Tseng et al., 2019) – as they are rendered not too effective to be causing moderation; and 3. that alternative paths should be considered – as they can emerge equally significant with hypothesized paths (Dwivedi et al., 2019). Furthermore, the researcher has also decided to exclude Actual Use, for its questionable relationship with Behavioral Intention (Sangeeta & Tandon, 2020) during the context of this pandemic.

This study was able to investigate the significant influence of the revised UTAUT factors over Behavioral Intention towards adoption of online classes among learners and lecturers during COVID-19 outbreak. Moreover, their perceptions of their current adoption of online classes were also reported. Both sample groups were voluntary respondents from Rajamangala University of Technology, Tawan-ok, currently affected more than a few times by the pandemic with the government’s current initiative to implement adoption of online classes (Mala, Covid-19 Fear Pushes Classes Online, 2020) (Mala, Covid Hinders Education Again, 2021).

This paper explores the topic on technology acceptance, reviews related literature, establishes the research methodology, presents results, and discusses analyses for investigating factors that encourage positive Attitude and Behavioral Intention towards adoption of online classes. Likewise, it hopes to help the university’s stakeholders, policymakers, and administrators towards a better and smoother mitigation of online learning and online teaching during this educational disruption caused by the COVID-19 outbreak.

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2. Literature Review

2.1 Theoretical Models

Studies on technology acceptance have always been interested in use behavior; establishing factors that lead to users’ actual usage of information technologies or actual adoption of information systems. Since the 1980s, where the investments in IT & IS boomed (Westland & Clark, 2000), companies understood that a technology’s productivity
would only be as good as the employee’s acceptance of that particular technology. Thus, there have been many theories and theoretical models developed in the past that tested pertinent relationships with use behavior.

The first of them, the ‘Theory of Reasoned Action’ (Fishbein & Ajzen, 1975) had proposed that a user’s behavior is determined by one’s behavioral intention and in turn by one’s attitude and subject norm. A second theory, the ‘Technology Acceptance Model’ (Davis, 1989) had suggested that a user’s acceptance or adoption is determined by one’s perception of the technology’s usefulness and ease of use. Another would be an improvement of the first model, the ‘Theory of Planned Behavior’ (Taylor & Todd, 1995b), which had added perceptions of control as a second factor, besides behavioral intention, in understanding an individual’s use behavior. Many more of these theoretical individual models: ‘Motivational Model’ (Davis, Bagozzi, & Warshaw, 1992), ‘Combined TAM & TPB’ (Davis, Bagozzi, & Warshaw, 1989), ‘Model of PC Utilization’ (Thompson, Higgins, & Howell, 1991), ‘Innovation Diffusion Theory’ (Moore & Benbasat, 1991), ‘Social Cognitive Theory’ (Compeau & Higgins, 1995), would seek to explain acceptance and usage of technology for several decades and still.

Recent studies have been published, particularly on students’ sudden adoption of online learning and teachers’ sudden adoption of online teaching. A local journal by Imsaard (2020) has reported his university students’ perceptions toward the abrupt transition to online learning; and another one by Todd (2020) has identified his schoolteachers’ perceptions of the shift from the classroom to online teaching during COVID-19. International journals like the one by Tiwari (2020) have used theoretical models in measuring the impact of the students’ attitude towards adoption of online classes; and another by Sangeeta & Tandon (2020), in identifying factors influencing adoption of online teaching by schoolteachers during COVID-19. More of these studies, especially today, would employ theoretical models in understanding factors leading to the sudden acceptance and use of technology especially during the pandemic.

One theoretical model in particular is the ‘Unified Theory of Acceptance and Use of Technology’ (UTAUT) (Venkatesh et al., 2003), popular for being able to conveniently combine previously theorized factors into similar constructs: Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions, and establish them significantly over Behavioral Intention and Actual Use, along with moderators: Gender, Age, Experience, Voluntariness. This model would be extended as UTAUT2 (Venkatesh et al., 2012) and later modified as revised UTAUT (Dwivedi et al., 2019) in response to specific settings.

2.2 Hypotheses Development

The hypotheses established in this study were based on a strong foundation derived from very recent studies on education and technology acceptance in the context of COVID-19 outbreak. In achieving the research objectives, this study proposed to use the revised UTAUT theoretical model (Dwivedi et al., 2019). The researcher’s decision to exclude the final dependent variable – Use Behavior, was supported as well by results and recommendations in recently concluded researches. Hypothesis 1 to 9 are specific to learners while hypothesis 10 to 18 are to lecturers.

2.2.1 Performance Expectancy on Attitude & Behavioral Intention

Performance Expectancy, the degree to which an individual believes that using the system will help him or her attain gains in job performance (Venkatesh et al., 2003) covers constructs like perceived usefulness (TAM1/TAM2) (C-TAM-TPB), extrinsic motivation (MM), job-fit (MPCU), relative advantage (IDT), and outcome expectations (SCT) from the other individual theories of technology acceptance.

In the original UTAUT, Attitude was treated as already being encompassed in Performance Expectancy and/or Effort Expectancy, and treated not as a direct influence to Behavioral Intention or Use Behavior. On the other hand, Dwivedi et al. (2019) purported for their revision of the UTAUT, that Attitude should be maintained as an individual could be influenced by the extent to which the technology may prove to be useful (better or worse), or the extent to which technology may be easy to use (easy or hard). In other words, the degree to which a technology is capable of performing and ease of usage influences how people feel about the technology itself.
Ha1: Performance Expectancy has a significant influence over the learners’ Attitude to adopt online classes.

Ha10: Performance Expectancy has a significant influence over the lecturers’ Attitude to adopt online classes.

Performance Expectancy is said to be the strongest predictor of Behavioral Intention and remains significant in both voluntary and mandatory settings in technology Usage Behavior (Venkatesh et al., 2003).

Ha2: Performance Expectancy has a significant influence over the learners’ Behavioral Intention to adopt online classes.

Ha11: Performance Expectancy has a significant influence over the lecturers’ Behavioral Intention to adopt online classes.

2.2.2 Effort Expectancy on Attitude & Behavioral Intention

Effort Expectancy is defined as the degree of ease associated with the use of the system (Venkatesh et al., 2003). It covers constructs from other technology acceptance theories like perceived ease of use (TAM1/TAM2), complexity (MPCU), ease of use (IDT).

For the justification of Effort Expectancy over Attitude, please refer to section 2.2.1 (Performance Expectancy on Attitude & Behavioral Intention).

Ha3: Effort Expectancy has a significant influence over the learners’ Attitude to adopt online classes.

Ha12: Effort Expectancy has a significant influence over the lecturers’ Attitude to adopt online classes.

Ha4: Effort Expectancy has a significant influence over the learners’ Behavioral Intention to adopt online classes.

Ha13: Effort Expectancy has a significant influence over the lecturers’ Behavioral Intention to adopt online classes.

2.2.3 Social Influence on Attitude & Behavioral Intention

Social Influence – the degree to which an individual perceives that important others believe he or she should use the new system (Venkatesh et al., 2003); constitutes subjective norm (TRA, TPB, C-TAM-TPB), social factors (MPCU), and image (IDT) from related individual theories, which contains the same explicit and implicit notion that the individual’s behavior is influenced by the way in which they believe others will view them as a result of having used the technology (Venkatesh et al., 2003).

However, Dwivedi et al. (2019) quoted Davis (1985), that although an individual may do what a referent feels he or she must do, the act might also be consistent with the individual’s own feelings. Thus, besides the mechanism on compliance, - internalization and identification would be two more identifying social influences as pertaining to the individual (Warshaw, 1980). In other words, there is social pressure and there is internal pressure. It is with the revised UTAUT that not only the context is accounted for, but the individual as well.

Ha5: Social Influence has a significant influence over the learners’ Attitude to adopt online classes.

Ha14: Social Influence has a significant influence over the lecturers’ Attitude to adopt online classes.

Ha6: Social Influence has a significant influence over the learners’ Behavioral Intention to adopt online classes.

Compliance causes the individual to simply alter one’s intention in response to social pressure as for Warshaw (1980). For voluntary, social influence has become non-significant; yet for mandatory settings, appears important especially during the first stages of individual experience with technology, which eventually wears away over time with sustained usage (Venkatesh & Morris, 2000).
Ha15: Social Influence has a significant influence over the lecturers’ Behavioral Intention to adopt online classes.

2.2.4 Facilitating Conditions on Attitude & Behavioral Intention

Facilitating Conditions are defined as the degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system (Venkatesh et al., 2003). What constitutes facilitating conditions are theoretical constructs such as perceived behavioral control (TPB, C-TAM-TPB), facilitating conditions (MPCU), and compatibility (IDT).

Venkatesh et al. (2003) found it to be significant in both voluntary and mandatory settings of technology usage immediately following training. In addition, Facilitating Conditions, empirically having a direct influence on usage, negates having one with Behavioral Intention. According to the researchers, Behavioral Intention only becomes significant in the absence of core constructs like Performance Expectancy and Effort Expectancy.

Dwivedi et al. (2019) agreed in their earlier study; but later in furthering expansion of the role of Attitude (Dwivedi et al., 2019), the unexpected path between Facilitating Conditions and Attitude became accounted for as well. The revised UTAUT would acknowledge this context in the form of training programs and help desks which may be instrumental in enabling individuals to form positive attitudes about the technology use.

Ha7: Facilitating Conditions has a significant influence over the learners’ Attitude to adopt online classes.

Ha16: Facilitating Conditions has a significant influence over the lecturers’ Attitude to adopt online classes.

2.2.5 Attitude on Behavioral Intention

Venkatesh et al. (2003) in their establishment of the UTAUT, also recognized Attitude towards using technology as the strongest predictor of Behavioral Intention. However, the researchers have also empirically established that, in one way or another, attitudinal/affective reactions have already been encompassed in the first two core constructs – Performance Expectancy and Effort Expectancy. Therefore, Attitude will only have a direct effect in the absence of the latter mentioned constructs. The non-significance of Attitude has been further supported by previous model tests (Davis et al., 1989; Taylor & Todd, 1995; Thompson et al., 1991).

Although Attitude is deemed an iterating construct in the UTAUT, Dwivedi et al. (2019) believed, as in the previous literature, that it is still significant in determining Behavioral Intention. For the revised UTAUT, the researchers would still maintain that individuals still form intentions to perform behaviors toward which they have a positive attitude about.

Ha9: Attitude has a significant influence over the learners’ Behavioral Intention to adopt online classes.

Ha18: Attitude has a significant influence over the lecturers’ Behavioral Intention to adopt online classes.

2.3 Conceptual Framework

The final conceptual framework being used is based on the revised UTAUT Model (Dwivedi et al., 2019); four core constructs as exogenous variables being mediated by Attitude to predict Behavioral Intention; final endogenous factor – Use Behavior, being omitted.

3. Research Methodology

This non-experimental quantitative study required non-probabilistic voluntary responses from university
learners and lecturers in predicting their perception and Behavioral Intention towards adoption of online classes during COVID-19 outbreak. A valid and reliable questionnaire was operationalized, customized to fit the specific context, and made available online for convenient distribution and solicitation.

The population for this empirical study were 8,142 learners and 621 lecturers as of Semester 2 of the year 2020 at Rajamangala University of Technology, Tawan-ok (RMUTTO) varying in gender, age, and to which faculty and campus they belong. The sample for this empirical study were those who responded to the voluntary public survey; which were 414 learners and 166 lecturers.

The research instrument was a google form-generated questionnaire, which consisted of three parts:
- Part 1 – General information such as occupation, gender, age group, and campus they currently belong to;
- Part 2 – 23-item Survey on Adoption of Online Class during COVID-19 Outbreak; and
- Part 3 – Follow-up open-ended questions for both learners and lecturers.

The validity of the questionnaire was based on the total adoption of items used by Venkatesh et al. (2003) in developing the Unified Theory of Acceptance & Use of Technology (UTAUT) as proposed measurement in their previous study entitled, “User Acceptance of Information Technology: Toward A Unified View”. The reliability on the other hand, was based on the previously conducted pilot test among 30 university learners and 30 university lecturers with no scores less than 0.6 Cronbach’s Alpha (Cronbach, 1951). Furthermore, the questionnaire was made available in two languages, English and Thai, since the minority consisted of a few hired foreign language teachers and the rest are mostly Thai.

The process started by preparing the questionnaire in google form. The permission to run the study with learners and lecturers as subjects of the study was firstly approved and permitted by the President of the university. The online questionnaire was attached as google form links and sent as emails to all subjects through the assistance of the ICT department of the university. Upon inception, subjects were given two weeks to respond, or until responses suffice data analysis count requirement to conduct SEM analysis. The data was collected as generated summary by google forms; then later interpreted through the appropriate data analysis tools.

Descriptive statistics to describe characteristics and explain central tendencies & variability of data were collected in this study as mean, range, and standard deviation. Data analyses had employed Exploratory Structural Equation Model (ESEM) (Asparouhov & Muthén, 2009) where the data underwent three types of scrutiny: 1. Exploratory Factor Analysis (EFA) (Child, 1990) – to validate the construct items, 2. Confirmatory Factor Analysis (CFA) (Jöreskog, 1969) – to validate the constructs, and 3. Structural Equation Model SEM (Kaplan, 2008) – to validate construct relationships. As for the follow-up questions on the learners’ and lecturer’ current adoption of online classes, responses were qualified in similar themes and quantified in tabular statistics for reporting.

4. Results And Discussion

4.1 Demographic Information

All the 580 samples are learners (414) and lecturers (166) from Rajamangala University of Technology, Tawan-ok varying in gender, ages, and campuses to where they currently reside. The chart above shows females significantly more (71%) than males across subgroups, and much more significantly among learners (73%). Across ages, the learners aging 30 and below (69%) are the extreme majority in both subgroups. Moreover, majority of the respondents (50%) came from learners of Chakrabongse Bhuvanat Campus.

4.2 Data Analyses

4.2.1 Construct Items Analysis

The 23 construct items used in the questionnaire were adopted from the UTAUT theoretical model, thus construct and face validity have already been established. Yet, to further validate the items’ convergent & discriminant validity, and reliability, the Exploratory Factor Analysis was run. Data adequacy was at .964 KMO with Bartlett’s Test at .000 significance; and after elimination of cross-loads, KMO was at .940 with Bartlett’s still at .000 significance – indicating that construct items can be grouped and that they
are appropriate for identifying relationships (Osei-Kyei et al., 2014).

Data validity was initially determined among construct items with high convergent validity (factor loadings) and minimal discriminant validity (cross-loadings) through the Pattern Matrix (Campbell & Fiske, 1959). After resolution was made to eliminate eight major cross-loaders, convergent validity remained high with no factor loadings lower than 0.7, discriminant validity established despite two constructs minimally correlating at .715 as evidenced by the Component Correlation Matrix (Lyytinen & Gaskin, 2016).

Data Reliability was established separately for both learners and lecturers subgroup, before and after deletion of cross-loading items. The internal consistency of constructs as a measurement of latent variables for both groups were high and remained higher than 0.6 Cronbach’s Alpha (Nunnally, 1978) threshold cut-off. The construct items were established to be adequate, valid and reliable after undergoing EFA.

4.2.2 Measurement Model Analysis

After the construct items were established fit, the constructs were run for a measurement model fit through the Confirmatory Factor Analysis. In doing so, factor loadings, model fit, model re-specification, and construct reliability & validity were established. All constructs had items with factor loadings higher than 0.5 (Gao, Mokhtarian, & Johnston, 2008) with standard error, critical ratio (t-value), and p-value supporting significance. Initial model fit was deemed terrible; however, after model re-specification, goodness of fit was reported:

\[
\text{CMIN/DF} = 2.281, \text{CFI} = 0.985, \text{SRMR} = 0.025, \text{RMSEA} = 0.056, \text{PClose} = 0.191 \quad \text{for learners} ; \quad \text{and:} \quad \text{CMIN/DF} = 1.489, \text{CFI} = 0.979, \text{SRMR} = 0.0594, \text{RMSEA} = 0.054, \text{PClose} = 0.349 \quad \text{for lecturers} - \text{reflecting excellent model fit for both subgroups (Hu & Bentler, 1999).}
\]

Construct reliability was established through Composite Reliability (CR) and Maximal Reliability (MaxR(H)) being higher than recommended 0.70 (Awang, 2015). Convergent validity reported Average Variance Extracted (AVE) no value less than 0.50 (Hair, Black, Babin, & Anderson, 2010), and all values for CR were greater than the AVE.

Discriminant validity was assessed through the Heterotrait-Monotrait Ratio of Correlations (HTMT) with no value less than 0.90 (Gold, Malhotra, & Segars, 2001) among constructs. Finally, to know whether the constructs meant the same to both subgroups: learners and lecturers, the configural invariance was identified by comparing model fit per subgroup and as a whole. The model fit among groups were excellent proving that the measurement model was invariant among subgroups.

2.3 Structural Model Analysis

After the data underwent EFA for construct items analysis and CFA for constructs analysis, the model was ready to test pre-theorized relationships through the Structural Equation Model (SEM). In doing so, the structural model fit was tested, hypotheses were concluded, and path analyses were made.

The structural model was found fit for learners at: CMIN/DF = 2.439, CFI = 0.983, SRMR = 0.028, RMSEA = 0.059, PClose = 0.083; and lecturers at: CMIN/DF = 1.489, CFI = 0.979, SRMR = 0.064, RMSEA = 0.054, PClose = 0.349. Hypotheses testing alternative hypotheses as being supported or not supported for both groups as shown in the comparison below:

There were six supported (H1, H2, H4, H5, H6, H7) with three not supported alternative hypotheses (H3, H8, H9) from the learners; and there were five supported (H10, H12, H13, H5, H16) and four not supported (H11, H14, H17, H18) from the lecturers subgroup. Similar hypotheses reflecting acceptance in both groups were: PE to ATT (H1 & H10), EE to BI (H4 & H13), SI to BI (H6 & H15), and FC to ATT (H7 & H16). Hypotheses accepted particular to learners were PE to BI (H2), and SI to ATT (H5); and to lecturers subgroup was EE to ATT (H12). Both subgroups had retained the null hypotheses for FC to BI (H8 & H17), and ATT to BI (H9 & H18).

4.2.4 Path Analysis

Towards path analysis, path coefficients for both subgroups rank were found similar with the first top three correlations namely: Performance Expectancy to Attitude, Effort Expectancy to Behavioral Intention, and Social
Influence to Behavioral Intention. Particularly high coefficient for learners was Performance Expectancy to Behavioral Intention; and for lecturers Effort Expectancy to Attitude. Both subgroups scored negatively for Facilitating Conditions to Behavioral Intention.

4.3 Discussion

4.3.1 Performance Expectancy on Attitude & Behavioral Intention

In the revised UTAUT, Performance Expectancy sought to explain its influence over Attitude and over Behavioral Intention. The extent to which technology is perceived useful influences Attitude (Dwivedi et. al, 2019); and regardless settings being voluntary or mandatory, performance expectancy remained the strongest predictor of Behavioral Intention towards technology use (Venkatesh et. al, 2003). In the context of this study, below is a discussion whether or not Performance Expectancy has significant influence over Attitude and Behavioral Intention.

The hypothesized path between PE and ATT were found the most significant for both learners (H1: \( \mu = .514 \)) and lecturers (H10: \( \mu = .491 \)). This means that the subgroups’ attitude on adopting online classes were being influenced by how useful they perceived the technology was in achieving educational goals. Recent studies, during the context of this pandemic, support similar claims (Tiwari, 2020; Sukendro et al., 2020; Maphosa, Dube, & Jita, 2020) that learners’ positive attitude with online learning was strongly related with the extent on how helpful they perceived the technology being used; and claims about lecturers (Sangeeta & Tandon, 2020; Lazim et al., 2021), liking the adoption of technology was based on how they believed technology to be supportive in their online teaching endeavors. As for this study, it is concluded that Performance Expectancy does influence Attitude significantly.

The hypothesized path between PE and BI was found significant for learners (H2: \( \mu = .263 \)), but not for lecturers (H11: \( \mu = .082 \)). This means that while the Behavioral Intention was directly affected by how the learners appreciate the usefulness of the technology, the lecturers were not as affected. Several recent studies supported how strong as a predictor Performance Expectancy was over Behavioral Intention for both learners and lecturers, especially in the context of the pandemic (Tiwari, 2020; Samat et al., 2020; Raza et al., 2020). The studies have shown that both subgroups showed more intention to adopt online classes if they believed the technology was helping them in getting positive online learning or online teaching results. However, a few studies in the same context of the present pandemic revealed otherwise. The educational technology gap in Jakarta Indonesia middle school being a disadvantage (Asvial et al., 2021), and Performance Expectancy being moderated by perceived risk in some 390 adults in Bangkok Thailand as being debunked (Chayomchai et al., 2020) – are two occasions Performance Expectancy surprisingly uncorrelated with Behavioral Intention. As for the lecturers of this study, a possible reason might be that the respondents were mostly middle-aged and had strong positive responses on Performance Expectancy having no qualms about appreciating the importance of technology unlike the older groups (Venkatesh et al., 2019), which is the minority in this study. Thus, their intention to adopt online classes would have nothing to do with biases about performance expectations from the technology. As for the conclusion, the decision is split between learners and lecturers.

4.3.2 Effort Expectancy on Attitude & Behavioral Intention

With its significance on Attitude, a group of researchers were able to prove how one sees technology as easy or hard directly affects how one feels about using the technology (Dwivedi et al., 2019). As towards Behavioral Intention, the UTAUT established Effort Expectancy as significant in voluntary and mandatory settings and declining over periods of extended and sustained usage (Venkatesh et al., 2003). In the context of this study, it is paramount to know whether Effort Expectancy significantly influence Attitude and Behavioral Intention.

The hypothesis established between EE and ATT showed insignificant for learners (H3: \( \mu = .030 \)), yet otherwise for lecturers (H12: \( \mu = .228 \)). How lecturers felt about the adoption of online classes had nothing to do with it being easier or harder. However, for lecturers, technology being easier or harder directly and proportionally affected how they would feel about the adoption. The potential reason might be found in the comparison itself, that younger generation of learners don’t feel much burdened about the intricacies of technology unlike older generation of
lecturers. Age being a moderator affecting Attitude explains Effort Expectancy being more significant along age brackets (Venkatesh et al., 2012). Effort Expectancy and Attitude in lecturers were found significant as evidenced in similar recent publications (Lazim et al., 2021; Sukendro et al., 2020; Sangeeta & Tandon, 2020), stating that it mattered to them how easy, user-friendly and convenient to use the system. The decision was split among groups for this study; the learners’ Effort Expectancy has nothing to do with their Attitude in adopting online classes; as for lecturers, the opposite is true.

The hypothesis about EE and BI were both strongly significant for learners (H4: \( \mu = .332 \)) and lecturers (H13: \( \mu = .500 \)). This means that learners’ intention to adopt online classes were strongly influenced by how convenient the adoption would be; and similarly true among lecturers as well. Recent publications (Chayomchai, 2020; Chayomchai et al., 2020; Raza et al., 2021; Tiwari, 2020) have proven perceived ease of use, factored in the construct Effort Expectancy, significantly influencing Behavioral Intention to use technology. As for this study, a strong conclusion is made that Effort Expectancy significantly influences Behavioral Intention to adopt online classes among learners and lecturers during the current pandemic.

4.3.3 Social Influence on Attitude & Behavioral Intention

It’s influence on Attitude and Behavioral Intention is explored here. On a personal level, scientists believed that identification with people that mattered to them, their opinions, had a say in how they felt (attitude) about using technology (Dwivedi et al., 2019), but the individual, as part of the bigger functional workforce, make decisions more as a mechanism of compliance rather than just identification or internalization of how they felt, which eventually shapes their intention to use technology (Venkatesh et al., 2012). In this study, it’s essential to know whether Social Influence has significant influence over Attitude and eventually over Behavioral Intention.

The hypothesis between SI and ATT had been explored as significant for learners (H5: \( \mu = .185 \)), and not at all true for lecturers (H14: \( \mu = .070 \)). This means that the learners’ Attitude in the sudden adoption of online classes was significantly related to how their important loved ones, like friends and family, thought about the idea of learning online during the pandemic. Previous study supported this claim among learners (Dwivedi, Rana, Janssen, Lal, Williams, & Clement, 2017; Mosunmola et al., 2018; Tseng et. al., 2019), that relating to their classmates (identification) and understanding their parents’ concern (internalization) had an impact on how they felt about accepting technology. Surprisingly for lecturers, Social Influence did not impact their Attitude at all in adopting technology. A similar study had the same result during the context of this pandemic (Sangeeta & Tandon, 2020), that some teachers in Rajpura, India did not base their attitude on how important people in their lives thought of their adoption of technology. This said much about how they were able to do things during this pandemic out of compliance, rather than out of biased perception (Dwivedi et al., 2019). The conclusion for Social Influence on Attitude holds true for learners but not for lecturers towards their adoption of online classes during this pandemic.

The hypothesis established between SI and BI were significant for learners (H6: \( \mu = .298 \)) and lecturers (H15: \( \mu = .292 \)). For both, it meant that how their important others believe in adopting of online classes during the pandemic, shape their Behavioral Intention significantly. Recent studies (Samat et al., 2020; Raza et al., 2021; Asvial et al., 2021) support the claim that both learners and lecturers were more likely to comply with the policy of adopting online classes as being positively reinforced by their loved ones who were concerned about their safety during pandemic. Therefore, it is concluded in this study that Social Influence significantly influences Behavioral Intention towards adopting online class for both learners and lecturers during COVID-19 outbreak context.

4.3.4 Facilitating Conditions on Attitude & Behavioral Intention

Facilitating Conditions is proven for its relationship with Attitude and Behavioral Intention. As an emergent path in Dwivedi et al.’s (2019) meta-analysis of UTAUT and the addition of Attitude as a mediating factor, Facilitating Conditions in the forms of help desks and customer support were proven instrumental in how users felt about the use of technology. Furthermore, the same researcher believed that, although Facilitating Conditions was only linked with Use Behavior as the final endogenous construct in UTAUT, it was however also proven
significantly related with Behavioral Intention – only because Attitude was introduced in the first place (Dwivedi et al., 2019). The relationships are being explored whether there is a significance between Facilitating Conditions and Attitude & Facilitating Conditions and Behavioral Intention.

The alternative hypothesis between FC and ATT were accepted for both learners (H7: µ = .240) and lecturers (H16: µ = .184). This meant that for both groups, the availability and unavailability of support in using technology has some influence in how positive or negative they felt about using the technology. The study by Sangeeta and Tandon (2020) reciprocated this result expressing the teachers of Rajpura, India felt encouraged in using the program during the pandemic because of training programs being made available as well. As for subjects of this study, it is solidly concluded that Facilitating Conditions significantly influenced both groups’ Attitude towards adoption of online classes during the context of the pandemic.

The alternative hypotheses between FC and BI were rejected for both learners (H8: µ = -.122) and lecturers (H17: µ = -.035). This meant that the provision of facilities and organizational support did not reinforce their intentions to use technology. Similar recent studies during this pandemic (Chayomchai et al., 2020; Asvial et al., 2021) did not support the claim likewise concluding that Facilitating Conditions had more to do with the Actual Use rather than with Behavioral Intention to use technology. This was originally premised in the UTAUT (Venkatesh et al., 2003) were Facilitating Conditions could hold significance on Behavioral Intention only in the absence of first two constructs - Performance Expectancy and Effort Expectancy, as previous empirical studies were concerned (Eckhart et al., 2009; Foon & Fah, 2011; Yeow & Loo 2009). This study concludes Facilitating Condition on Behavioral Intention not significant for both sample groups towards their adoption of online classes during COVID-19 outbreak.

**4.3.5 Attitude on Behavioral Intention**

Attitude and Behavioral Intention are the final two constructs in the revised UTAUT that deemed to have significant relationship. Although Attitude is deemed an iterating construct in the UTAUT, Dwivedi et al. (2019) believed, as in the previous literature, that it is still significant in determining Behavioral Intention. These group of researchers would still maintain that individuals still form intentions to perform behaviors toward which they have a positive attitude with. For this study, Attitude is tested for significance on Behavioral Intention.

The hypothesis between ATT and BI came out insignificant for both learners (H9: µ = .061) and lecturers (H12: µ = -.004). This meant that there is a clear disconnect on how both groups felt about the use of technology and their intentions to use the technology. A recent study (Asvial et al., 2021) produced similar claims among Indonesian middle schoolers in their acceptance of online classes during COVID-19. It was concluded that because of the existing gap in using technology (being not ready), Attitude and Behavioral Intention could not be established. The reason might be the same as for this study, as COVID-19 context has put learners and lecturers in a limitation which is a disadvantage of choice; states of their present attitude don’t say much towards their intention to use. Another plausible reason could be based in the original UTAUT findings by Venkatesh et al. (2003), stating that Attitude had similar indicators that of Performance Expectancy and Effort Expectancy, and thus its redundance did not contribute well to the establishment of the unified model of technology acceptance. For the record, this study has concluded that Attitude has no significant influence over Behavioral Intention towards adoption of online classes among learners and lecturers in the present context of Covid-19 outbreak.

**5. Conclusions**

**5.1 Summary of Key Findings**

This study initially identified factors as prescribed by the revised UTAUT in determining the learners’ and lecturers’ Attitude and Behavioral Intention to adopt online classes in the context of COVID-19 outbreak. Furthermore, it sought to report their differing perceptions on their actual current adoption of online classes. Below are the summarized results of this study:

There were two endogenous variables in this study – Attitude and Behavioral Intention. Over Attitude, the following had direct effects: Performance Expectancy, Social Influence, and Facilitating Conditions; leaving Effort
Expectancy rejected. Over Behavioral Intention, the following had significant influences: Performance Expectancy, Effort Expectancy, and Social Influence; leaving two others: Facilitating Conditions and Attitude not supported.

The learners’ perception of adopting online classes had opinions that the policy was necessary, beneficial, yet not so practical amidst COVID-19 outbreak. Furthermore, they believed the greatest challenge of adopting online classes were related to paucity and capacity, and that a possible issue might be related to effectiveness of online classes if it were to continue longer in the future.

As for the lecturers, the same four exogenous and two endogenous variables were at play. Performance Expectancy, Effort Expectancy, Facilitating Conditions, but except Social Influence, were found to have significant effects on Attitude. In addition, Effort Expectancy and Social Influence, were found having influence over Behavioral Intention; Performance Expectancy, Facilitating Conditions and Attitude having none.

When asked about their perceptions about the current policy, the majority felt it was strongly necessary, beneficial, yet not as practical as hoped. When asked what challenges they were currently facing with the adoption, the bigger majority believed them to be related to paucity and capacity; while a high minority accounted infrastructure as contributing factors to problems in running online classes. When asked about probable issues they could think of if the adoption persisted longer, most lecturers believed them having to do with equity, sustainability and effectiveness.

5.2 Implications for Practice

There were significant relationships made during the testing of the hypotheses, and the results have clearly shown what the university could do to encourage learners’ and lecturers’ adoption of the government’s mandate to resume classes during the pandemic.

5.2.1 Practical Implications for Learners

Performance Expectancy was found to be the strongest indicator for Attitude and equally significant on Behavioral Intention towards adoption of online classes. Now that this study has proven how learners see the adoption as being useful, causing them to feel accomplished, increasing their productivity, bettering their learning results – all these, influence the extent of their preference and intention amidst being mandated; thus, an effort should be made to improve their online learning experience. Although the vast majority of learners perceived adoption of online classes as necessary and beneficial, they also thought the initiative as not practical, since there were problems related to unpreparedness in the sudden implementation. Challenges they thought were related to paucity – setbacks due to instability (weak internet, log-in errors, lags), and capacity – setbacks due to inability (first timer, not computer proficient); a dominant issue they thought needed looked at for the future, is the adoption’s effectiveness. All of these are only saying that for them to be able to appreciate the adoption of online classes, the quality of adoption itself is needed to be better and more.

Effort Expectancy was the second strongest indicator found significantly influencing Behavioral Intention. This study has proven that the extent to how learners saw the adoption of online classes as simpler, clearer and more understandable will have impacted their intention more towards adoption itself. Therefore, an effort should be made to make adoption of online classes easier and user-friendly for them. The administration may choose a unified digital platform with occasional tutorials where learners be able to navigate conveniently.

This study found Social Influence impacting Attitude and Behavioral Intention. It has proven that the degree to which the learners’ friends and family believed the adoption of online classes also influenced their preference and intention towards actual adoption. Hence, extra efforts can be made to encourage important people to theses learners to continually give their utmost support in learning online. Somehow, the best way to do this is to send them emails of gratitude, as thanking them would be the best means of getting more of their support for the learners.

The significance of Facilitating Conditions in the formation of the learners’ attitude toward adoption of online learning was proven in this study. This meant that the availability of resources, knowledge, compatibility and assistance during online learning impact their preference to adopt online learning. Hence, an effort must be made on providing learners the necessary resources, pertinent knowledge, and assistance especially during their troubles in adopting online classes. Administrators may establish a system to provide
timely updates, offer mini-trainings, and offer call support whenever students are at loss with online classes.

5.2.2 Practical Implications for Lecturers

Performance Expectancy was found to be a strong indicator for Attitude towards adoption of online classes. Now that this study has proven how lecturers see the adoption as being instrumental, helpful, giving good teaching results or better – all these influence the extent of their preference despite the policy being abruptly enforced; thus, an effort should be made to improve their online teaching experience. Although the vast majority of lecturers perceived adoption of online classes as necessary and beneficial, they also thought the initiative as not practical, since there were difficulties related to the sudden implementation. Challenges they thought were related to paucity – setbacks due to instability (weak internet, log-in errors, lags), and capacity – setbacks due to inability (first timer, not computer proficient); a dominant issue they thought needed looked at for the future, is the adoption’s sustainability. All of these are only saying that for them to be able to appreciate the adoption of online classes, the quality of adoption itself is needed to be better and maintained at standard.

Effort Expectancy was the strongest indicator found significantly influencing Attitude and Behavioral Intention in lecturers. This study has proven that the extent to how they saw the adoption of teaching online as simple, clear and understandable to follow will have an impact in their preference and intention towards adoption itself. Therefore, an effort should be made to make online teaching easier and user-friendly. The perceptions of the lecturers confirmed this issue as equity – that when initiative was made to enforce online teaching, corresponding effort to make it easier and faster to adopt was equally important to them. Next to quality, convenience of adopting online classes should be in the checklist as well.

This study found Social Influence impacting Behavioral Intention. It has proven that the degree to which the lecturers’ friends and family believed the adoption of online classes also influenced their preference towards actual adoption. Hence, an effort can be made to boost morale among lecturers by keeping open a forum where communal discussions about the policy during COVID-19 is openly tabled for everyone’s discussion; a chance to express their thoughts among colleagues and peers and get to listen from each other would likely boost their preference to support adoption of online classes.

The significance of Facilitating Conditions in the formation of the learners’ Attitude toward adoption of online learning was proven in this study. This meant that the availability of resources, knowledge, compatibility and assistance during online learning impact their preference to adopt online learning. Hence, an effort must be made on providing lecturers the necessary resources, pertinent knowledge, and assistance especially during troubleshooting problems in online teaching. Administrators may establish a system to provide timely updates, offer mini-trainings, and offer call support whenever lecturers are at loss with online classes.

5.3 Recommendations for Further Research

Despite the success of this research in arriving at significant conclusions, the researcher felt more could be achieved with: 1. the addition of moderators, 2. addition of Actual Use of Behavior, 3. addition of parameters more specific to subgroups, 4. having a more demographically represented sample population; and 5. Having results for indirect and mediating effects as well.

The addition of moderators and the final endogenous construct, Actual Use of Behavior, is as suggested in original UTAUT model. Although reasons have been established to exclude them from the start, incorporating them in a further similar study may contribute well to establishing theoretical implications. Their inclusion could be lent insignificant because of the nature of this study being mandatory, nevertheless, additional theoretical basis would be established.

Parameters specific to learners and online learning (COVID-19 anxiety, perceptions about the lecturer, perceived cost), and parameters specific to lecturers and online teaching (readiness, administration support, project team capability) should be included for future studies; thus, making results more meaningful and specific for the current context.

Employing more samples that fairly represents demographic information among groups is one thing to add in further studies. Although, this study is successful in explaining significant relationships among technology acceptance constructs, it is also much better put if the
samples were dispersed equitably among age, gender and subgroups; consideration of bias is better addressed.

Finally, besides identifying direct effects – indirect and mediating effects can be further explored for more meaningful internal relationships hypotheses testing as well.

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Development of A Model of Technology Integration at A K-12 Level

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Abstract

There is no doubt that the way people live, interact, communicate, and conduct business changes dramatically. This change is known as the “digital revolution,” which refers to the progression of technology from analogue, electrical, and mechanical tools to the digital tools accessible today. Furthermore, technology has begun to alter education, influencing how learners gain the skill sets required to prepare for future education and a profession and how educators use digital technological instructional strategies to educate. Various studies have been published that address the challenges to technology integration and, of course, the efficacy of technology in the classroom. This research attempts to develop a method to comprehend the influence of technology integration on educators’ teaching performance at a private K-12 school in Hanoi City. The respondents of this study consist of fifty (50) educators who apply educational technology in their teaching. The findings revealed that all with the teaching performance measured, educators were described as very satisfactory. The study’s results demonstrated that technology integration had a considerable influence on teaching performance. It is suggested that School Leaders continue to offer programs, seminars, and training workshops on technology integration to improve educators’ performance.

Keywords: eLearning, K-12 Education, Technology integration, Technology use

1. Introduction

Over a decade, there has been a tremendous shift in the classroom, particularly in imparting courses in the most comfortable manner. That is why many educators have become creative in terms of how they will deliver the knowledge effectively and efficiently. The factors that influence technology integration in classrooms and how digital technologies are used in teaching and learning have become critical issues in educational technology (Tondeur et al., 2008; Wastiau et al., 2013) Until then, that educator uses technology, which is growing at a rapid pace in society. Technology integration has opened up new possibilities for teaching and learning in our school. It also opens up new options for making the learning process more conducive, interactive, and fruitful for educators and learners. In May 2017, the Vietnamese Prime Minister issued Directive No.16/CT-TTG on “Strengthening Access to the Fourth Industrial Revolution,” requesting a dramatic change in education in terms of policies, contents, and methods to provide human resources that are well adapted to constant changes and new technology trends in Industry 4.0 (Phuc, 2017). In accordance with this, the Vietnamese government has encouraged collaboration between educational institutions and international organizations to create technology-enhanced experiences that address curriculum content and improve teaching performance. As a result, an increasing number of educators across the country are being exposed to technological infusions that can assist them in improving their teaching performance. Furthermore, incorporating technology into the classroom is critical for increasing educator productivity and performance. The findings revealed that educators and learners are both competent members of the class due to their equipment and innovative pedagogical routines incorporating technology into the teaching and learning experience. Besides that, using technology to teach any subject produces optimal
results in terms of educator performance. It demonstrates that technology integration was successful in its mission to provide a positive response in education, particularly in innovating current education. Unfortunately, numerous studies call into question the benefits of incorporating technology into the classroom. The findings show that educators saw technology integration as beneficial to their learners’ success; however, their practices and performance did not reflect this increased importance. Findings revealed that faculty members’ lack of technological proficiency necessitates their inability to incorporate these new technologies into the classroom, resulting in many remaining unused. This is supported by the findings, which show that faculty members need to learn how to use technology and how to integrate technology into their curricula. As a result, this study aims to assess and evaluate the impact of technology integration in educators’ teaching performance and determine the relationship between technology integration in teaching and educator productivity and find out the best model to apply at Horizon International Bilingual School. Furthermore, this research aims to assist school leaders in guiding their teaching staff to apply and deliver their lessons successfully with the use of technology to achieve the entire satisfaction of learning that the educator expects from his learners.

2. Literature Review

2.1 Technology integration and its models;

Initially, technology integration in education was characterized as the use of technology only in classrooms. It is today characterized as a continuous and sustained process that helps the learning of students. However, the dilemma of how to actualize an integration process that can contribute to student learning is in the forefront at this time. Understanding and implementing a complex, multi-dimensional, dynamic process like technology integration is difficult, and various models have been produced to date (Sumba Nacipuchua et al., 2020). Many integration models approach integration from various angles, and the indications of integration for each model varies in terms of objectives and elements (Kuskaya & Koçak, 2015).

The focus of the 5W1H (What?Why?Where?When?Who?How?) Unified Integration Model is on student learning, and it is built on assessing and planning the process to improve student learning. While the emphasis in the Generic Model of Pedagogy, Social Interaction, and Technology is on the tool in the process and what the tool provides in various contexts, rather than on students and teachers (Wright et al., 2007). Also, the E-capacity Model takes a comprehensive view of the integration process, emphasizing schools as places where education is effectively realized. It is presumptively assumed that students, instructors, and tools are subunits of the school system, and that they can only be maintained if the entire system is improved. Contrary to popular belief, the use of ICT by instructors is not viewed as a dependent variable in this paradigm; rather, it is viewed as a process or an independent variable that leads to other outcomes (Wang, 2008).

2.2 Factors affecting technology integration in K-12 classrooms;

Several prior research has shown that integrating technology into classroom instruction is a gradual and challenging process driven by various factors (Levin & Wadmany, 2008; Snoeyink & Ertmer, 2001; Valcke et al., 2007). For example, research has identified an extensive range of teacher or school-related elements that substantially impact technology integration, including instructors’ beliefs and attitudes. (Chen, 2008; Jimoyiannisa & Komisib, 2007; Lim & Chai, 2008; Lumpe & Chambers, 2001; Van Melle et al., 2003; Vannatta & Fordham, 2004; Wozney et al., 2006), computer and resource availability and access (Hohlfeld et al., 2008), and school support system (Davis et al., 2009; Ringstaff, & Kelly, 2002; Van Melle et al., 2003). Teacher factors were academic degree, gender, computer skills and years of experience in teaching. According to Mathews and Guarino (2000), Using data gathered from almost 3000 teachers from Southeast Idaho, researchers found that gender, years of experience, the number of computers and computer skills directly affect the use of technology; while technology usage experience directly affects computer skills. Mathews, & Guarino (2000) also indicated that years of teaching experience indirectly affected teachers’ computer use.

2.3 The impact of technology integration in teaching performance

Integration of technology into teaching has a significant impact on teachers’ performance. According to
Hero (2019), the critical predictor of technology integration was productivity and professional practice. Moreover, the development of technological integration opens new opportunities for teaching and learning. Furthermore, it provides another path for making the learning process more hospitable, participatory, and profitable for teachers and students (Schul, 2014). Also, research advocates that teachers and students constitute competent class members through their equipment with creative pedagogical routines, integrating technology in the teaching and learning experience. According to Trucano (2015), technology empowers teachers and students while also promoting the skills required for the 21st-century workplace. According to Wright and Akgunduz (2018), Educational Technology allows students to explore, discover, create, interact effectively and freely with instructors, complete and receive assignments and comments online, and create and participate in online discussions. Gadgets are exposed to the search for the content in all ways on mobile phones, tablets and digital boards, which enable learners in educational institutions to gain access and promote knowledge on an hourly basis.

2.4 Educators’ pedagogical and content knowledge

Because technology-based training is learner-centred rather than educator-centred, educators' roles and duties, as well as the learning process, have changed fundamentally. Learners can use technology and education to help them understand without being constrained by time or location; in this environment, they can easily collect and analyze data, test hypotheses, design experiments, and draw conclusions. Because utilizing tools and technologies will reduce some limitations in the classroom (Zamani & Azimi, 2010). The use of technology suggests a variety of possibilities for advancing and expanding a traditional teaching and preparation paradigm primarily focused on new learning tools for educators. Educators would be able to coordinate various forms of online learning programs. They can shift classrooms from a static mood of understanding, from educators to learners, to a learner-centred approach with a dynamic process. Educator success in classrooms and other learning environments is contingent upon her educational philosophy, subject knowledge, professional skills and knowledge in classroom management, personal characteristics, teaching habits, and circumstances. Technological knowledge and its application influenced many of these components (Ayati et al., 2007).

3. Research Methods and Materials

3.1 Participants

The survey was conducted at the end of the 2020-2021 academic year with the sample of 50 educators at Horizon International Bilingual School offering Kindergarten, Primary, Secondary and High School education in Hanoi, Vietnam. Both female and male, part-time and full-time educators of mixed races, at the age between 25-50 years old have participated. The qualification of the research respondents was the educators who graduated from a university and have at least five years of experience using educational technology tools such as computers, iPads, tablets, Smartboards and other digital and online devices. According to the research, the sample size is around ten educators who hold Google Certification Level 1 and 2 and successfully use educational technology in their teaching.

Table 1 Participants experience and education level

<table>
<thead>
<tr>
<th>Teaching Experience</th>
<th>Bachelor’s degrees</th>
<th>Master’s Degrees</th>
<th>Doctoral Degree</th>
<th>Google Certified Educator</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 5 years</td>
<td>5</td>
<td>5</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>5 - 9 years</td>
<td>20</td>
<td>5</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>10 - 20 years</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

3.2 Qualitative data collection

The goal of the survey was to begin collecting data that, when analyzed, would assist the researcher in determining educators’ perceptions of the benefits and drawbacks of technology integration, educators' technology usage methodology, and proposing a technology usage model that educators with high learners’ achievement use. The researcher divided the interviewed questions into four primary objectives, which were 1) determining educators'
usage models of technology at a private school in Vietnam; 2) describing educators' perception of the advantages and disadvantages of technology integration at the school; 3) identifying educators' perception problems of technology integration at the school and lastly; and 4) proposing a technology usage model that educators with high learners' achievement use. The survey was conducted in a semi-structured format with several different types of survey questions. They range from structured to unstructured, with open-ended questions and much more content flexibility, in which the form of the questions and the order in which they are asked are determined prior to the survey (Merriam, 2009). This structure allowed the researcher to ask open-ended questions as well as numerous targeted questions. The researcher needed to change or remove questions based on the responses of the participants. According to the researcher, a mix of open-ended and guided questions provided the best opportunity for educators to discuss their classroom experiences while ensuring that all participants were asked the same essential questions to allow for result comparison. The researcher generated an initial set of questions for the educators before conducting the surveys. Before reaching a final decision on survey questions, the researcher examined the upsides and drawbacks of all questions with a research advisor.

The Content Validity of the Overall Scale (S-CVI) method was used to assess the content validity of the interview questions. The questionnaire was examined by four experts who were familiar with the research methodology and met the requirements for expert qualifications. The following criteria were used to select an expert panel to validate questionnaire items and interview questions: 1) hold a doctorate degree; 2) be an expert and have experience in the field of education, and 3) be a professor teaching at a university.

Four experts evaluated the 28-item questionnaire on a 4-point scale: 1 = not at all suitable, 2 = not suitable, 3 = suitable, and 4 = highly suitable. The results revealed that the experts who scored at least 2 and 4 are primarily. In computing the Content Validity Index, ratings of 1 and 2 are grouped at the same rate, while ratings of 3 and 4 are grouped at the same rate. Thus, the Validity of individual items (I-CVI) of this questionnaire was computed as 1.00, according with the S-CVI procedure, which states that a rating of 3 or 4 is acceptable and that the I-CVI should be 1.00 when there are five or fewer judges (Polit & Beck, 2006). The average the I-CVIs was calculated by summing the Content Validity of individual items (I-CVI) and dividing by the number of items:

\[
\frac{(1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+1+0+1)}{28} = 1.00
\]

Based on the expert evaluation results, all of the items in the questionnaire and the interview questions received a score of 1, agreeing that the items were suitable. Thus, the items were considered valid according to Polit and Beck (2006).

As soon as the data was obtained, the researcher began transcribing the findings. The results were word for word transcribed. Furthermore, the researcher began to study the data. The data was reviewed in accordance with the criteria proposed by Corbin and Strauss (1990), which suggested that data analysis can begin as soon as possible after collection.

4. Results and Discussion

Grounded theory data analysis approaches were used to analyse the survey data. The researcher surveyed 50 educators to gain a clear image of what is going on in the classroom and what may be advised. Following data collection, the researcher used data analysis methodologies often used in grounded theory studies. Using this strategy, the researcher was able to establish three primary categories that help answer the study questions: "educators' usage methodology and experiences," "opinions on the integration of technology in education," and "technology integration readiness."

4.1 Educators' methodologies and experiences

In all of the participant responses, there was a sense of willingness to integrate technology in teaching. (See figure 1) This refers to how educators use technology as a change catalyst to provide a personalized learning experience for all learners. This is an important area since it appears to impact how successful the use of technology in the classroom is.
The researcher was attempting to comprehend what educators were attempting to achieve in the classroom by employing technology. Answering this question was essential in assessing the educator's perception of the effectiveness of technology integration in the classroom. According to the data, the majority of educators thought that technology is beneficial in the classroom. Furthermore, educators consider the creation of a learner-centred learning environment as indicated in Figure 2 to be one of the fundamental objectives of technology. Some educators seemed to believe that simply adopting technology in the classroom will elicit this good response.

4.2 Opinions on the integration of technology in education

Most educators cited differentiating activities and making their lessons more interactive to motivate learners as one of the primary reasons they used technology. For example, Respondent 14 said the following when asked about the advantages of having educational technologies in his/her class:

"Learners can participate in the lesson with joy and are interested and motivated in learning. In addition, they are excited about the games created by educators using digital devices. As a result, they focus and quickly absorb the lesson content, and the logic of the lesson will be easier to understand."

In this case, the educator appeared to convey that the learners are pleased with the lesson. Another portion of respondents mentioned that it is effortless to reach out to the school documents and learners' data collection. For example, Respondent number 41 said that integrating technology within the school helped educators collect data about the learners' well-being and track their progress throughout the academic year. While Respondent number 43 highlighted the shared documents and how easy it is now to share and get the form from the school documents site. In addition to all of the aforementioned information, there were some respondents with different opinions about integration. For example, Respondent number 7 mentioned Mobile Device management needs at school. According to him/her, lack of this management may cause misusing the devices, distraction and difficulties of device content controlling. In addition, Respondent number 21 has mentioned that all the challenges can be reduced if the educator knows how to integrate and use educational technology in class.

Another aspect found during the research was that most educators indicated engagement as one of the positive responses induced by technology usage in the classroom. Many educators said observing an increase in the number of work learners did while utilizing technology to learn vs lessons that did not use technology. For example, Respondent number 10 mentioned that lectures are livelier, learners are more active and engaged. All of the technology-related activities mentioned in the questionnaires were nearly entirely based on educators' personal views on how to use technology to improve their learners' learning experiences. They believe that incorporating technology into the classroom inspires and engages learners in the learning process.

5. Conclusions

Based on the study’s findings, the following conclusions were attained:

The purpose of the study was to develop a model of technology integration at school. The data demonstrate
that Horizon educators have a high level of technology integration in their classrooms. Their performance has been assessed as very satisfactory. In the previous five years, technology integration in the school has had a substantial impact on the teaching performance of all subject educators. Furthermore, productivity and professional practice were found to be significant predictors of technology integration. As a result, incorporating technology into the classroom was considered pedagogical innovation in the education paradigm, rather than just compliance with Department of Education rules.

Additionally, a satisfactory score demonstrates that educators were optimistic and confident in teaching using technology in class as shown in Figure 4.

**Figure 3** The graph of educators using technology in instructional strategy in classes at Horizon

It also indicates that they were adhering to the current standards of 21st-century education. Finally, the findings revealed various implications that may help educators recognize that courses, seminar workshops, faculty development plans, and even extra time for school learning action cell sessions are needed to help them know how they would fully employ and integrate technology in teaching.

### 6. Recommendations

Based on the study's findings and conclusions, the following recommendations are made:

Educators would be more conscious of overcoming technology issues such as management concerns, health-related difficulties due to excessive use of technology, and learner safety considerations. To increase educators' awareness of technological difficulties, this topic might give different insights if included in Professional Developments and semestral training programs and school departmental meetings and discussions. If possible, in bilingual Languages so the Vietnamese educators could have a deeper understanding.

Those educators assure themselves and their learners the beneficial use of technology in the classroom that they utilize technology so that they learn from it. In such a way that the values of technology integration could be integrated into everyday education.

Reviewing factors affecting technology integration mentioned in the study’s Literature review, the researcher also recommends that educators can employ research-based information and principles to improve professional practices as long as they adhere to government expectations. The school would benefit from undertaking enrichment training and discussions for each subject and application of Technological Pedagogical and Content Knowledge framework training to fully address subject educators' weaknesses in the use of research-based knowledge and principles to improve their professional practices as well as keeping updated about technology's fast-moving evolution.

Addressing another possible challenge, I would like to highlight that the school's internet security management system is insufficient to provide a secure and safe digital environment. Mobile Device Management (MDM) is suggested to be implemented as the top priority to overcome the safety and security challenges of Bringing Your Own Device (BYOD) policy. The school's educational technology coaches can research the most suitable MDM for each campus and enforce it with mutual agreement with the device owners.

### 6.1 Recommendation for Technology Integration Model

Following the collection of the data, the researcher utilized methods of analysis frequently used in grounded theory research. Through this method, the researcher could discover major categories that assist in developing a model for technology integration.

The capability of an educator to properly integrate technology into the classroom is referred to as technology integration readiness. The majority of the educators surveyed mentioned this category when they have been asked their opinions on a tech educator promoting the application of classroom technology and how much they use technology to be more productive in their teaching. Most of
the teachers responded that various factors influence this readiness, which is best represented by its subcategories of technological interest of a teacher and training provided by the school as presented in figure 4.

**Figure 4** Mind map representing the category of readiness for technological integration

![Mind map for readiness in technology integration](image)

Interest in technology. Almost all of the educators expressed a desire to learn more about technology. This interest in technology was visible throughout the educator's observations. They said their excitement while outlining how they use technology in the classroom and daily. This subcategory can be defined by its properties, quantity, and presence.

The number of technology tools and software that educators use daily is referred to as quantity. The amount ranges from practically none usage to extremely effective technology use. Educators stated that they used computers, iPads and other technological tools to communicate and provide the content.

The second property of interest in technology is presence. Presence refers to the quantity of technology used during instruction and class activities. The majority of educators used technology to organize and post-class materials online, create activities, plan lessons, and communicate. Furthermore, educators used the computer for online assessments, research, activity, and document creation, primarily in Google Docs, Google Sheets, and Google Classroom. Although the prevalence of technology varied slightly among educators, most shared similar experiences when discussing how technology was used in the classroom. It seems every educator has been striving to actively integrate technology into their teaching throughout the year. This seems to indicate that educators really want to use technology to better their instruction. Due to this apparent interest in technology and the increasing variety of technology tools available to schools, if educators are to use these tools to increase academic attainment, it is crucial for them to provide a great deal of professional development. This training requires educators to stay up to date with their tools and to better understand how these tools can improve their teaching practices and hence increase their learners' grasp of the subject.

Training. It is the second sub-category of readiness for technological integration. The training of educators refers to formal and informal activities that enable them to acquire the strategies used in classrooms. Training seems to have a bearing on both technological and pedagogical elements. Personal experience, professional development, and desire to learn are the best ways to describe training.

Almost all of the educators mentioned personal experience. Personal experiences aren't part of a formal professional development program but serve as a learning platform for a specific piece of technology. These unique experiences varied across all educators, but it appears that they played a role in assisting educators in growing as technology users. Thus, professional development is the second property of training.

The school district provides the educator’s professional development. This type of training focuses on using technology in the classroom for both technological and pedagogical purposes. The quantity and focus of professional development are the best ways to describe it.

Quantity is the first aspect of professional development. Professional development concerning technology integration strategies was identified as a need by educators. Extensive workshops, online training, inviting educational technology coaches from sister schools could be some good descriptions of the conditions mentioned. As one Respondent said, "I want to receive specialized training in the field of applying technology in teaching." The data suggests that educators believe they need more educational
technology training, and the quantity of learning experiences could be increased.

The second aspect of professional development is a focus. The dimension's emphasis varies from technical training alone to technological and pedagogical training. The majority of the educators' training was essentially technical in nature. This type of training mainly focused on using technology tools or software, with little emphasis on how to use technology to help learners better understand the topic. One Respondent who teaches mathematics highlighted, "I would like to acquire more information on implementing technology in teaching math in the classroom...". It appears educators appreciate this type of training. All of the educators' training activities had little to do with improving pedagogy in incorporating technology into the content they teach. Still, it was clear that they considered the training worthwhile. It is difficult to argue that this type of training does not help educators understand the technology they have access to and teach them the fundamentals of how to use it. Educators, on the other hand, receive insufficient instruction to help them convey the subject matter for which they are accountable.

The desire to learn is the final property of training. All educators expressed a desire to continue receiving training and Professional Developments. As Respondent number 37 said, "With our lives working around technology, educators would benefit from embracing the use of technology in teaching. This way, learners will be more exposed and familiar with how to incorporate these in their learnings. Educators would have ample knowledge and continuous professional developments and a variety of tech tools to make not only teaching more up to date but engaging as well."

Interestingly, the learning experiences that learners and educators have daily appeared to be directly influenced by the educators' readiness for technology integration and how educators prepare for using technology in the classroom, as well as their personal experiences with technology at the school, appeared to be very important factors in the development of an educator's technical integration skills.

6.2 Recommendations for Further Research

Based on the above, it appears that future research might address the areas where educators would benefit from promoting technology-related activities rather than technological tools themselves. Further research that identifies these activities and gives instructional suggestions may assist educators in developing and implementing a curriculum that improves the learning environment. Additionally, educators may benefit from various training and professional development models. Currently, the standard training model is used to give instructional resources to educators who want to employ technology in the classroom. Additional research may be needed to determine whether educators would benefit from an in-class instruction model that emphasizes integration techniques in the context of their classroom and curriculum. A study that documents and evaluates various professional development models could assist this school in planning appropriate educator training, thereby increasing the level of technology integration.

Furthermore, it is evident that educators in today's world use technology in their daily lives. So, do the learners. This pervasive use of technology could be considered a cultural phenomenon. Educators might use technology because they believe it is expected of learners in today's world and that they would be doing their learners a disservice if they did not. Research to see if educators are following cultural stigma to use technology in the classroom or honestly believe it will improve the learning experience would be beneficial.

Moreover, it is recommended to conduct similar research in more schools with similar profiles to observe the behavior of teachers regarding technology usage, which the results would enhance the development of technology integration aligned with the school context.

Finally, this study showed that the use of technology in school appears to be linked to a desire to provide learners with a motivating and engaging learning environment. Some educators believed that simply using technology in the classroom was enough to create this atmosphere. As technology advanced and became more prevalent, its use became less exciting, and it simply became one of the tools that this research employs to learn. A study that determines whether using technology in the classroom improves engagement and motivation or whether the initial gain is due to the novelty of using technology instead of traditional teaching methods would assist educators in
determining the most appropriate uses of technology in the classroom.

References


Causal Relationship Model of Factors Influencing Safety Behavior among Thai Flight Crew in Thailand

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Wisanupong Potipiroon²

Abstract

Purpose: A survey of the literature reveals that safety climate generally plays an important role in affecting safety-related behaviors in various safety-related contexts; nevertheless, relatively few studies have considered how safety climate could influence safety behaviors among flight crew. Research design, data and methodology: This study aims to contribute to the safety literature by investigating the impact of fleet safety climate on pilots’ safety behaviors and to investigate the mediating roles of safety knowledge and attitudinal pride. Results: Based on a sample of 610 Thai commercial pilots in Thailand, the mediation structural equation modeling analysis affirmed that fleet safety climate had a positive significant effect on Thai pilots’ safety behaviors, which are safety participation and safety compliance via an increase in their safety knowledge and attitudinal pride. Conclusions: Airlines can use the results from this study to establish and implement fleet-wide safety policies to reduce aviation risks at work. Future studies should apply multi-level analysis or qualitative method for deeper results.

Keywords: Aviation, Attitudinal Pride, Safety Behavior, Safety Climate, Safety Knowledge

JEL Classification Code: M50, M53, M54

1. Introduction

Safety has always been regarded as the ultimate goal in aviation. Even though, there are many related parties that help promote aviation safety such as cabin crew, flight engineer, mechanic, ground crew or air traffic controller, pilots are directly responsible for the safety of the entire flight operations (Durlak & Wells, 1997). Unfortunately, past studies indicate that air accidents are often caused by human errors (Helmreich, 1997; Wiegmann & Shappell, 2001). Indeed, it has been suggested that pilots are the primary cause of aviation accidents (DaRBy, 2006). According to Boeing (2020), between 1959 and 2019, there were a total of 637 fatal aviation accidents, the most of which were caused by human error, including those related to abnormal runway contact (ARC), controlled flight into terrain (CFIT) or loss of control inflight (LOC-I). Air accident causes vast loss of life and assets. It is therefore essential to gain more understanding about factors affecting pilots’ safety behaviors and what could help enhance their safety performance.

While past research indicates that several individual, team and organizational factors are associated with an increase in safety behaviors (Crichton, 2017; Curcuruto & Griffin, 2018; Gao et al., 2016; Makary et al., 2006), this study emphasizes on the role of safety climate (Hofmann et al., 2003; Kapp, 2012; Quach et al., 2021). In particular, this study draws attention to the role of fleet safety climate (Brondino et al., 2012). In aviation contexts, fleets can be considered as work groups in the same way they are in other settings. Pilots flying in the same fleets of aircrafts generally receive the same training and operate by the same safety procedures. Pilots working within the same fleets also share work-related information with their peers and their behaviors could be influenced by the social norms. This could result in a unique molding and development of safety behaviors that differ from other fleets.

To explain the positive influence of fleet safety climate, the mediating roles of safety knowledge and attitudinal pride are examined (Goudarzi et al., 2011; Helm, 2013; Nigli & Joseph, 2017; Nouri et al., 2017; Zohar,
2. Literature Review

2.1. Fleet Safety Climate and Safety Behaviors

The main emphasis of this study on how safety behaviors among Thai pilots can be further improved. According to past studies, safety behaviors can generally be divided into two specific dimensions, namely, safety compliance and safety participation. Safety participation is defined as the extent to which individuals are willing to participate in safety-related activities while safety compliance refers to the extent to which individuals willingly comply with safety procedures and regulations at work (Lu et al., 2017; Neal & Griffin, 2002). Similarly to organizational citizenship behaviors, safety participation includes such behaviors as participating in safety-related activities at work that are not formally required but are encouraged seeing that they are important to effective functioning of the organization (Daily et al., 2009). This may include joining safety promotional campaign activities and participating in safety-related events (Chmiel et al., 2017; Dahl & Olsen, 2013; Subramaniam et al., 2016). As for safety compliance, it can be considered as task-related behaviors that are formally specified in one’s job descriptions (Didla et al., 2009) and are often monitored via the work-related assignment of key performance indicators. Examples of formally required safety behaviors in aviation contexts include following specific flight procedures and adhering to strict aviation checklists (Chen & Chen, 2014; Tjosvold, 1990).

Recent research in China has shown that more conscientious workers possess more positive attitudes towards questioning about unsafe acts, which in turn leads to more safety behaviors at work (Tao et al., 2021). Although research on the influence of these individual-level factors can have significant implications for recruitment and selection processes, this study argues that they are relatively difficult for the organization to manipulate. This study focuses on the role of safety climate, which falls under a proximal interpersonal and professional settings for employees in several work group (Kapp, 2012; Navarro et al., 2013; Zohar, 2000). While past research has generally indicated that different levels of safety climates can lead to more desirable safety behaviors (Agnew et al., 2013; Morgeson et al., 2014; Oah et al., 2018), the focus of this research, in aviation context, is on safety climate at the group level, or fleet safety climate, which refers to the shared perceptions regarding safety requirements and norms among pilots within the same fleet of aircrafts (KAPP, 2012).
In particular, fleet safety climate can significantly manipulate pilots’ safe behaviors as fleets represent their most close proximal social contexts at work. Pilots within the same fleets are trained to operate the same type of aircrafts that they are assigned to fly. They are also trained to follow the same standard operating procedures (SOPs) and depend upon the same technical knowledge. For example, a pilot operating a turbo prop aircraft like Q400 or any Short Take-off and Landing aircraft (STOL) has to be properly informed that such aircrafts can hardly handle cross-wind landings owing to its aerodynamic performance limitations while a jet aircraft like Boeing 737 can better handle cross-wind or even downwind landings due to better engine performance (Riebe, 1973). These technicality and complications require different training time and safety protocols. Over time, the emphasis on this safety-related practices can probably give rise to the emergence of safety norms that can affect pilots’ flight behaviors. Therefore, it is possible to assume that different fleets of aircraft will have significantly different safety requirement levels (Zohar & Luria, 2010).

In this matter, past research indicates that safety climate can lead to several positive safety-related outcomes. For example, group safety climate can reduce risk perceptions among manufacturing workers in South Korea (Oah et al., 2018). In another context, group safety climate can predict safety performance among workers in mega-construction projects in Australia by improving their psychological contract perceptions (Newaz et al., 2019). Additionally, in a notable longitudinal study, group safety climate can promote safer driving behaviors among truckers, which in turn leads to a favorable reduction in future lost days due to injury (J. Lee et al., 2019). Despite these interesting findings, there are few studies that have examined the psychological mechanisms that underlie the influence of group safety climate. Below, there will be discussions on how and why fleet safety climate may exert its positive influence on pilot’ safety behaviors.

2.2. The Mediating Role of Safety Knowledge and Attitudinal Pride

Safety knowledge is defined as an ability to know and recognize issues regarding the importance of safety in work process (Guo et al., 2016). In aviation, safety knowledge could play an important role in an unforeseen event such as in-flight engine failure, adverse weather conditions or terrorist threats. Pilots with safety knowledge will be able to recall what they have learned and act according to rectify the situations. The way flight crews react to adversity and determine the suitable choice is crucial to safe flight operations (You et al., 2013). Safety decision-making especially during undesirable situations can be recalled rapidly when one possesses proper safety knowledge (Ji et al., 2017). This is comparable to System 1 thinking, which is an unconscious mechanism that allows one’s knowledge to be retrieved quickly when needed (Milkman et al., 2009). Apart from the technical knowledge and flying skills gained directly through flight school, pilots’ learning will continue to expand once they join an airline. In particular, according to social learning theory, this study proposes that fleets provide an essential social context that shapes individuals’ knowledge and shapes their behaviors as time goes by (Bandura, 1977). First, we argue that informal learning constantly takes place at the fleet level through a socialization process. Pilots socialize and share work-related information with peers in the same fleets. For example, in the event of engine failure inflight, operating a Boeing B747 may require different engine restart procedure due to different number of engines compared to Airbus A320 and B747 pilots can share this information among peers within their fleet. Secondly, we propose that pilots will try to emulate the behaviors of their peers to ensure that their behaviors is consistent with the fleet’s accepted norms.

Attitudinal pride refers to the pleasure taken in being associated with employer (Helm, 2013, p. 544). Such pride is said to emerge when one is given information to help evaluate organizational membership in a positive way (Ng, Yam, & Aguinis, 2019). According to social exchange theory, it posits that when a party receives a positive treatment from another, they will feel obligated to reciprocate positive behaviors (Blau, 1964). In the organizational context, such behaviors may include showing a strong commitment to organizational missions and devoting a significant amount of their resource to achieve work goals (Best & Kahn, 1993). Attitudinal pride can be considered as a type of positive attitude that reflects individuals’ gratitude toward the organization (Gouthier & Rhein, 2011). In particular, this study posits that fleet safety climate can induce feelings of pride among pilots, which will in turn lead to safer work behaviors. There could be several reasons for this phenomenon. Firstly, in aviation contexts, fleet safety climate can be considered as a
reflection of the overall emphasis among pilots on passenger safety. When safety of passengers is regarded as the ultimate goal of work units, it is likely that pilots will take greater pride in their jobs and be proud to work for their airline, such that they will take their work more seriously and professionally (Borst & Lako, 2017; Kraemer et al., 2017). Secondly, the emphasis on safety could also be considered as the employer’s obligation to maintain safety standards to ensure the pilots’ safety, which could in turn prompt the latter to feel grateful for the employer’s concerns for their safety and to engage in more positive behaviors (Newaz et al., 2019). Thirdly, when pilots fly safely, passengers and other stakeholders will likely appreciate not only the pilots who fly the aircrafts but also the airlines that employ them. Such appreciation may further amplify feelings of pride and safety performance among pilots.

Empirically, safety knowledge has been shown to be an important mediating psychological mechanism in the relationship between safety climate and safety behaviors (Shen et al., 2017). This work seeks to ensure such findings in the pilot contexts. Apart from this, there is no direct empirical evidence regarding the influence of attitudinal pride on workers safety-related behaviors; however, past studies have shown that attitudinal pride is related to several work-related attitudes such as job satisfaction (Helm, 2013) and also task performance (Seyedpour et al., 2020). Based on these reasons, the theoretical model has been developed, which is portrayed in Figure 1 and this study also hypothesizes that:

Hypothesis 1: Safety knowledge play mediation role in the relationship between fleet safety climate and pilots’ safety behaviors.

Hypothesis 2: Attitudinal pride play mediation role in the relationship between fleet safety climate and pilots’ safety behaviors.

Hypothesis 3: There is a significant relationship between fleet safety climate and safety compliance and safety participation, whereas safety knowledge and attitudinal pride are accounted for mediations.

Figure 1 Conceptual model developed by authors’ literature review and hypotheses

3. Methodology

3.1. Overview of Sample and Data Collection

Research hypotheses were tested by using a sample of commercial pilots in Thailand. This is an essential sample for investigating air safety because several aviation-related accidents in Thailand are said to be related human error (Charoensook, 2018; K.-S. Lee, 2009). Samples were drawn from both airplane in commercial airlines as well as helicopter in offshore transportation (IFR) and general aviation (VFR) industries totaling in seven air carriers in Thailand. Inclusion criteria is that samples will be only derived from Thai pilots regardless of aircraft types. Apart from this will be excluded from the sample selection. Currently, according to the data from Civil Aviation Authority of Thailand, there are 9,209 active civilian pilots in Thailand. 6,048 pilots hold commercial pilot license and 3,161 pilots hold air transport pilot license. After being allowed access from each of the airline companies’ HR departments, self-administered questionnaire surveys with rating scale were sent to the pilots through each company intra email system. Data collection started from January to March 2021. Surveys questionnaires with rating scale was divided into 6 parts including fleet safety climate, attitudinal pride, safety knowledge, safety participation, safety compliance and demographic data. Advantages of using email-based surveys are that the anonymity of the respondents could be confirmed and surveys can be directly sent to target samples. Seven hundred surveys were sent out. In total, six hundred and ten responses were completely returned. This specific sample size was considered a priori by considering the suitable sample size for analyzing structural equation modelling (SEM) as the minimum acceptable sample size for an analysis should be at least 200 or about 8-15 cases per manifest indicator, whichever is larger (Kline, 2015).
The original rating scales were developed in English and they were all translated into the Thai. A complete list of items and their measurement properties are presented in Table 2. Fleet Safety Climate (\(\alpha = 0.95\)) was measured using the 3-item scale adapted from the study by Neal and Griffin (2006). Attitudinal pride (\(\alpha = 0.95\)) was measured using the 3-item scale developed by Gouthier & Rhein (2011). Safety Knowledge (\(\alpha = 0.92\)) was measured using the 3-item scale developed by Guo (2016). Safety Participation (\(\alpha = 0.92\)) was measured using the 7-item scale developed by Lu (2017). Safety Compliance (\(\alpha = 0.94\)) was measured using the 3-item scale developed by Neal and Griffin (2006). All rating scales were based on a 5-point Likert type format (1 = strongly disagree, 5 = strongly agree). Hypotheses were tested by using structural equation modeling in R (Team, 2014). Several indices were used to assess the model fit (Browne & Cudeck, 1993). After the fit of the measurement model was assessed, the analysis estimated the hypothesized structural model. The model involves testing the partial mediation structural model. This model results were used to test the indirect effects of fleet safety climate on safety participation and safety compliance via safety knowledge and attitudinal pride.

4. Results and Discussion

4.1. Descriptive Statistics

For the descriptive properties of the samples. Most respondents were male (93.60%), holding a bachelor’s degree or equivalent (75.60%). Most of the pilots received sponsorship for flight training (57.70%), worked as Pilot-in-Command position (51.30%), obtained Air Transport Pilot License (53.30%) and operated Fixed-wing Aircraft (76.60%). These six demographic variables were also controlled for in the analyses. The result indicated that none of these demographic variables had significant effects on safety compliance and safety participation. Hence, they were not included in the further analysis. The analysis results shown below were remain unchanged with or without these demographic controlling variables.

4.2. Confirmatory Factor Analysis

Measurement model in this study was fitted with empirical data as per model fit indices (\(\chi^2 = 551.36, \text{df} = 142, p < .000; \text{relative } \chi^2 = 3.88; \text{GFI} = .91; \text{CFI} = .95; \text{TLI} = .94; \text{RMSEA} = .06; \text{SRMR} = .06\)). The discriminant validity of the constructs was assessed by using the square roots of the Average Variance Extracted (AVE) (Fornell & Larcker, 1981). As shown in Table 1, the size of the AVE values was greater than the correlations shared between the construct and other constructs in the model. This indicated the discriminant validity among constructs. In terms of convergent validity, the factor loadings on each construct were examined. The standardized factor loadings were all above .60, ranging from .62 to .92. The size of the Average Variance Extracted (AVE) for each variable was also acceptable at the recommended value of .50. Composite Reliabilities (CR) of constructs also ranged from .81 to .95, exceeding the recommended value of .60 (Bagozzi & Yi, 1988). Besides, Cronbach’s alphas showed satisfactory levels of reliability of internal consistency, ranging from .87 to .93 (Hulland, 1999).
Table 1: Means, Standard Deviations, Bivariate Correlations, Standardized Multiple Correlation and Average Variance Extracted

<table>
<thead>
<tr>
<th>Variables (n = 610)</th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Fleet Safety Climate (FSC)</td>
<td>2.90</td>
<td>.94</td>
<td>(1.87)</td>
<td>.55</td>
<td>.63</td>
<td>.49</td>
<td>.26</td>
</tr>
<tr>
<td>2. Safety Knowledge (KNW)</td>
<td>3.77</td>
<td>.69</td>
<td>.60</td>
<td>(.84)</td>
<td>.44</td>
<td>.48</td>
<td>.42</td>
</tr>
<tr>
<td>3. Attitudinal Pride (ATT)</td>
<td>3.72</td>
<td>.60</td>
<td>.68</td>
<td>.48</td>
<td>(.91)</td>
<td>.38</td>
<td>.39</td>
</tr>
<tr>
<td>4. Safety Compliance (COM)</td>
<td>3.53</td>
<td>.70</td>
<td>.55</td>
<td>.54</td>
<td>.42</td>
<td>(.83)</td>
<td>.25</td>
</tr>
<tr>
<td>5. Safety Participation (SPT)</td>
<td>3.84</td>
<td>.75</td>
<td>.28</td>
<td>.46</td>
<td>.42</td>
<td>.28</td>
<td>(.77)</td>
</tr>
</tbody>
</table>

Note. All values in this table are significant at p < .00; Numbers below diagonal line are bivariate correlations; Number over diagonal line are standardized multiple correlations shared between the constructs; Numbers in the diagonal line in parentheses are square roots of AVEs, which are greater than the size of standardized multiple correlations shared between the constructs.

Table 2: Estimated Factor Loadings, Standardized Factor Loadings, AVE, CR and Cronbach’s Alpha

<table>
<thead>
<tr>
<th>Variables</th>
<th>Items</th>
<th>Estimated Loadings</th>
<th>Standard Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fleet Safety Climate (FSC)</td>
<td>AVE = .77; CR = .91; α = .91</td>
<td>1. My fleet places a strong emphasis on workplace health and safety. (FSC1) 1.00</td>
<td>0.88</td>
</tr>
<tr>
<td></td>
<td>2. Safety is given a high priority in my fleet. (FSC2) 0.98</td>
<td>0.84</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. My fleet considers safety to be important. (FSC3) 1.03</td>
<td>0.91</td>
<td></td>
</tr>
<tr>
<td>Safety Knowledge (KNW)</td>
<td>AVE = .72; CR = .88; α = .88</td>
<td>1. I know how to maintain or improve workplace health and safety. (KNW1) 1.00</td>
<td>0.85</td>
</tr>
<tr>
<td></td>
<td>2. I know how to reduce the risk of accidents and incidents in the workplace. (KNW2) 1.08</td>
<td>0.91</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. I know what are the hazards associated with my jobs and the necessary precautions to be taken while doing my job. (KNW3) 0.92</td>
<td>0.79</td>
<td></td>
</tr>
<tr>
<td>Attitudinal Pride (ATT)</td>
<td>AVE = .83; CR = .93; α = .93</td>
<td>1. I feel proud to work for my organization. (ATT1) 1.00</td>
<td>0.92</td>
</tr>
<tr>
<td></td>
<td>2. I feel proud to contribute to my organization’s success. (ATT2) 0.91</td>
<td>0.89</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. I feel proud to tell others for which organization I am working. (ATT3) 1.04</td>
<td>0.92</td>
<td></td>
</tr>
<tr>
<td>Safety Compliance (COM)</td>
<td>AVE = .70; CR = .87; α = .87</td>
<td>1. I always use checklist. (COM1) 1.00</td>
<td>0.76</td>
</tr>
<tr>
<td></td>
<td>2. I use the correct safety procedures for carrying out my job. (COM2) 1.10</td>
<td>0.86</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. I ensure the highest levels of safety when I carry out my job. (COM3) 1.03</td>
<td>0.88</td>
<td></td>
</tr>
<tr>
<td>Safety Participation (SPT)</td>
<td>AVE = .60; CR = .91; α = .90</td>
<td>1. Attending safety meetings. (SPT1) 1.00</td>
<td>0.62</td>
</tr>
<tr>
<td></td>
<td>2. Volunteering for safety committees. (SPT2) 1.33</td>
<td>0.77</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Participating in setting safety goals. (SPT3) 1.55</td>
<td>0.82</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. Making safety-related recommendations about work activities. (SPT4) 1.52</td>
<td>0.83</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. Encouraging co-workers to get involved in safety issues. (SPT5) 1.00</td>
<td>0.65</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6. Rising safety concerns during planning session. (SPT6) 1.55</td>
<td>0.83</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7. Expressing opinions on safety matters even if others disagree. (SPT7) 1.42</td>
<td>0.79</td>
<td></td>
</tr>
</tbody>
</table>

Note. AVE = average variance extracted; CR = composite reliability; α = Cronbach’s alpha; All factor loadings are significant at p < .00
4.3. Structural Equation Model

According to adequate reliability and validity of measurement model, the hypothesized structural model was then examined. All paths in the model were estimated as shown in Table 3.

Mediation only model was fitted with empirical data as per model fit indices ($\chi^2 = 590.32$, $df = 145$, $p < .000$; relative $\chi^2 = 4.07$; GFI = .90; CFI = .94; TLI = .93; RMSEA = .07; SRMR = .06). The results showed that fleet safety climate had direct positive effects on attitudinal pride and safety knowledge ($\beta = .81$, $p < .000$; $\beta = .49$, $p < .000$, respectively). Attitudinal pride and safety knowledge were positively related to safety participation ($\beta = .16$, $p < .000$; $\beta = .29$, $p < .000$, respectively) and attitudinal pride and safety knowledge were also positively related to safety compliance ($\beta = .12$, $p < .000$; $\beta = .33$, $p < .000$, respectively). Overall, this model explained 41%, 32%, 22% and 28% of the variance in attitudinal pride, safety knowledge, safety participation and safety compliance respectively.

<table>
<thead>
<tr>
<th>Paths &amp; $R^2$</th>
<th>Estimated Loadings</th>
<th>Standard Loadings</th>
<th>Coefficient of Determination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fleet Safety Climate &gt; Safety Knowledge</td>
<td>.49</td>
<td>.56</td>
<td>-</td>
</tr>
<tr>
<td>Fleet Safety Climate &gt; Attitudinal Pride</td>
<td>.81</td>
<td>.64</td>
<td>-</td>
</tr>
<tr>
<td>Safety Knowledge &gt; Safety Compliance</td>
<td>.33</td>
<td>.40</td>
<td>-</td>
</tr>
<tr>
<td>Attitudinal Pride &gt; Safety Compliance</td>
<td>.16</td>
<td>.22</td>
<td>-</td>
</tr>
<tr>
<td>Safety Knowledge &gt; Safety Participation</td>
<td>.29</td>
<td>.31</td>
<td>-</td>
</tr>
<tr>
<td>Attitudinal Pride &gt; Safety Participation</td>
<td>.26</td>
<td>.26</td>
<td>-</td>
</tr>
<tr>
<td>Safety Knowledge $R^2$</td>
<td>-</td>
<td>-</td>
<td>.32</td>
</tr>
<tr>
<td>Attitudinal Pride $R^2$</td>
<td>-</td>
<td>-</td>
<td>.41</td>
</tr>
<tr>
<td>Safety Compliance $R^2$</td>
<td>-</td>
<td>-</td>
<td>.28</td>
</tr>
<tr>
<td>Safety Participation $R^2$</td>
<td>-</td>
<td>-</td>
<td>.22</td>
</tr>
</tbody>
</table>

All factor loadings are significant at $p < .00$

In terms of the indirect effects, contrast effect and total effect of mediation only path analysis as shown in Table 4, the results revealed that the indirect effects of fleet safety climate on safety compliance and safety participation via attitudinal pride were also significant. However, contrast effects between 4 indirect effects were not significant. Total effect of path analysis was significant. Therefore, all hypotheses were supported.

<table>
<thead>
<tr>
<th>Indirect Effect, Contrast Effect and Total Effect</th>
<th>Coeff</th>
<th>Std. Coeff</th>
<th>SE</th>
<th>z</th>
<th>p - value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indirect Effect 1 (FSC &gt; KNW &gt; COM)</td>
<td>0.16</td>
<td>0.23</td>
<td>0.02</td>
<td>7.63</td>
<td>.00***</td>
</tr>
<tr>
<td>Indirect Effect 2 (FSC &gt; KNW &gt; SPT)</td>
<td>0.14</td>
<td>0.17</td>
<td>0.02</td>
<td>6.07</td>
<td>.00***</td>
</tr>
<tr>
<td>Indirect Effect 3 (FSC &gt; ATT &gt; COM)</td>
<td>0.10</td>
<td>0.14</td>
<td>0.02</td>
<td>4.99</td>
<td>.00***</td>
</tr>
<tr>
<td>Indirect Effect 4 (FSC &gt; ATT &gt; SPT)</td>
<td>0.13</td>
<td>0.16</td>
<td>0.02</td>
<td>5.52</td>
<td>.00***</td>
</tr>
<tr>
<td>Contrasting Indirect Eff.1 and Indirect Eff.3</td>
<td>0.06</td>
<td>0.08</td>
<td>0.03</td>
<td>1.85</td>
<td>.06</td>
</tr>
<tr>
<td>Contrasting Indirect Eff.2 and Indirect Eff.4</td>
<td>0.00</td>
<td>0.00</td>
<td>0.03</td>
<td>0.18</td>
<td>.85</td>
</tr>
<tr>
<td>Total Effect</td>
<td>0.54</td>
<td>0.71</td>
<td>0.04</td>
<td>12.42</td>
<td>.00***</td>
</tr>
</tbody>
</table>

Note. *** $p < .00$

Objectives of this study are to examine the causal relationship of safety climate and behaviors and examine mediation roles of safety knowledge and attitudinal pride. This study results found that the use of fleet safety climate had a positive effect on pilots’ safety behaviors by enhancing their perceptions of attitudinal pride and safety...
knowledge. Hence, both hypotheses were supported. Theoretical implications and practical implications will be discussed below.

4.4. Theoretical and Practical Implications

Theoretically, this study adds to the concurrent knowledge in the behavioral science and safety literature by focusing on the significance of fleet safety climate on pilots’ safety behaviors. Based upon the results, fleet safety climate could be considered as another essential aspect of teamwork relationship that makes team members feel that they are on the same boat and need to work together in order to ensure a better flight operation as stated in several past studies (Chen & Chen, 2013, 2014). Additionally, the results help clarify the important role of attitudinal pride and safety knowledge in the relationship between fleet safety climate and safety behavior. In particular, fleet safety climate was found to positively influence perception of attitudinal pride and safety climate. Moreover, whereas perception of attitudinal pride and safety climate were found to describe significant variance in the two forms of safety behaviors as confirmed by past studies (Ng et al., 2019; Oo et al., 2018). The results also revealed that perceptions of safety knowledge played stronger role in inducing positive safety behaviors than attitudinal pride. It is possible that knowledge involves expressing a learning experience and recall what they have learn to response to the situation at work. Several past studies also confirmed this result regarding safety knowledge (Latham & Saari, 1979; Zohar, 1980). To the best of authors knowledge, this study is among the very first studies that incorporate attitudinal pride as a mediator in this type of safety causal relationship.

Practically, to the concept of fleet safety climate, pilots always spend most of their flying time engaging in collaborative flying activities in the cockpit and they feel that, as part of team, no one will never understand what they do except for those pilots within the same fleet. Therefore, by promoting positive fleet safety climate, this could possibly enhance safety behavior both safety compliance and safety participation through safety knowledge and attitudinal pride within the same fleet.

4.5. Limitations

Despite the novel findings of this research, several limitations could be expected. Firstly, this study considers the formation of individuals’ perception on a level of safety climate, attitudinal pride and safety knowledge and safety behaviors, future research might extend the result of this study by using a multilevel method as perceptions of psychological-related variables could be more efficiently interpreted at both individual and group levels of analysis (Pohl & Galletta, 2017). Secondly, the results are obtained by analyzing the quantitative data. There might be some hidden implications that quantitative analysis cannot dig into or reveal. Future research might adopt qualitative research method to further amplify analysis result into a richer and deeper aspect. Thirdly, in this study, the number of different fleets of different types of aircraft both fixed wings and helicopters are not listed. Moreover, the number of pilots operating each type of aircraft and the number of pilots operating more than one fleet are not classified. Future studies should include these factors into an analyses process.

5. Conclusion

The study has examined the causal relationship between pilots’ perception of fleet safety climate, attitudinal pride, safety knowledge, safety compliance and safety participation. The results imply that perceptions of safety climate play an essential role in motivating pilots to perform safety behaviors. The partial mediating effects that attitudinal pride and safety knowledge have on the causal relationship among pilots’ perception of their companies’ safety climates have also been affirmed. The conceptual model proposed earlier is considered as among the very first attempt to explore the causality of those safety-related factors in Thai commercial aviation context. The findings from this study have a number of theoretical and practical implications as aforementioned.

Acknowledgements

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American Medical Directors Association, 22(2), 388–392.


Factors Affecting Customer’s Purchase Decision on “Chapter” E-Publication Purchase in Thailand

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Preecha Methavasaraphak²

Abstract

Purpose: While physical book industry is declining, E-Publication industry is developing. New format of E-Publication is out in the form of Chapter E-Publication. However, with limited capital, it should be considered whether investing in Chapter E-Publication platform would be wiser, or other traditional platforms should be pursued. This research aimed to discover the factors affecting customer decision making on Chapter E-Publication, as well as whether customers would considered repurchase the same story in different formats in Thailand. Research design, data and methodology: Using quantitative surveys from 396 respondents who experienced purchasing Chapter E-Publication who lived in Thailand, descriptive, correlation, and regression analyses were done. Results: From the analysis, the researcher found that there were five factors that affected the purchase decision of Chapter E-Publication, which are Price, Perceived Ease of Use, Customer Review, Trust, and Perceived Usefulness, respectively. The result could be explained that 71.2% (R² = .712) of the variation affect in purchase decision of the Chapter E-Publication. In addition, people also had tendency to purchase another format of the publication for the collection purpose. Conclusions: Few recommendations were made for publisher and platform owners to take into consideration for way to survive and maintain long-term sustainability with the customers.

Keywords: Chapter E-Publication, E-Book, Physical Book, Purchase Decision, Intention to Purchase

JEL Classification Code: M11, M31, M50

1. Introduction

Electronic reading has been booming in the publishing industries, with fast growing on many channels (Renear & Salo, 2003; Vasiliev et al, 2009). As the access to the technology increased, as well as the lower investing capital, the trend of physical publication has been down-hill since everyone tends to shift to online channels (Boonthong, 2020.) It is further stated that the rise of Covid-19 pandemic even accelerated the phenomenon; many publishers closed, and even Association of Publisher and Booksellers Association of Thailand (PUBAT) had announced to arrange online book fair along with the physical book fair. The pandemic forced a large group of population, including those who never engaged to digital platform before, to enter the online market. (Pigabyte, 2021) According to Alvaro Del Pozo, Vice President in International Marketing of Adobe, Digital channel will be the main marketing channel that would be consistency used even post-pandemic and will be the generator to help with the business growth.

Nattawut Puengcharoenpong, CEO & Co-Founder of Ookbee, has developed his business from e-book products, and now owning several digital platforms such as Tanwalai, Joylada, and Fiction Log, which accounted of 10 million users in total, that share the characteristic of “Professional User Generated Content (PUGC)”, like YouTube that develop platforms for the content creator to generate their income. He saw the market trend of “User Generated Content”, since more people owns the smartphone and have access to the internet, which they can also create their own content. (Sae-Ngow, 2020) He made the statement of “We need to understand that Gen Y and above are the market that have money but not time, while the younger generations have time, but not money.” That is why Mr. Nattawut now developed many of his platform, not offering only “Whole Book E-Publication”, but also selling the content with cost per “Chapter.”
While many previous studies have confirmed the positive relationship on the factors such as easiness to use and price and the decision to purchase “Whole Book” or “Complete Book” E-Publication (Jubanjong, 2017; Kiatjaroonsiri, 2019), it is coming under question whether the same would apply to the “Chapter” E-Publication, which are mostly available for the fictional genre, and whether the customers would repurchase the complete book upon the completion of the story.

1.1. Research Objectives

The research objectives are to study the factors related and affecting with Customer Decision Making on “Chapter” E-Publication Purchase, as well as to study the Customer’s Purchase Intention on “Complete Book” after the full version of “Chapter” E-Publication Purchase is available.

2. Literature Review

2.1. E-Book/ E-Publication

E-Books have since brought evolutionary experience to the book publishing industry, offering the “affordance” to overcome the physical limitation of printed book using information technology (D’Ambra et al., 2017). Unlike other innovations, which took many years to be accepted by the public, E-Book seemed to take short span of time to be accepted and adopted into the society. Wilson (2016), however, raised the point that E-Book took after the long development of computers and portable devices such as tablets, prior to its popularity, as the concept and performance of E-Book is wholly dependent on the devices’ development. E-Book demand, according to Wilson (2016), is also driven by the social necessity such as technological development demands, or readily accessibility function of E-Book, as well as pressure from the high cost of necessary textbook for students.

2.2. Chapter -E-Publication

Chapter – E-Publication, such as Joylada application, is accessible only on mobile devices or PC, and required the internet access. Under the fictional genre, a novel is divided into several chapters, containing text of many formats, such as story, chat room, and even connecting itself to the GIF or YouTube Video, which could not be found on printed, or even the “traditional version” of E-Publication (Kanthawong et al., 2021). While this is the User-Generated Content (UGC), the platform also provide channel for “Writer” to gain income, and therefore lead to more sustainable traffic on the platform. Normally, Chapter E-Publication would be available on such platform business, which like Amazon for e-commerce business, Airbnb for real estate business, applies for the publication business (Moazed, 2020).

2.3. Purchase Intention

Purchase intention refers to as an influential shopping tendency and shopping process that is controlled by the consumer themselves (Rook & Fisher, 1995). The enjoyment could stimulate the environment and stir up the impulse to act (Zhang et al., 2020). As Chapter E-Publication in this context mostly apply to the fictional genre, which written mainly for entertainment purpose, “Enjoyment” may be the key factors, topping up with other factors as appeared in this research, that stimulate the purchase intention of the whole book publication once the Chapter E-Publication is completed.

2.4. Customer Review

Customer review refers to the previous customers’ comment on the product or brand, in this case, may apply to the platform where the E-Publication is located, or even in the E-Publication itself. The customer reviews affect directly on the online transaction (Guo et al., 2016). Online review is considered electronic word-of-mouth (eWOM), that could increase or decrease the diffusion of business within the market (Plotkina & Munzel, 2016). As a part of information search, the customers may look for the previous consumer’s review as the alternative to get the first evaluation of the product or service they are interested in. Many studies as mentioned by Plotkina & Munzel (2016) confirm the positive result that positive customer review increase the higher purchase intention.

2.5. Media Richness

Daft & Lengel (1984) developed the theory that the media richness is differed by “the ability of information to change understanding within a time interval.” Face to Face, as easiest communication method, is considered richest, while others may be limited by the amount of message that could be transferred (vocal, gesture), or the amount of time required for feedback (email, text). Using richer media would suit more on the complicate matters, while lean media would be better for the less complicated task. Lim & Benbasat (2000) saw that media richness has positive effect
on perceived usefulness. Lai & Chang (2011) found that media richness is a significant factor that contributes the intention to use e-book readers.

2.6. Perceived Ease of Use & Perceived Usefulness

Davis (1986) mentioned Perceived Usefulness and Perceived Ease of Use as the two indicators that led to technology’s (such as E-Publication) recognition, with Perceived Usefulness could improve the user’s performance and experience, and Perceived Ease of Use is the belief on using less effort to utilize the product. Davis (1986) further stated that Perceived Ease of Use could affect Perceived Usefulness, where if the platform is easier to use, it is perceived to be more useful to the users.

2.7. Price

Price refers to the value setting for the product or service. Customers developed their internal reference prices after checking through various sources (Saricayir, 2018). It is stated further that if customers have positive perception on price, it will increase the likelihood to buy. E-Publication, as displayed on Meb market, Thailand’s top E-Book market, always mentioned the price “xx percent lower than cover page price”, which is the price of sales in the physical bookstores. In addition, for the normal “Chapter” E-Publication, normally it would cost within one digit of Thai Baht per chapter, which unless it is complete, it would be harder for customer to determine the price between purchased chapter by chapter vs. purchase the whole (E-books).

2.8. Trust

Online Trust differs from Offline Trust mainly on physical distant between buyer and seller (Yoon, 2002), as well as limited feedback and learning capability (Eccles & Nohria, 1992). With the increase access capability of consumer to the internet, they are now offered with various choice when it comes to online purchase. This caused “Trust” to become one of the key factors that could lead to online purchase (Herath & Wijesundara, 2008).

3. Research Hypothesis

The researcher developed seven hypotheses based on the conceptual framework, which were summarized as followed.

H1: Customer Review affects purchasing decision of Chapter E-Publication Readers in Thailand.

H2: Media Richness affects purchasing decision of Chapter E-Publication Readers in Thailand.

H3: Perceived Ease of Use affects purchasing decision of Chapter E-Publication Readers in Thailand.

H4: Perceived Usefulness affects purchasing decision of Chapter E-Publication Readers in Thailand.

H5: Price affects purchasing decision of Chapter E-Publication Readers in Thailand.

H6: Trust affects purchasing decision of Chapter E-Publication Readers in Thailand.

H7: Chapter E-Publication Purchaser in Thailand has intention to purchase the completed version once it is available in the store.

4. Research Methodology

The research is conducted using a quantitative approach via online survey to collect the data from people who have experience purchasing the “Chapter” E-Publication on the online platform in Thailand.

Prior to distributing 396 questionnaires, the researcher conducted a pretest sample of 35 respondents to test the reliability of the questions. The respondents were selected using convenience sampling and snowball sampling. The reliability test was later conducted through the Statistics program, which provided the Cronbach’s Alpha. After that, the descriptive, correlation, and regression analyses.
4.1. Result of Reliability Test

Table 1: Summary of reliability in each variable for pre-test (N = 35)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Cronbach’s Alpha</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Review</td>
<td>.704</td>
<td>Reliable</td>
</tr>
<tr>
<td>Media Richness</td>
<td>.728</td>
<td>Reliable</td>
</tr>
<tr>
<td>Perceived Ease of Use</td>
<td>.902</td>
<td>Reliable</td>
</tr>
<tr>
<td>Perceived Usefulness</td>
<td>.898</td>
<td>Reliable</td>
</tr>
<tr>
<td>Price</td>
<td>.737</td>
<td>Reliable</td>
</tr>
<tr>
<td>Trust</td>
<td>.731</td>
<td>Reliable</td>
</tr>
<tr>
<td>Purchase Decision</td>
<td>.803</td>
<td>Reliable</td>
</tr>
<tr>
<td>Intention to Purchase a Completed Version</td>
<td>.881</td>
<td>Reliable</td>
</tr>
</tbody>
</table>

As Table 1 shows, the Cronbach’s Alpha of all eight variables are more than .70, it implied that the questions of the variables are acceptable.

5. Result of the study

From the total of 396 respondents, it was shown that majority of the respondents use more than one E-Publication platforms. Counting those accumulated more than 10 percent are users of Joylada (18%), Kindle (17.9%), Dek-D (17.7%), and Fiction Log (10.6%). The remaining six platforms have less than 10% users of the respondents. In term of years of usage on the first platform they have ever used, majority of people have been using the platform for 5-8 years (51.3%), 1 – 4 years (37.6%), less than 1 year (9.1%), and above 8 years (2%).

The respondents 77.8% would repurchase the complete version of E-Publication in other format if they already purchase the Chapter version. Respondents were provided with multiple choices and could answer more than one reasons, which include for collection (60.9%), for read in different situation (24.6%), and forget than I already have a set (14.6%).

The correlation shown that the value of all independent variables (Customer Review, Media Richness, Perceived Ease of Use, Perceived Usefulness, Price, and Trust) had strong relationship with the Purchase Decision as Independent Variable of those who have purchase Chapter E-Publication in Thailand, with Price having the highest correlation level at .793. Similarly, it also showed a strong relationship that those who purchase Chapter E-Publication also has Intention to Purchase a Complete Book later, with correlation level of .710.

In Table 2 below, the Adjusted R Square was value of .711, meaning that 71.1% of the variable affect the Purchase Decision of Chapter E-Publication for those who has experience purchasing from the platform in Thailand. While Table 3 contain .000 significant level, for reject null hypothesis and accept the alternative hypothesis.

Table 2 – Model Summary from Multiple Regression Analysis

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.846*</td>
<td>.715</td>
<td>.711</td>
<td>.29667</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Trust, Media Richness, Perceived Ease of Use, Customer Review, Perceived Usefulness, Price

Table 3 – ANOVA from Multiple Regression Analysis

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>86.056</td>
<td>6</td>
<td>14.343</td>
<td>162.959</td>
<td>.000*</td>
</tr>
<tr>
<td></td>
<td>34.237</td>
<td>389</td>
<td>.088</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>120.293</td>
<td>395</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Trust, Media Richness, Perceived Ease of Use, Customer Review, Perceived Usefulness, Price
b. Dependent Variable: Purchase Decision

As for Table 4, the Adjusted R Square value was .503, meaning 50.3% of the variation affect the Intention to Purchase a Complete Book for those who has experience purchasing a Chapter E-Publication from the platform in Thailand. While Table 5 contained .000 significant level, meaning the researcher could reject null hypothesis.
In the Table 6 (H1o – H6o) below showed the significant value, or “p-value” to examine the statistically significant on Purchase Decision of a Chapter E-Publication or not. The significant value of the of Customer Review, Perceived Ease of Use, Perceived Usefulness, Price, and Trust are less than .050, meaning they have statistically significant affecting the Purchase Decision of Chapter E-Publication. However, the significant value of Media Richness was more than .050, which means there was no statistical significantly affecting the Purchase Decision of Chapter E-Publication. In addition, from the Standardized Beta Coefficient of the five statistically significant independent variables in Customer Review, Perceived Ease of Use, Perceived Usefulness, Price, and Trust are .172, .177, .112, .302, and .164, respectively.

Moreover, Table 6 (H7o) also represented the Single Linear Regression Result. The significant value of the of Purchase Decision on Chapter E-Publication was less than .050, meaning it had statistically significant affecting the Intention to Purchase a Complete Book after Purchase Chapter E-Publication. In addition, from the Standardized Beta Coefficient of the Purchase Decision of Chapter E-Publication as the independent variable was .710.
The second round was summarized in Table 7 and Table 8 by excluding Media Richness. The Adjusted R Square was .712, which could explain that 71.2% of the variation affect the Purchase Decision of Chapter E-Publication for those who has experience purchasing from the platform in Thailand. It could be explained by the five independent variables in this research, including Customer Review, Perceived Ease of Use, Perceived Usefulness, Price, and Trust. However, there were another 28.8% of the variation affect in the Purchase Decision of those who have experience purchasing Chapter E-Publication in Thailand, which could be explained by other independent variables. While Table 26 contain .000 significant level, meaning the researcher could reject null hypothesis and accept the alternative hypothesis.

Table 7 – Model Summary from Single Regression Analysis (2nd Round)

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.846*</td>
<td>.715</td>
<td>.712</td>
<td>.29631</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Trust, Customer Review, Perceived Ease of Use, Perceived Usefulness, Price

Table 6 – The Summary of Hypothesis Testing Results

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Significant Value</th>
<th>Standardized Coefficients Beta</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1o: Customer Review does not affect purchasing decision of Chapter E-Publication Readers in Thailand</td>
<td>.001</td>
<td>.172</td>
<td>Fail to accept</td>
</tr>
<tr>
<td>H2o: Media Richness does not affect purchasing decision of Chapter E-Publication Readers in Thailand</td>
<td>.836</td>
<td>.010</td>
<td>Accepted</td>
</tr>
<tr>
<td>H3o: Perceived Ease of Use does not affect purchasing decision of Chapter E-Publication Readers in Thailand</td>
<td>.000</td>
<td>.177</td>
<td>Fail to accept</td>
</tr>
<tr>
<td>H4o: Perceived Usefulness does not affect purchasing decision of Chapter E-Publication Readers in Thailand</td>
<td>.037</td>
<td>.112</td>
<td>Fail to accept</td>
</tr>
<tr>
<td>H5o: Price does not affect purchasing decision of Chapter E-Publication Readers in Thailand</td>
<td>.000</td>
<td>.302</td>
<td>Fail to accept</td>
</tr>
<tr>
<td>H6o: Trust does not affect purchasing decision of Chapter E-Publication Readers in Thailand</td>
<td>.001</td>
<td>.164</td>
<td>Fail to accept</td>
</tr>
<tr>
<td>H7o: Chapter E-Publication Purchaser in Thailand does not have intention to purchase the completed version once it is available in the store</td>
<td>.000</td>
<td>.710</td>
<td>Fail to accept</td>
</tr>
</tbody>
</table>

Note: Significant value < 0.05, Hypothesis rejected
Table 8 – ANOVA from Multiple Regression Analysis (2nd Round)

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>86.052</td>
<td>5</td>
<td>17.210</td>
<td>196.024</td>
<td>.000*</td>
</tr>
<tr>
<td>Residual</td>
<td>34.241</td>
<td>390</td>
<td>0.888</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>120.293</td>
<td>395</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Trust, Customer Review, Perceived Ease of Use, Perceived Usefulness, Price

b. Dependent Variable: Purchase Decision

In the Table 9 below shows the Multiple Linear Regression Result. The significant value, or “p-value” to examine whether there are any statistically significant on Purchase Decision of a Chapter E-Publication or not. The significant value of the of Customer Review, Perceived Ease of Use, Perceived Usefulness, Price, and Trust are less than .050, meaning they had a statistically significant influence that affect the Purchase Decision of Chapter E-Publication for people who have experience making a purchase on platform in Thailand.

In addition, from the Standardized Beta Coefficient of the five statistically significant independent variables in Customer Review, Perceived Ease of Use, Perceived Usefulness, Price, and Trust are .176, .178, .114, .304, and .165, respectively.

Table 9 – Multiple Linear Regression Result (2nd Round)

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
</tr>
<tr>
<td>Customer Review</td>
<td>.157</td>
<td>.043</td>
<td>.176</td>
</tr>
<tr>
<td>Perceived Ease of Use</td>
<td>.178</td>
<td>.049</td>
<td>.178</td>
</tr>
<tr>
<td>Perceived Usefulness</td>
<td>.106</td>
<td>.049</td>
<td>.114</td>
</tr>
<tr>
<td>Price</td>
<td>.310</td>
<td>.054</td>
<td>.304</td>
</tr>
<tr>
<td>Trust</td>
<td>.157</td>
<td>.045</td>
<td>.165</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Purchase Decision of Chapter E-Publication

6. Discussion and Conclusion

The purpose of this study was to find out and examine the factors affecting purchase decision of Chapter E-Publication, and later to study the customer’s purchase intention on the complete book after the full version of Chapter E-Publication is available. From the result above, Price, Perceived Ease of Use, Customer Review, Trust, and Perceived Usefulness are the five independent variables that could affect purchase decision of the Chapter E-Publication, respectively.

Firstly, Price was considered as the strongest factors influencing Purchase Decision of Chapter E-Publication of those who live in Thailand. It was clear from the questionnaires that the respondents perceived the price of Chapter E-Publication as affordable, at the reasonable price, which could be purchased by public, and is cheaper than another format such as physical book. Thus, the price could be lowered. And the discount statement set by Meb Corporation, as well as the price set by other Chapter E-Publication platforms are viewed positively by their customers. In this sense, since majority of respondents are those who have used the platforms for 5-8 years, it is in line with Jarutian (2016)'s findings, that frequent readers (customers) do not have price sensitivity, topping up to the
fact that the price of Chapter E-Publication is low, it’s easier to make purchase decision.

Secondly, Perceived Ease of Use was the second strongest influential factor of Purchase Decision on Chapter E-Publication. The respondents responded positively that the platforms are easy to use with guideline, and the purchasing steps are not complex. This corresponded to Davis (1986)’s statement that Perceived Ease of Use could lead to technology recognition, which improve users’ performance and experience.

Thirdly, Customer Review was the third strongest influential factor of Purchase Decision on Chapter E-Publication. Customer Review got the highest mean score on the statement that the respondents would look for when choosing which online platform to use, and that it impacts whether they would choose to make a purchase of the content. This was in line with Guo et al., (2016) that it impacted the online transaction, and Plotkina & Munzel (2016) that positive customer review could increase the purchase intention.

Trust was the fourth strongest influential factor of Purchase Decision on Chapter E-Publication. The trust in payment security and personal information was appeared crucial for the respondents, while trust that platform could deliver service up to the expectation came a slightly below. Considered no actual human seller involved in the payment process, this corresponded to Mohseni et al., (2016) that the company should put emphasis on this aspect since there was a minimal human interaction in the online transaction.

Lastly, Perceived Usefulness was considered the last influential factor of Purchase Decision on Chapter E-Publication. Respondents confirmed the platform improve their performance in story searching and making any payment. This corresponded to Shin (2011), where his research reported the impact the tendency to use such technology if the users perceived it as useful to them, and the other way round if it was not useful. In this case, the respondents perceived the platform as useful to them, thus continued to make purchase on the platform.

While Media Richness features the comments of other readers and other features not available on physical book, making it more appealing to respondents, which was in line with Daft & Legel (1984), the regression analysis determined it insignificant factors, and thus the researcher re-run the analysis again without this variable, confirming no more insignificant variables appeared. There were few reasons we could conclude from this on why Media Richness was being an insignificant variable: there might be some error in sampling procedure from the convenient and snowball sampling, which was mainly based on subjective judgement. In addition, it might be due to majority of stories are still using the descriptive approach and less likely to have other links, illustration, and the chat type story format were not well-known on other application beside Joylada. Thus, this might not be considered or put on much weight in the mind of the respondents.

Separately, as we also studied on the intention to purchase a complete book after purchasing Chapter E-Publication, we found that 77.8% of the respondents tended to purchase a complete book, with the main reason to be kept as collection.

6.1. Recommendation

From the Discussion and Conclusions, the researcher would like to offer some recommendations to the publisher or those who would like to publish their own stories in the Chapter E-Publication platforms as follows:

Firstly, the publisher should be considerate when determine the pricing. Considering all the cost, it should be a proper price in the market, making sure people of all age could be able to afford to pay easily. If the publisher would publish the story in other forms, then it should be taken in consideration whether the price would be cheaper in the chapter version or not, as it could influence the cost-center customers to choose whatever the cheapest, despite being granted the access to the content before the complete book.

Secondly, the publisher should consider uploading the stories on the platform that was easy to use and considered useful by both the publisher and the readers. From the platform owner’s perspective, it would be recommended to improve the platform according to the customer feedback, since doing so would retain the current users, and attract new reader to use platform.

Thirdly, the publisher should carefully select the transcript with positive feedback from the reader to sell. If it was a self-publishing author, the story might need to be adjusted according to the customer feedback. The customer review on either story, author, or publisher as a brand may influence the reader to follow the story, author, or publisher.
for the future stories after one story is finished, and it could contribute to a sustainability of the company.

Fourthly, it was important to maintain the customer trust. By keeping the standard of the platform, and content quality, as well as keep payment process transparent and secure could boost up customer trust, and therefore encourage them to make the online payment. The customer would remain on the trusted platform for a long period of time, as it displayed on the result of the questionnaires that more than 50% of respondents use the platform for at least 5 – 8 years.

Fifthly, while media richness was not significant, this may be due to its key feature of being able to display other features that were unavailable on physical book are not widely known. Thus, keeping an eye on the trend and be able to react as soon as the new technology emerge would give the publisher an advantage compares to its competitors.

Lastly, referring to the intention to purchase a complete book after purchase the chapter version as a collection, the publisher should emphasis on the illustration and book appearance, as well as other premium or short stories that might give more value to the complete book version, whether it was the E-Book or physical book. This was not only targeting the people who will purchase another version of the story, but also for the target group who would not prefer to purchase a chapter version as well.

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Factors Influencing College Students’ Choice of Takeout Vendors
Study in Chengdu, China

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Abstract
In today’s increasingly fierce competition in the catering industry, the takeout industry also develops rapidly. More and more catering enterprises have begun to pay attention to catering delivery. The delivery data show that some vendors sell more takeout food than they do in brick-and-mortar stores. Takeout greatly meets college students’ needs, who have become the mainstream group in the takeout industry in China. At present, there are various forms in the takeout market, so it is particularly important to study the factors affecting college students’ choice of takeout vendors. Based on the Theory of Consumer Behavior and Technology Acceptance Model and previous research review, four factors are identified: User Review, Price, Delivery Time, and Business Service that influence college students’ consumption behavior. The target population is Chinese college students in Chengdu city, China. 384 survey questionnaires were collected via online using convenience and snowball sampling. Descriptive statistics and inferential statistics were utilized to describe demographic characteristics and do hypotheses testing. The results showed that user reviews, delivery time, and business service selection had significant effects. According to the research model and conclusion, suggestions are put forward to develop takeout vendors in the college students’ market.

Keywords: Takeout, User reviews, Price, Delivery time, Business Service

1. Introduction

The continued impact of the COVID-19 has led to a significant increase in registered members across the takeout market as many restaurants are unable to provide indoor dining services and are, therefore, only offering takeout services (Baidu, 2020).

According to statistics, the scale of China’s takeout market has reached 204.8 billion, and the number of urban residents is constantly increasing, which provides a broad customer base for the downstream demand of China’s takeout. However, the current takeout market pattern has been stable, so how to extend takeout to life services has become the new direction of China’s takeout development (Zhang, 2016).

The takeout ordering system was first developed in the southeastern coastal areas of China, especially in economically developed areas such as Beijing, Shanghai, Guangzhou, and Shenzhen. Due to the accelerated pace of life and work, people gradually began to take out orders to save time. In the above regions, many local catering enterprises have gradually launched their takeout ordering system, mainly based on fast food. In Shandong province, the takeout ordering system is still in its infancy stage, and the takeout ordering system in Qingdao city will also face a broader market (Ni, 2015).

In 2019, the scale of China’s food and beverage delivery industry reached 653.6 billion yuan, up 39.3% from 2018. Meanwhile, the penetration rate of the food delivery industry also continued to increase. The penetration rate of the takeout industry reached 14.0% in 2019, up to three percentage points from 11.0% in 2018. By the end of 2019, there were about 460 million takeout food consumers in China, up 12.7% from 2018, accounting for about 50.7% of the country’s urban permanent residents (Baidu, 2020).
The current situation of college students’ takeout consumption is characterized by low ordering frequency, difficulty in meeting the delivery time requirements.

College students are the main consumers of takeout food. They do not have a fixed order frequency but usually choose to order food at lunchtime. There are many options for takeout, which is conducive to discovering new food and dishes and also conducive to the promotion of new stores for vendors. In addition, college students actively communicate with the takeout platform and give feedback to the vendors to understand the customers’ needs and their shortcomings, urge them to improve the quality of the food and drink, and create a better takeout consumption environment. This current paper focuses on the field study on university students ordering. By clearly understanding their needs and the platform’s service system, they can better choose the takeout vendor (Xiao, 2019).

This research investigated Chinese college students living in Chengdu who had ordered takeout.

2. Literature Review

The researchers concluded in-dept literature to identify key theories related to the choice of takeout vendors. Two theories were examined, which are the Technology Acceptance Model and Model of Consumer Behavior.

Technology Acceptance Model (TAM)

TAM has been one of the most influential technology acceptance models to an individual’s intention to use new technology, perceived ease of use, and perceived usefulness (Davis et al., 1989, Braun, 2013). Online food ordering and delivery service is an emerging business in today’s world. Like e-commerce businesses, these food-tech companies depend on technological platforms. TAM is developed to study the acceptance of new technology from owners’ and user’s points of view (Davis, Bagozzi, & Warshaw, 1989). Food application is increasingly downloaded and used by a class of people having smartphones. The result showed that the technology adoption of food applications is influenced by the quality of food application (Information, Security, and System), the consumers who are proved using TAM. Therefore, the quality of food application is the foremost external stimuli that result in technology adoption; these service providers have to be very conscious of maintaining the quality of the food application to ensure that it results in ease of use and ultimately purchase intention (S. Preetha & S. Iswarya, 2019).

Model of Consumer Behavior

Walters (1974: 7) defines consumer behavior as: “... the process whereby individuals decide whether, what, when, where, how, and from whom to purchase goods and services.”

Trying to understand what goes on in a consumer’s head and exactly what makes them buy is a goal of every business only way to do this is by closely studying the buying patterns and building theories and models. Consumer behavior theory studies how people make decisions when they purchase, helping businesses and marketers capitalize on these behaviors by predicting how and when a consumer will make a purchase. It helps to identify what influences these decisions, as well as highlight strategies to manipulate behavior proactively. Consumer behavior theory allows businesses to understand more about their target audience and so be able to craft products, services, and company culture to influence buying habits.

College students’ choice of takeout vendor

By clearly understanding their needs and the platform’s service system, they can better choose the takeout vendor (Xiao, 2019). Because college students lack the time or psychological dependence, many times will choose to order takeout to solve the problem of eating (Zhao, 2016)

Here are four variables that influence College students’ choice of takeout vendor upon literature review.

User reviews

User reviews are the process of making value judgments about certain ideas, methods, and materials. It is a process of using criteria to evaluate the accuracy, effectiveness, economy, and satisfaction of things (Bloom, 2017).

Based on the analysis of customer reviews and rating data and the interview of O2O consumers, it is
believed that user reviews have a significant impact on the choice of takeout (Cao, 2017). The more comprehensive, objective, and credible the content published by reviewers, the more likely consumers will be to give their comments, thus influencing consumers’ choices (Shi, 2018). Furthermore, a good evaluation can increase the merchant’s reputation and improve the score in the consumer’s mind, thus affecting the choice of the takeout vendor when consuming (Du, 2015).

**Price**

Price refers to the quantity of payment or compensation given by one party to another in return for one unit of goods or services (Schindler & Robert M, 2012).

On the whole, the lowest discount price most college students can accept is between 2 yuan and 9 yuan, which means that they may turn to the canteen or the way of eating below this discount price (Chen & Jiang, 2014). Although college students have a great demand for takeout sales, their consumption level is greatly restricted. Therefore, college students will choose it reasonably according to the price (Shen, 2016). According to the survey, the proportion of college students ordering takeout food is high. The boom is that takeout has obvious advantages in taste, time, and price (Li, 2015).

**Delivery time**

It means that the goods delivered to you are within the standard service time. It means to arrive on time (Ma, 2017).

According to the research, consumers hope that the delivery time of takeout is as short as possible while taking into account the overall situation, the acceptable delivery time is 30 minutes, if more than 30 minutes will affect consumers’ choice of the business (Sheng, 2018). Ordering and delivery time are the primary issues consumers attach importance to, and preferential strength is the primary basis for choosing the ordering platform (Fang, et al., 2015). The results showed that the longer the delivery time, the greater the loss of customers (Huang, 2015).

**Business service**

Any project that improves customer satisfaction falls under the category of business service (Zheng, 2005).

First, it is necessary to realize the service’s importance and key to making the served person happy. Only by constantly improving the service quality can the merchant win more markets (Chen, 2015). The results show that good merchant service will increase customer loyalty, retain customer numbers for the takeaway merchants, and be actively promoted by customers (Xu, 2012). Furthermore, business services with enthusiasm, patience, integrity, and a certain degree of professional knowledge to meet the needs of consumers, which will enable more consumers to continue to choose the business (Li, 2015).

### 3. Conceptual Framework

**Conceptual Framework**

In this part, the researcher developed the literature review in the previous section.

The conceptual framework depicts between independent and dependent variables: college students’ choice of takeout vendors.

**Research Hypotheses**

H01: User reviews do not influence college students’ choice of takeout vendors.

Ha1: User reviews influence college students’ choice of takeout vendors.

H02: The price does not influence college students’ choice of takeout vendors.

Ha2: The price influences college students’ choice of takeout vendors.

H03: The delivery time does not influence college students’ choice of takeout vendors.

Ha3: The delivery time influences college students’ choice of takeout vendors.

H04: Business services do not influence college students’ choice of takeout vendors.

Ha4: Business services influence college students’ choice of takeout vendors.
4. Research Methodology

Methods of Research Used

This research applied quantitative research for collecting primary data. The survey questionnaire was utilized, and a series of statistical analyses were employed. Firstly, test the reliability of each variable in the research conducted by using Cronbach’s Alpha in SPSS. Secondly, descriptive analysis was used to analyze and explain respondents’ demographic data, and the multiple linear regression method is used to determine whether there is the statistical influence of independent variables on dependent variables.

Table 1 - Pre-Testing Result (N=30)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Number of Items</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>User reviews</td>
<td>4</td>
<td>0.788</td>
</tr>
<tr>
<td>Price</td>
<td>4</td>
<td>0.848</td>
</tr>
<tr>
<td>Delivery time</td>
<td>4</td>
<td>0.811</td>
</tr>
<tr>
<td>Business service</td>
<td>4</td>
<td>0.885</td>
</tr>
<tr>
<td>College students’ choice of takeout vendors</td>
<td>4</td>
<td>0.790</td>
</tr>
</tbody>
</table>

Researchers used the survey technique method measured by 5 points Likert Scale because it is widely used and could easily adapt to any part of the questionnaire. The scales range from strongly disagree to strongly agree: Strongly Disagree = 1, Disagree = 2, Neutral = 3, Agree = 4, Strongly Agree = 5

Respondents and Sampling Procedures

Target respondents of this study are Chinese who are living in Chengdu and have takeout ordering experience. Three hundred eighty-four samples were selected by non-probability sampling. The questionnaires were distributed online. The questionnaire consists of screening questions, measuring variables, and general information questions.

Before collecting the real 384 respondents, researchers employ Cronbach’s Alpha to test the reliability of each variable. Thus, 30 samples are the size to collect data for conducting pre-testing, identify the errors, and evaluating the quality of the questionnaire. The values for all variables exceed 0.7, which makes it acceptable. Since they range from 0.7 to 0.9, they are acceptable to collect the complete sample data (Jiradilok, Malisuwan, Madan, & Sivaraks, 2014).

Data Collection Method

Researchers used online questionnaires to collect primary data from 384 Chinese people who live in Chengdu and previously ordered takeout. The researchers managed

the online survey by providing a survey link (Wechat 、 WENJUANXING) to the respondents, allowing respondents to answer questions displayed on the screen.
Convenience and Snowball sampling are applied sampling methods.

Statistical Treatment of Data

After researcher collected 384 questionnaires, the researcher used descriptive analysis to identify the user’s characteristics via the statistical package for the social science programs (SPSS), a tool for analyzing the use of multiple regression analysis to test hypotheses.

5. Result And Discussion

The researchers used statistical analysis software to analyze the data and discover the effects of independent variables on the dependent variable.

Demographic Analysis

The researchers conducted a demographic description of the basic information of 384 respondents who ordered takeout and live in Chengdu, as follows:

Table 2 - Demographic Information of respondents (N=384)

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>193</td>
<td>50.26%</td>
</tr>
<tr>
<td>Female</td>
<td>191</td>
<td>49.74%</td>
</tr>
<tr>
<td>Grade</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freshmen</td>
<td>52</td>
<td>13.54%</td>
</tr>
<tr>
<td>Sophomores</td>
<td>62</td>
<td>16.15%</td>
</tr>
<tr>
<td>Junior</td>
<td>109</td>
<td>28.39%</td>
</tr>
<tr>
<td>Senior</td>
<td>93</td>
<td>24.22%</td>
</tr>
<tr>
<td>Postgraduates</td>
<td>68</td>
<td>17.71%</td>
</tr>
</tbody>
</table>

Table 2 demonstrates that the number of male and female respondents is 193(50.26%) and 191(49.74%). Percentage respondent for Freshmen for 52(13.54%), Sophomores 62(16.15%), Junior 109(28.39%) ,Senior 93(24.22%) and Postgraduates 68(17.71 %).

Inferential Analysis

Multiple linear regression analysis (MLR) at the significant level of 0.05 was appropriately applied to each hypothesis to find the effects and the important assumptions that mean difference. Variance inflation factor (VIF) was to investigate a key multicollinearity problem in this study in VIF > 5 (Ringle Wende&Becker, 2015).

H1: User reviews influence college students’ choice of takeout vendors.
H2: The price influences college students’ choice of takeout vendors.
H3: Delivery time influences college students’ choice of takeout vendors.
H4: Business services influence college students’ choice of takeout vendors.

Table 3 - Result of Regression, DV: College students’ choice of takeout vendors
As shown in Table 3, R^2 = 0.341 of College students’ choice of the takeout vendor can be explained by user reviews, price, delivery time, and business services. The Significant value of the three variables is less than 0.05; these assumptions are supported. However, the Significant value of the price is greater than 0.05, so this assumption was not supported. Moreover, the standardized beta coefficients of three statistically significant independent variables -- user reviews, delivery time, and business service were 22.6%, 23.0%, and 22.3%, respectively. This result can be interpreted as follows: for each unit increase in user reviews, college students choice will increase by 22.6%; for each unit increase in delivery time, college students choice will increase by 23.0%; for each unit increase in business service, college students choice will increase by 22.3% respectively. There is no statistically significant influence of price on college students’ choice of takeout vendor. All independent variables were also tested for multicollinearity, and the results were 1.393, 1.546, 1.577 and 1.502 respectively. When VIF is less than 5, there is no serious multicollinearity problem in this study.

6. Conclusion And Recommendation

Conclusion

The purpose of this current research is to examine factors influencing college students’ choice of takeout vendors. The Technology Acceptance Model (TAM) and Model of Customer Behavior related to college students’ choice of takeout vendors. Referring to the result that researchers showed in table 3, user reviews, delivery time, and business services influenced college students’ choice of takeout vendors. The following part is a discussion comparing the results of current research to those from previous studies.

User reviews

The result showed that user reviews influence college students’ choice of takeout vendors. User reviews are the process of making value judgments about certain ideas, methods, and materials. It is a process of using criteria to evaluate the accuracy, effectiveness, economy, and satisfaction of things (Bloom,2017). Based on the analysis of customer reviews and rating data and the interview of
O2O consumers, it is believed that user reviews have a significant impact on the choice of takeout (Cao, 2017). This result supports previous studies such as Du (2015). A good review can increase the vendor’s reputation and improve the score in the consumer’s mind, thus affecting the choice of the takeout vendor when consuming.

**Price**

The result indicates that price had an insignificant influence on college students’ choice of takeout vendors, which conflicts with research by Shen (2016). According to Shen (2016), college students will choose it reasonably according to price when considering takeout. In addition, Li (2015) proved that takeout has obvious advantages in terms of taste, time, and price.

**Delivery time**

The result showed that delivery time influences college students’ choice of takeout vendors. First, it means that the goods delivered to you are within the standard service time. This result supports previous studies such as Fang et al. (2015), ordering and delivery time are the primary issues consumers attach importance to, and the preferential strength is the primary basis for choosing the ordering platform. Second, it means arriving on time (Ma, 2017). Third, the results showed that the longer the delivery time, the greater the loss of customers (Huang, 2015).

**Business services**

The result showed that business services influence college students’ choice of takeout vendors. This result supports previous studies such as Xu (2012). Good business service will increase customer loyalty, retain customer Numbers for the takeaway merchants, and be actively promoted by customers. Only by constantly improving the service quality can the merchant win more markets (Chen, 2015). It is necessary to realize the importance and key of the service in order to make the served person happy.

**Recommendation**

This current study has a certain reference value for the sales of takeout vendors. The research results show that college students’ choice of takeout vendors is affected by delivery time, user reviews, and business services in order of strength (Beta).

The strongest influential factor is the delivery time, which suggested that takeout vendors can increase the delivery personnel and develop the fastest delivery route. However, the survey indicated that the mean value of college students choosing the delivery service with a short delivery time is 3.443, which is the lowest. Therefore the managerial team should work harder on shortening delivery time.

The second influential factor is user reviews. It is suggested that takeout vendors should pay more attention to pre-sales and after-sales evaluation to improve their praise rate, because in the questionnaire, college students think user reviews are very important when choosing takeout vendors. The mean value of this problem is 3.393 in the questionnaire survey, showing the lowest.

The third strongest factor is business services. It is suggested that the takeout vendors can often give small gifts because, in the questionnaire, the mean value of this problem is 3.492, which is the lowest. Providing small gifts can attract more attention of consumers that lead to purchase decision toward the takeout vendor.

**Further Studies**

Regarding the results of this study, researchers found that they cannot represent the opinion of other people who live outside Chengdu, China, with the ordered takeout. Therefore, further studies should expand to other provinces, which people have ordered takeout.

Moreover, the study collected the primary data from 384 respondents and applied the non-probability sampling method. Therefore, the results might not represent the whole population. Further research may apply probability sampling because probability sampling ensures that the sample represents the population more accurately for valid data.

**References**


Challenges in servitization of Thai manufacturing companies

Chonnawee Pukdeemai

Abstract

Purpose: According to the increased pressure in the manufacturing sector in recent years, Thailand is potentially losing its competitive advantages to other countries. Thus, a servitization strategy is considered to be one of the methods to maintain competitiveness, and create additional value for the manufacturing sector in Thailand. There are, however, a few studies regarding servitization within Thailand. As a result, there are significant gaps in existing research that must be filled. Research design, data and methodology: Qualitative case study research of servitization companies in construction and automotive areas was conducted, and in-depth interviews with 6 key informants who were involved in adopting the servitization strategy were investigated to explore the main challenges to be faced, and how to facilitate the successful transition into servitization of the Thai manufacturing company.. Results: There are four main phases of challenges in transforming to servitization of the Thai manufacturing industry. Firstly, in the design phase, the company must consider both internal and external factors that can affect the needs of customers. Secondly, the design stages that are the mindset of employees, the organization structure, working process, and infrastructure need to be changed. Thirdly, the deliver stage is the company needs to find the suitable partner to offer services to the customers. Finally, the company needs to set an appropriate KPI to measure the service performance. Conclusions: Customer-centric, internal cooperation, and supplier collaboration are the key factors to success in adopting to servitization Furthermore, the study demonstrated that having a good evaluation plan is also a key factor to being successful in the transformation into servitization of the Thai manufacturing companies.

Keywords: Servitization, Manufacturing companies, Thailand

JEL Classification Code: L60, L80, N65, O14

1. Introduction

Joining the ASEAN Economic Community: AEC affects the structural transformation of the economy in Thailand because the cost of production in Thailand is higher than other countries in AEC, while the movement of products is easier due to trade liberalization. This is supported by the data on minimum wages provided by an analysis of each ASEAN country's labor force illustrating that Thailand is among those high-wage countries of AEC countries (Suttiwichienchot & Sampilattavanija, 2019). As a result, Thailand is in the position of potentially losing competitiveness because the country may not be able to compete on price against other AEC countries. Although the global economy has been expanding over the years, Thailand could not export extensively as it was because the demand of the global economy was still unstable (Suriyathanin, 2015).

In addition, the private sector's investment is slowing down since they are waiting for a positive signal from the overall economy. While, the government spending had some limitations due to the onset of economic reforms and reduced populist policies (Srivastava et al., 1998).

Only the service sectors are currently growing well, acting as a backup engine that has helped Thailand's economy recover (Suriyathanin, 2015). In conclusion, the intensity of price rivalry and market liberalization has prompted Thai manufacturing enterprises to expand their services to complement their products, resulting in a shift from traditional manufacturing to servitization (Suriyathanin, 2015; Thamjai, 2013).

Servitization is a shift in the company’s strategy from focusing on selling products to making more value by integrating products and services into a package, to maintain competitive advantage (Baines & Lightfoot, 2013; Vandermerwe & Rada, 1988; Wise & Baumgartne, 1999; Zhang & Banerji, 2017). The implementation of a service strategy could provide benefits to the company in terms of financial, strategic, and marketing benefits (Mathieu, 2001).
This method has been employed by several Thai manufacturing enterprises to acquire a competitive advantage in market share. However, not all Thai businesses succeed in their endeavors (Suriyathanin, 2015). This is because, in order to successfully apply servitization, manufacturing organizations must change their guiding principles, structures, and operations (Oliva & Kallenberg, 2003). As a result, it is important to remember that servitization is a difficult work, and it is proposed that in order to successfully execute servitization, the company must understand value through the eyes of the client and apply these perspectives to operations management (Smith et al., 2014). As a result, it is vital to identify the major problems that Thai manufacturing businesses encounter while transitioning to a servitization model, as well as the critical components that must be applied in order to successfully transform into a servitization.

To summarize, it is necessary to understand the challenges of servitization in the Thai manufacturing sector in order to accommodate the higher competitive scenario, which leads to significant gaps in the existing literature that need to be clarified and how a Thai manufacturing company can successfully transition into servitization. The following are the primary research questions:

RQ1: What are the key challenges faced when a Thai manufacturing company implements a service-based strategy?

RQ2: What are the key factors to move successfully from product offering into a service provider of the Thai manufacturing company?

2. Literature review

2.1 Definition of servitization

Vandermerwe and Rada (1988) coined the term "servitization" to describe the mixing of products and services in packages or bundles to add value to core products. Many writers provide additional meanings of servitization (Martinez et al., 2010; Oliva & Kallenberg, 2003; Tukker, 2004; Wise & Baumgartner, 1999). They appear to share a similarity in a certain component of meaning across a variety of their definitions. To summarize, servitization is a shift in a company's strategy away from selling items and toward integrating products and services in order to preserve a competitive advantage.

Servitization is developed from the blurred boundary between products and services (Vandermerwe & Rada, 1988). The importance of this phenomenon expanded into various industries in the late 1990s, such as manufacturing, automotive, and airlines (Hahn & Morner, 2011). During the 1990s, several leading companies, such as General Electric, Xerox, and IBM, shifted from solely selling products to the integration of services, which contributed to the increase in profit of the enterprise (Martinez et al., 2010). In addition, the transformation of the company to become a products-service provider resulted in changes in operation management such as the change from focusing on cost and quality reliability to innovation and flexibility, company strategies, organization structure, and technology (Araujo & Spring, 2006; Lele, 1997; Oliva & Kallenberg, 2003; Slepniov et al., 2010; Wise & Baumgartne, 1999).

2.2 Drivers of servitization

In discussing the drivers of servitization from a variety of researchers, they commonly bring up three significant factors that encourage businesses to adapt from their current position to become products-services providers, which are financial, strategic, and marketing factors (Baines & Lightfoot, 2013; Mathieu, 2001; Oliva & Kallenberg, 2003).

Integrating tangible products and services is expected to increase revenue for the company in terms of finance (Gebauer & Friedli, 2005; Mathe & Shapiro 1993). This view is supported by Wise and Baumgartner (1999), who measured that the profit margin of the services sector in some industries can range between one- or two-digits higher revenues than launching only products into the market. An agreement with this illustrated that some companies can remain profitable by offering their services to customers during a significant drop in total market sales (Sawhney et al., 2003).

In terms of strategic benefits, it is viewed as an increase in the company's competitive advantage (Coppett, 1988; Wise & Baumgartne, 1999). This is due to the fact that cheap pricing and innovation make it difficult for enterprises to maintain market share (Bitner, 1997; Lele, 1997). Service offers are significant in the firm since they can set it apart from competitors in the same field (Baines and Lightfoot, 2013). Many scholars agree that the expansion of services in a manufacturing firm can provide a
significant competitive advantage by providing a barrier to others competitors in the market (Gebauer & Friedli, 2005; Oliva & Kallenberg, 2003).

The provision of services is one of the ways to build a good relationship between the producer and the customer. They can make repeated purchases from their existing customers, which consequently leads to customer loyalty (Baines & Lightfoot, 2013). Service offerings can provide more choices to customers so that they can choose what they want from a variety of choices (Oliva & Kallenberg, 2003). Therefore, it has the potential to persuade clients to buy products from a specific company.

2.3 Challenges in the servitization transformation

Companies used to focus their value creation efforts on enhancing products and production processes in order to meet client requests. Over the last few years, thanks to the concept of servitization, which can develop value in terms of product functionality for customers, a manufacturing company's value creation has changed (Smith et al., 2014). Many authors have supported this viewpoint; for example, Baines & Lightfoot (2013) pointed out that transitioning manufacturing to servitization can provide more value than merely providing goods. For example, offering services to clients accounted for half of Rolls-total Royce’s revenue. In conclusion, the application of servitization can increase value through service offerings since a client may be prepared to pay more money if they know they will receive good service (Mathieu, 2001).

To better understand the mechanisms of value in servitization, the creation of value is classified into 3 distinct stages, consisting of the define stage, design stage, and deliver stage (Pawar et al., 2009). A company should define what value is in the view of customers in the define value stage, and design values in consistency with the operational systems, and deliver that value to participants. The aforementioned three stages of values in servitization can be used as a basis to explore the challenges that an organization needs to handle if it decides to transform itself towards servitization.

The importance of defining service value through client and shareholder perceptions is the first stage of servitization (Smith et al., 2014; Vargo & Lusch, 2008). Many authors believed that defining client business activities and operations is the underpinning for servitization because service offerings can generate more revenues for a corporation than product sales (Pawar et al., 2009; Vendrell-Herrero et al., 2017; Wise & Baumgartne, 1999). However, there are various issues that can arise during the defining value stage that the organization must be aware of in order to avoid economic concerns (Tukker, 2004). Therefore, the costs and the benefits of the servitization must be considered thoughtfully.

In designing the value, Bitner stated that services should be designed to accommodate the needs of customers (Bitner, 1997). Building on Bitner’s work, the organizational networks need to be re-designed in order to share capabilities to manage the customer’s needs (Vargo & Lusch, 2008).

Hence, organizational networks must be designed simultaneously with services and products (Pawar et al., 2009; Vendrell-Herrero et al., 2017; Zhang & Banerji, 2017). It becomes obvious that a company needs to design and improve processes within the organization.

The features of value were described by Baines et al. (2009) into three categories of operations: product-focused operations, product-centric servitized activities, and services-focused operations.

In conclusion, the characteristics of the business model for the product-focused operation tend to focus on producing and selling products, whereas customers tend to define value on ownership of the artifact. The order-winning characteristics of this operation could be price, quality, features, and product innovation.

Furthermore, for the product-centric servitized operation, the business model tends to be based on a combination between relationships and transactional, while the customer tends to value the performance of the operation, and the key order winning is total cost of ownership of the products, and also features of products and services.

While, for services-focused operations, the business model tends to work towards the delivery of services while the customers perceive the value of the services offered and the features (Baines et al., 2009). Focusing on the product-centric servitized operation, it is necessary to understand clearly the characteristics of working units operating by servitization (Baines & Lightfoot, 2013).
A servitization manufacturing company’s operation units can be classified into three categories: top management or strong center, back end, and front end (Pawar et al., 2009). The traditional production of products for sale to consumers is the back-end group, whereas the front-end is a new group which must be implemented in the organization to respond to customers with tailored product solutions. As a result, the organization structure must have been redesigned in order to accommodate the front-end section into the organization (Pawar et al., 2009).

As a result, when a company transitions to servitization, methods, processes, organizational structure, and infrastructure that were initially created for a typical product offering organization must be restructured (Martinez et al., 2010).

![Figure 1: Types of operation units in a servitization manufacturing company (Pawar et al., 2009).](image)

According to Pawar et al. (2009)’s figure 1, a servitization corporation has three primary operation units: a strong center, a back-end, and a front-end. The back-end will focus on the traditional product, while the front-end will handle the product-service offering to clients.

For the delivery of value stage, it is to work on the required activities in order to offer those created values to customers (Martinez et al., 2010). It may be necessary for a company to identify, select, and manage potential partners in order to deliver the values to their customers (Tukker, 2004; Vargo and Lusch, 2008). This is because many companies may not have expertise in delivering those services themselves. Collaboration amongst partners, therefore, needs to be considered to ensure that the customers’ satisfaction is fulfilled (Pawar et al., 2009). Hence, the company needs to consider collaborative options for a servitization strategy in a delivery value stage in order to cope with the risks, costs, and resources in an effective way while still maintaining a competitive advantage (Mathieu, 2001).

The collaboration continuum of servitization can be divided into three levels consisting of internalizing, outsourcing, and potential partners, and it is recommended that the company needs to do benchmarking in order to explore which collaborative options are suitable and tend to offer higher benefits to the company (Mathieu, 2001).

Apart from the challenges in selecting a collaboration option for delivering value to customers, the alignment of mindset amongst the service providers needs to be considered, as the attitudes toward suppliers may be changed over time due to the pressures on the delivery of products-services integration (Martinez et al., 2010).

### 3. Research methodology

The qualitative case study research approach was selected as an appropriate research methodology. The reason for choosing this research methodology is that the objective of this study is to explore and examine the key factors faced when implementing servitization to the Thai manufacturing company. Hence, the case study can provide in-depth knowledge and experiences through a range of data collection methods (Blumberg et al., 2008; Creswell, 2003).

Multiple case studies were used in this study to allow for a more thorough exploration of theoretical evolution and research questions. This form of case study also creates a more convincing hypothesis when the ideas are more intensely founded in diverse empirical evidence. The case study was selected based on the purposive sampling technique, aiming to target particular cases and research participants which are relevant to the research questions (Siggelkow 2007).

Two companies were chosen as case studies for interviewing in order to determine the co-challenges and compare and contrast the issues faced when implementing servitization as the primary challenges in the Thai manufacturing industry. Because these are the primary
businesses in Thailand and their valuable contribution to the Thai economy.

One selected company is in the automobile industry, and another is in the building products area, which includes some parts of the plastics industry. In order to represent the Thai industry, both selected companies are among the top three ranked by revenue in their industry. However, due to the sensitive nature of the information, the researcher will refer to the automobile and construction product companies as Thai automotive and Thai construction product companies respectively.

The data was conducted through a semi-structured interview as it allows the researcher to ask additional questions to follow up on the interviewee’s answers (Siggelkow 2007). In addition, semi-structured interviews can provide the perspectives of participants on the issues and enable researchers to confirm the information that they have (Blumberg et al., 2008).

According to a review of the literature, the functioning of a manufacturing company may be divided into three parts: the strong center, the back end, and the front end. As a result, one representative from each group from each organization will be chosen as interview participants. Because this is a vital component of monitoring the workers in the organization and also coordinating both front end and back end, the center will choose one of the interviewers from each firm in the area of operation control or planning. As a result, he or she may be able to give employees a perspective on the issues of servitization. Furthermore, interviewers for the back end are picked from the fields of logistics or supply chain management since they have direct contact with suppliers and can clearly describe the influence of the servitization plan to them. In the front end, responders are chosen from sales or marketing departments who are dealing with and responding to customized product solutions; it is hoped that the issues faced by consumers can be uncovered.

To summarize, six interviewers in the role of senior decision-makers from two different companies, one in the leading automotive industry, and another in the construction products manufacturer, were chosen to conduct the interviews, which lasted about an hour each. The case study data was gathered in the form of a semi-structured interview. Every interview is taped and transcribed. In order to facilitate data triangulation, these interview data are complemented with secondary data such as the company's internal reports and press releases, which enables a limited bias due to poor interviewee recall or reflexivity. Besides, all of the interviewees are at the management level because they might have enough experience to explain in depth. The further details of the interviewees are illustrated in table 1 as shown below.

<table>
<thead>
<tr>
<th>strong centre</th>
<th>front-end</th>
<th>back-end</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The leading construction products manufacturer</strong></td>
<td>A manager of the operation and strategic development. (Interviewee: A)</td>
<td>A manager of customer management department in the building products. (Interviewee: B)</td>
</tr>
<tr>
<td><strong>The leading automotive company</strong></td>
<td>An assistant manager of the production and operation control department. (Interviewee: D)</td>
<td>A manager of sales and marketing department in a domestic car sale. (Interviewee: E)</td>
</tr>
</tbody>
</table>

The tasks of interviewee "A" for the leading construction products manufacturer included infrastructure investment and establishing the company's direction and strategies. He has been working for the company for fourteen years. Interviewee "B" is dealing with retail customers who want to build a house in order to improve
their working performance and support their customer's needs. His experience in this company is eight years. The interviewee, "C," has the responsibility of sourcing materials from the vendor, and then controlling the distribution of products to the company's dealers. His experience is four years in this position.

For the leading automotive company, the interviewee 'D's job is to take care of the production system, and control efficiency and productivity of employees in the plant. He has been working in this position for five years. The interviewee 'E's role is to promote the domestic car sales and take care of the domestic dealers. He has been working for this company for sixteen years. The interviewee 'F' is a manager of the new project and logistics management, and her responsibility is to liaise among production, R&D, and suppliers, and her scope of work is mainly focused on the launching of the new car.

The case data was examined using a thematic data analysis approach based on Clarke and Braun (2014), which includes five thematic analysis steps: (1) Data familiarization, (2) Initial code creation, (3) Theme development, (4) Refinement, and (5) Theme designation are the five steps in the theme development process.

Thematic analysis can be used by the researcher to identify subjects that are relevant and significant to the research questions. Following these five key steps of thematic analysis, the interview transcripts and documents were familiarized, followed by the data-driven initial coding process to capture and label (1) the categorization of the challenges involved in implementing their servitization and (2) the significant factors to successfully implementing servitization to the company.

When there are no new codes in the world to add to the knowledge of the issues in servitization from the interview, the themes were developed and refined, indicating that theoretical saturation had occurred. The themes designation step focuses on creating unambiguous labels for the elements involved in the servitization process, as well as matching the details of each challenge's strategic responsibilities in supporting the important factor to be concerned about when servitization is implemented.

4. Results

RQ 1: What are the key challenges faced when a Thai manufacturing company implements a service-based strategy?

During the define phase, the respondent 'E' mentioned that the organization has to research client demand as well as investigate competitors to determine if they provide similar services. "...if they don't, it needs to figure out how they work, what their best practices are, and what their limitations are." It's a struggle, according to interviewee 'B' because there are so many variables that can influence the client's needs. "...certain elements are easier to regulate, such as product and service quality, while others, such as external factors like government regulations, are difficult to monitor."

For the challenges in the design stage, "...it is difficult to design an operation consistent with the defined service because the company needs to change the mindset of people in the organization to be aware of the benefits of services, and this contributes to the change in organizational culture and organization charts," said interviewee 'C'. Furthermore, servitization may make employees' regular work more challenging. "...the employees may not only examine a design or function during the development of new products, but they will also have to consider the complexity of design services to ensure that the product is easy to repair," according to respondent 'F'.

For the challenges in the delivery stage, servitization may have an impact on the firm's vertical integration, such as the process of selecting suppliers, as interviewee 'F' suggested: "...the organization may have to turn to the most timely and reliable provider." "...if the services are vast in scale, the corporation may need to restructure the organization, IT systems, and people in order to accommodate to the change in delivery channel," said interviewee 'C'.

For the challenges in the evaluation phase, providing a good measurement criterion for every activity in servitization could help the company to achieve their target as mentioned by interviewee 'A' "...if the quality of service is low, it may affect the company's image." In addition, interviewee 'D' mentioned that "...having a good measuring scale of the service levels in the organization is a key to improving the company's performance, and resulting in a sale that meets targets each year."
RQ2: What are the key factors to move successfully from product offering into a service provider of the Thai manufacturing company?

Being customer-centric implies that everything should be tailored to the needs of the customers. "...we need to comprehend the consumer's requirement by thinking about what we actually want if we were a customer of our company," said interviewee ‘B’. As a result, it is necessary to study the customer's perspective before making any changes in the firm, as respondent 'E' suggests: "...by putting yourself in the shoes of the consumer and contemplating how customers can be satisfied before making any changes in the organization."

The executive must have a good strategic strategy in place for internal cooperation. "...the success of the servitization implementation is influenced by a defined purpose of a change in organizational structure, and business culture"; interviewee ‘A’. This strategy would be carried out through collaboration between blue- and white-collar workers, as suggested by interviewee ‘D’, who stated that "...this top-down practice will make everyone engaged in what is going on in the organization, and they will perform at their best, while the results will be sent from the bottom to the top, and it is called bottom-up."

According to interviewee ‘C’, "having a good rapport with the suppliers is one of the most crucial components" in supplier collaboration.

5. Findings

1. When a Thai manufacturing business implements a service-based approach, there are a number of issues to consider

This research suggests that there are four main challenging strategy stages when implementing a service-based strategy, including the define, design, deliver, and evaluation stages.

For the challenges during the defining phase, the company needs to research the demand from customers and explore the competitors to see whether they offer such a service or not. As a result, the company must evaluate external factors affecting clients' wants as well as the benefits and drawbacks of having the services in the company in order to avoid becoming unable to compete in the market.

Due to the overlapping of work that arises from the inclusion of a service into the organization, re-allocation of jobs and responsibilities may occur during the design stage. Furthermore, if the services are responsible for a substantial amount of work, the company's infrastructure, including IT systems, facilities, as well as the personnel and resources of the organization, may need to be modified.

For the challenges in the deliver stage, the interviewees highlighted that there are many challenges when delivering the service to the customers with high performance according to the goals that have been set. For example, servitization may affect the vertical integration of the company, such as the process of selecting suppliers. This view is supported by existing literature that the company needs to consider collaborative options for a servitization strategy in a deliver value stage in order to cope with the risks, costs and resources in an efficient way and at the same time maintain its competitive advantage (Mathieu, 2001). In addition, the company may also need to restructure their operational system to conform with the delivery channel. Also, the company will maintain a relationship with significant suppliers to use the capability of a supplier to serve the customer needs.

For the issues in the evaluation phase, the interviewee's responses show that the company must control the quality and performance of the service after it is delivered. Furthermore, giving a good measuring criterion for each action in the servitization process could aid the organization in meeting its goal. Hence, KPI needs to be introduced to measure the service performance and quality to ensure customers’ satisfaction.

2. The most important aspects to consider while transitioning from a product providing to a service provider for a Thai manufacturing firm

The findings revealed that the Thai manufacturing company's move from product selling to servitization is influenced by three primary factors: customer-centricity, internal cooperation, and supplier collaboration. Furthermore, the respondents indicated that the organization should have a key measurement indicator in place at all times in order to increase the quality and productivity of their work.

Being customer-centric implies that everything should be tailored to the needs of the customers. As a result, prior to making any changes in the company, it is necessary to research the customer’s perspective.
The executive must have a good strategic strategy in place for internal cooperation. It may be necessary to assess present capacity and whether or not the personnel have sufficient capacity at this point. Furthermore, workers’ mindsets must be shifted through training or public awareness inside the firm.

In terms of supplier collaboration, the interviewees stated that in order to give value to customers in a systematic manner, the organization needs to have a good relationship with the providers.

These three primary variables to support the successful transition into servitization of the Thai manufacturing company, as well as the evaluation strategy in each stage, may be summarized in Figure 2 based on all of the above acquired information.

Figure 2: Three main factors for a successful transition into servitization of the Thai manufacturing company (Created by author)

Figure 2 shows the three primary characteristics that lead to a successful transition to a service provider: customer centricity, internal cooperation, and supplier collaboration. Starting with the customer, the organization must investigate the client’s insight requirements, then translate the client’s expectations into the enterprise’s vision and goal in terms of internal cooperation. This stage necessitates collaboration between senior management and staff to achieve a common purpose, as well as a service mindset in day-to-day operations. In order to carry out these operations, the organization must have an evaluation plan in place to monitor performance at each stage.

6. Discussion and conclusion

According to the review of literature, the challenges in transforming to servitization can be divided into three phases; the defined stage where the company needs to understand what is the value in the eyes of customers and company, the design phase where the company looks through how the organization is affected when it integrates services in the manufacturing industry, and the delivery stage where the vertical integration or collaboration with potential partners to avoid the risk of transforming to servitization takes place (Baines and Lightfoot, 2013; Hahn and Morner, 2011; Pawar et al., 2009). Similar to the results of the interviews in case study, those three stages are the main challenging phases when
transforming into servitization. However, the interviewees highlighted that the evaluation phase should be included.

According to the conclusions of this study, when a company shifts to servitization, methodologies, procedures, and an organizational structure that were originally built for a traditional product offering organization must be restructured to correspond to the new services offering. This leads to changes in the company's infrastructure, as well as the organization's structure and culture, employee mindset and skill, IT systems, vertical integration, and the company's new KPI.

To do this, the management board, also the CEO of the company, needs to understand the advantages and challenges of implementing servitization in the manufacturing company clearly. Hence, the project team needs to summarize the benefits and risks of implementing servitization through the use of tools such as PESTEL, or SWOT analysis for the management board. At the same time, the board needs to learn from the experiences of other companies which are already implementing servitization successfully. After the management team sets up the target of servitization, they must communicate their servitization strategies to the employees through the communication channels in order to make sure everyone in the company understands the goals. The gathered data from interviews shows that a major challenge in bringing the service into the organization is the resistance from staff who might have some suspicion of the benefits of following such a strategy. Therefore, the mindset of employees needs to be changed through the use of training.

Empirical findings from this research demonstrate those key factors for the Thai manufacturing company to successfully turn into servitization, which are customer centric, internal cooperation, supplier collaboration, and evaluation indicators of performance. For the customer-centric approach, the company needs to research the insight requirements of the client and transform the client's expectations into the vision and mission of the enterprise in the internal cooperation aspects. This requires cooperation between the top management and the employees, who need to have the same goal and also have the service mind in their normal operation. Then, it needs to have a good relationship with the supplier in order to deliver the value to the customer systematically. Nevertheless, the company needs to have a key performance indicator to control the quality and productivity of their services. To achieve this, it is required to evaluate the performance of servitization in the company in four main aspects.

1. Measurement of whether or not the implementing servitization project is on schedule in every step

2. Assessment of employees’ satisfaction levels.

3. Evaluation of the performance of the company in terms of financial benefits, strategic advantages, marketing opportunities, and also the efficiency and productivity of the company.

4. Judgement of the customer’s satisfaction levels.

This research suggested a range of theoretical and managerial implications. The identification of obstacles in the servitization of Thai manufacturing enterprises underlines the necessity for future research on operation management to include the domain of servitization. This study also adds to the body of servitization knowledge by demonstrating how each servitization phase should be addressed and managed to assist enterprises in creating new value and enabling new services.

Furthermore, as a result of the disruption caused by economic regression, this research has crucial implications for practitioners (i.e. senior decision-makers in a corporation) to investigate the prospects of servitization in creating product-service offerings. The four main challenges in servitization transformation are primarily associated with the three main factors leading to a successful transition to a service provider, as well as developing their capabilities and knowledge in order to manage the upcoming servitization journey, resulting in a competitive advantage.

7. Limitations

This study examines the problems faced by a Thai manufacturing firm in transitioning from traditional manufacturing to servitization. As a result, due to differences in industrial features between Thailand and other countries, it may not be suitable to western companies or other parts of the world to use this data without further analysis. In terms of data collecting, the participants in this study were largely from Thailand’s large corporations. As a result, the generalization of this research is limited due to a lack of data acquired from small and medium-sized
businesses. As a result, it may not be acceptable to apply this research to small and medium businesses because there may be some differences in the points of concern between large and small businesses. Furthermore, some business areas, such as computer and peripheral equipment, have a scarcity of data; therefore, future study should try to collect additional data to cover all industries.

Regarding to the limitation of this research is the leading point to be concerned as a beginning step for further research in order to fit this gap on this following subjects. Firstly, because of the data in this research mostly conducted from the big business in Thailand, hence, it is leading to the future study to focus on the case of the challenges in servitization of the small and medium business in Thailand in order to explore the issues to be concerned in the case of SME in Thailand to go servitization. Secondly, since this study presents an overview of challenges in servitization of the Thai manufacturing industry, while, some industry may have specific point to be concerned. It is beneficial to focus the further study on the specific industry in order to investigate and determine whether or not those industry have the same challenges with the overall Thai industry.

8. Acknowledgements

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A Study of Factors Affecting Purchase Intention of High-class Condominium of Generation Z Customers in Bangkok, Thailand

Ye Yang¹
Preecha Methavasaraphak²

Abstract

Purpose: This research attempts to study factors affecting purchase intention of high-class condominium real estate of Generation Z customers in Bangkok, Thailand based on online questionnaires. Research design, data, and methodology: The quantitative data are collected via online questionnaires, those questionnaires were distributed to Thai and Non-Thai who are aged between 20-30, income at least above 30,000 baht/month, and accommodate or plan to stay in Bangkok, Thailand within the next 2 years. The researcher collected 400 valid questionnaires and use statistical procedures to analyse the data. Four factors influence the purchase intention of high-class condominium of Generation Z customers in Bangkok, Thailand which include location, financial concern, environmental concern, and perceived value. Result: There are three factors affect purchase intention of Generation Z customers to buy a high-class condominium, and those three factors are financial concern, environmental concern, and perceived value. The result can be explained as the variation of 24.1% ($R^2 = .241$) affecting purchase intention of high-class condominium of Generation Z customers in Bangkok, Thailand. Conclusion: the research found out that the perceived value is the most important factor which affect purchase intention of high-class condominium of Generation Z customers in Bangkok, Thailand, follow by perceived value, environmental concern, and location respectively.

Keywords: Location, financial concern, environmental concern, perceived value, purchase intention.

JEL Codes: E21, G21, L85, R31

1. Introduction

From December of 2019, the COVID-19 virus spread in Wuhan China, then it swept the world. In March of 2020, the first round of COVID-19 pandemic occurred in Thailand, the effect to the whole country was unprecedented (the GDP in Q4/2020 decreased by 4.2%). The government had to lock down the airports, people need to work from home, cities had started a curfew, and many tourism industry practitioners had lost their source of income. Three months later, the first round of the epidemic had eased, and the economy had recovered a little bit. However, at the end of December 2020, a second round of epidemic broke out in Thailand, and many confirmed Myanmar workers broke the hard-won recovery. However, when people thought that the second round of the epidemic was about to end, the terrible third round of epidemic occurred. The 22,000+ confirmed cases per day have once again destroyed the possibility of economic recovery. The terrible epidemic has brought unpredictable effects on all walks of life. The strategy of many companies has changed from how to develop to how to survive.

For the real estate industry, the impact of the epidemic is undoubtedly very serious, the real estate markets, including residential and commercial real estate, as well as mortgage markets are confronted with unprecedented challenges. The number of commercial and residential property sales drops, people abandon their apartments in metropolitan areas, and households occur payment difficulties in redeeming their mortgages, among others.
About Generation Z, Generation Z is defined as people born between the mid-1990s and early 2010s (Tapscott, 2009). Each generation has its own unique characteristics, such as expectations, experience, generation history, lifestyle, values, and demographics that affect their behaviour (Williams and Page, 2011), which has a significant impact on industry and commerce. Therefore, the power and characteristics of generations should not be underestimated.

The members of Generation Z are different from other generations, so they “represent changes in all aspects of corporate real estate (CRE) through expectations in workplace, retail, residential, cultural and lifestyle environments” (Larkin et al., 2018). Real estate agents must understand consumer satisfaction and meet their needs. These insights can be achieved by studying the behaviour and characteristics of different generations of the real estate industry. Starting from Generation Z, Generation Z represents the most potential real estate buyers.

In this study, the researcher aims to find the factors which affecting location, financial concern, environmental concern, perceived value, and purchase intention in high-class condominium real estate of Generation Z in Bangkok area. The researchers decided to use descriptive research which is used to determine the characteristics of the population and solve the problem. The researchers aim to investigate what will impact customers to decide and buy high-class condominium real estate. Moreover, this research will help to understand both the purchase intention for Thai and Non-Thai customers, because Thailand is a country suitable for retirement and vacation, foreigners are willing to buy condo or property in Thailand.

2. Research Objective (Revised part)

To study the factors affecting purchase intention of high-class condominium real estate of Generation Z customers in Bangkok.

3. Scope of Research

In this research, the target population or subjects of this research is customers who had ever purchased house or condominium which have characteristics as Thai and Non-Thai, female and male, age 20 to 30 years old, living in Bangkok, or have plan to stay in Bangkok within the next 2 years.

4. Literature Review

4.1 High-class Condominiums

According to Livinginsider (2020), high-class condominiums is that high in terms of location that may not actually be in the city centre, but it is close to it (some are in the heart of Bangkok). Average price is 100,000 – 130,000 baht / sq. m. Get good grade materials. Not many units have more privacy very suitable for people who like being near the train station. which must have a high salary.

4.2 Purchase Intention

Intention is defined as an indicator of a person’s willingness to perform an action (Han and Kim, 2010). According to Taylor and Todd (1995), intention is a powerful predictor of human behaviour. Therefore, purchase intention is a prerequisite for purchase decision (Tan, 2012).

Purchase intention is also called the subjective judgment reflected by consumers after evaluating whether to purchase services or products (Sidi and Sharipah, 2011). Han et al. (2010) pointed out that the purchase intention covers several meanings, such as the customer's willingness to consider purchasing a certain product or service; the customer's future purchase intention; the customer's decision to buy back.

Purchase intention measures the likelihood of consumers buying products or services. Therefore, the higher the purchase intention, the higher the willingness of a customer to purchase. (Schuler and Adair, 2003). According to Han et al. (2010), customers follow their preferences, past experiences and external environment in order to gather information and evaluate most of the available alternatives before making a decision. Chia et al. (2015) pointed out that purchase intention has a positive impact on consumers’ purchasing decisions, because it can measure the likelihood of consumers buying products and services. Therefore, the higher the consumer's intention to buy, the higher the consumer's willingness to buy.

4.3 Environmental Concern
Environmental concern can refer to specific attitudes that directly determine intentions, or more general attitudes or value orientations (Bamberg, 2003). Although there are some attempts to measure environmental concern as attitudes toward specific consumer behaviours or objects (for example, worrying about the negative impact of driving a car on the environment – Barbarossa et al., 2017), most studies conceptualize environmental concern as a general focus on protecting the natural world and pay attention to its resource depletion (Bamberg, 2003; Moons et al., 2018).

According to Tiwari et al. (2015), the living environment concern here refers to the collection of natural and built environments, provided to the residents of the place, they are engaged in various social, cultural, religious, economic, and political activities, these activities arouse the characteristics of the living environment concern. Therefore, the “living environment” is created by combining the influence of these activities, and because these interrelated activities are constantly changing with the continuous development of time and space.

4.4 Financial Concern

Financial concerns include housing prices, mortgages, income and repayment periods, mortgage availability, purchase terms, housing prices, property appraisal value, opportunities for rapid appreciation, and waiting periods (Opoku and Abdul-Muhmin, 2010; Yongzhou, 2009). In other words, this definition refers to mortgage availability, terms of purchase, house price, assessment value of the property, the opportunity for quick appreciation, and waiting period (HADDAD et al., 2011). Number of studies have proved that consumers’ financial concerns have a great influence on their purchase intentions (Adair et al., 1996; Sengul et al., 2010; Daly et al., 2003; Kaynak and Stevenson, 2007).

4.5 Location

The meaning of location selection in the literature has two aspects: the process of location selection decision (choosing the type and location of investment) and the results of the process (Stryjakiewicz, 1988), this is the location of a given business activity associated with a given site. Findings from past studies, the location is as one of the most critical factors affecting the individual’s decision making in purchasing a house (Adair et al., 1996; Daly et al., 2003; Kaynak; Stevenson, 2007; Sengul et al. 2010; Xiao; Tan, 2007). Real estate location includes the distance to various points of interest of consumers, such as school, workplace, shopping area, family, and friends (Opoku and Abdul-Muhmin, 2010; Adair et al., 1996; Clark et al., 2006).

4.6 Perceived Value

According to Carol (2020), in marketing terms, perceived value is a customer’s assessment of the quality of a product or service and its ability to meet their needs and expectations, especially when compared with peers.

5. Research Framework

In this study, the researcher develops the conceptual framework based on three research models. The first research model was developed by Wee-Lee T. and Yen-Nee G. (2018) who developed “The role of psychological factors in influencing consumer purchase intention towards green residential building”. The second research model was developed by Visar H. and Emlema Z. (2020) who developed “The impact of Generation Z in the intention to purchase real estate in Kosovo.” The third research model was developed by Phuong Viet Le-Hoang, Yen Truong Thi Ho, Danh Xuan Luu, and Truc Thanh Thi Le (2019) who developed “Determinants of customer’s apartment purchase intention: is the location dominant?”

The conceptual framework gathering of relevant from the previous study on purchase intention that have four independent variables which are location, financial concern, environmental concern, and perceived value. The dependent variable of this research is purchase intention of High-class Condominium Real estate of Generation Z Customers in Bangkok, Thailand.

Figure 1: The Research Conceptual Framework
6. Research Hypothesis

Based on conceptual framework, the researcher developed five variables and four hypotheses under this study. The details of the hypotheses are as following:

Hypothesis 1

H1o: Location does not significantly affect purchase intention of high-class condominium real estate of generation Z customers in Bangkok, Thailand.

H1a: Location significantly affect purchase intention of high-class condominium real estate of generation Z customers in Bangkok, Thailand.

Hypothesis 2

H2o: Financial concern does not significantly affect purchase intention of high-class condominium real estate of generation Z customers in Bangkok, Thailand.

H2a: Financial concern significantly affect purchase intention of high-class condominium real estate of generation Z customers in Bangkok, Thailand.

Hypothesis 3

H3o: Environmental concern does not significantly affect purchase intention of high-class condominium real estate of generation Z customers in Bangkok, Thailand.

H3a: Environmental concern significantly affect purchase intention of high-class condominium real estate of generation Z customers in Bangkok, Thailand.

Hypothesis 4

H4o: Perceived value does not significantly affect purchase intention of high-class condominium real estate of generation Z customers in Bangkok, Thailand.

H4a: Perceived value significant affect purchase intention of high-class condominium real estate of generation Z customers in Bangkok, Thailand.

7. Research Methodology

This quantitative research applied for collecting primary data, before go on till complete 400 respondents, the study would test the reliability of each variable in the research at 43 respondents conducted by using Cronbach’s’ Alpha. Second, descriptive analysis was used to analyse and explain the demographic data of the respondents such as background and economic effect. Third, multiple linear regression to determine the affecting. The regression was the statistical influence program that evaluate influence of independent variables on dependent variable.
7.1 The Results of Reliability

Table 1 - Pre-test result by Reliability Test (Cronbach’s Alpha) N=43

<table>
<thead>
<tr>
<th>Variables</th>
<th>Number of Items</th>
<th>Cronbach’s Alpha</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase Intention</td>
<td>5</td>
<td>0.893</td>
<td>Good</td>
</tr>
<tr>
<td>Location</td>
<td>5</td>
<td>0.750</td>
<td>Acceptable</td>
</tr>
<tr>
<td>Financial Concern</td>
<td>5</td>
<td>0.734</td>
<td>Acceptable</td>
</tr>
<tr>
<td>Environmental Concern</td>
<td>3</td>
<td>0.613</td>
<td>Questionable</td>
</tr>
<tr>
<td>Perceived Value</td>
<td>6</td>
<td>0.805</td>
<td>Good</td>
</tr>
</tbody>
</table>

Note: From Table 1, Researcher collects data to test the reliability of the question in each variable for respondents with the same characteristics. The reliability of variables’ questions are acceptable value results from the alpha value was above 0.6.

8. Results of the Study

From the 400 valid respondents, the highest respondents are male 229 (57.3%) and 171 (42.8%) are female. All respondents are in Generation Z, the highest age is 20-25 years old which is 241 (60.3%) respondents, 159 (39.8%) respondents are aged in 26-30 years old. For the monthly income, the highest income is that 159 (39.8%) respondents are earning income between 35,001-40,000 Baht/Month, follow by 138 (34.5%) respondents are earning income more than 40,000 Baht/Month, the lowest is that 103 (25.8%) respondents are earning income between 30,000-35,000 Baht/Month. In term of occupation, 190 (47.5%) respondents worked as employee, 71 (17.8%) respondents are businessman, 63 (15.8%) respondents are students, 58 (14.5%) respondents are state employee, and only 18 (4.5%) respondents are other occupation. About the nationality, Thai nationality is the dominate nationality which is 235 (58.8%) respondents, 165 (41.3%) respondents are non-Thai nationality. The last question is the budget for buying condominium, 148 (37%) respondents have budget between 4,800,001-6,000,000 Baht to buy a condominium, follow by 115 (28.7%) respondents have budget between 3,900,001-4,800,000 Baht to buy a condominium, then 69 (17.3%) respondents have budget more than 6,000,001 Baht to buy a condominium, the lowest is that 68 (17%) respondents have budget between 3,000,000-3,900,000 Baht to buy a condominium.

Table 2 - Summary result of Independent Variables and Dependent Variables by mean and standard deviation.

<table>
<thead>
<tr>
<th>Question</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>400</td>
<td>3.98</td>
<td>.527</td>
<td>Agree</td>
</tr>
<tr>
<td>Financial Concern</td>
<td>400</td>
<td>4.28</td>
<td>.571</td>
<td>High Intention</td>
</tr>
<tr>
<td>Environmental Concern</td>
<td>400</td>
<td>4.00</td>
<td>.579</td>
<td>High Intention</td>
</tr>
<tr>
<td>Perceived Value</td>
<td>400</td>
<td>4.15</td>
<td>.525</td>
<td>High Intention</td>
</tr>
<tr>
<td>Purchase Intention</td>
<td>400</td>
<td>4.00</td>
<td>.570</td>
<td>High Intention</td>
</tr>
</tbody>
</table>

Note: According to Table 2, all five independent variables and dependent variable shows the results that can be interpreted with “Agree” from “Location”; and “High Intention” from “Financial Concern”, “Environmental Concern”, “Perceived Value”, and “Purchase Intention”. The mean score of those five statements is 3.98, 4.28, 4.00, 4.15, and 4.00, respectively. The standard deviation of the dependent variable is 0.570 (Purchase Intention), and other independent variables consist of “Location”, “Financial Concern”, “Environmental Concern”, and “Perceived Value” are at the value 0.527, 0.570, 0.579, and 0.525, respectively.

Table 3 - Model Summary from Multiple Regression Analysis
### Model Summary

<table>
<thead>
<tr>
<th>Mode</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Change Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>R Square Change</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>F Change</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>df1</td>
</tr>
<tr>
<td>1</td>
<td>.497</td>
<td>.247</td>
<td>.239</td>
<td>.49701</td>
<td>.247</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), PV, LO, EC, FC

**Note:** Above Table 3, Adjusted R square value is 0.239 which means that 23.9% of the variation affect in purchase intention of high-class condominium real estate of Generation Z customers in Bangkok, Thailand can be explained by the four independent variables which is location, financial concern, environmental concern, and perceived value.

### 8.1 Significant Value & Beta Coefficient Analysis

The significance value or commonly known as "p value" below Table 3 is used to test whether the purchase intention is statistically significant. The significant value of financial concern, environmental concern, and perceived value is less than 0.05 which is 0.022, 0.001, and 0.000, respectively. Hence, it can be explained that financial concern, environmental concern, and perceived value significantly affect purchase intention of high-class condominium real estate of Generation Z customers in Bangkok, Thailand. Nevertheless, the significant value of location is more than 0.05 which is 0.536. Thus, there is not a significant effect on purchase intention of high-class condominium real estate of Generation Z customer in Bangkok, Thailand.

In addition, the standardized Beta coefficients from the three statistically significant independent variables of financial concern, environmental concern, and perceived value are 0.134, 0.174, and 0.304, respectively. The result can show that for every 1 unit increase in financial concern the purchase intention of buying a high-class condominium real estate of Generation Z customer in Bangkok, Thailand will increase by 13.4%; every 1 unit add in environmental concern the purchase intention of buying a high-class condominium real estate of Generation Z customer in Bangkok, Thailand will add by 17.4%; and every 1 unit augment in perceived value the purchase intention of buying a high-class condominium real estate of Generation Z customer in Bangkok, Thailand will increase by 30.4%.

### Table 4- Multiple Linear Regression Results

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td>Tolerance</td>
</tr>
<tr>
<td>Location</td>
<td>-.034</td>
<td>.054</td>
<td>-.031</td>
<td>-.619</td>
<td>.536</td>
</tr>
<tr>
<td>Financial concern</td>
<td>.134</td>
<td>.058</td>
<td>.134</td>
<td>2.302</td>
<td>.022</td>
</tr>
<tr>
<td>Environmental concern</td>
<td>.172</td>
<td>.050</td>
<td>.174</td>
<td>3.430</td>
<td>.001</td>
</tr>
<tr>
<td>Perceived value</td>
<td>.330</td>
<td>.065</td>
<td>.304</td>
<td>5.102</td>
<td>.000</td>
</tr>
</tbody>
</table>

a: Dependent Variable: Purchase Intention
8.2 VIF-Variable Inflation Factor

According to Stephanie (2015), the Variance Inflation Factor (VIF) is a measure of the amount of multicollinearity in a set of multiple regression variables, and it should be between 1 and 5. In this study, the variance inflation factors of location, financial concern, environmental concern, and perceived value is 1.321, 1.769, 1.355, and 1.862, respectively. All of them are less than 5. This means that the correlation between all independent variables is not high, hence there is no problem of multicollinearity.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Sig.</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1o: Location does not significantly affect purchase intention of high-class condominium real estate of generation Z customers in Bangkok, Thailand.</td>
<td>.536</td>
<td>Failed to reject</td>
</tr>
<tr>
<td>H2o: Financial concern does not significantly affect purchase intention of high-class condominium real estate of generation Z customers in Bangkok, Thailand.</td>
<td>.022</td>
<td>Rejected</td>
</tr>
<tr>
<td>H3o: Environmental concern does not significantly affect purchase intention of high-class condominium real estate of generation Z customers in Bangkok, Thailand.</td>
<td>.001</td>
<td>Rejected</td>
</tr>
<tr>
<td>H4o: Perceived value does not significantly affect purchase intention of high-class condominium real estate of generation Z customers in Bangkok, Thailand.</td>
<td>.000</td>
<td>Rejected</td>
</tr>
</tbody>
</table>

Note: Based on the results, the researcher found that location is not significant because the significance level of the independent variables is higher than 0.05, hence the null hypothesis is not rejected. In consequence, the researcher decides to analyse all independent variables again by excluding variable that is not significant which is the location. Hence, the results change slightly because no insignificant variables are included. For the results, it will be concluded that financial concern, environmental concern, and perceived value have an impact on the purchase intention of buying a high-class condominium real estate of Generation Z customer in Bangkok, Thailand.

Table 6 – Model Summary from Multiple Regression Analysis (2ed round)

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>R Square Change</th>
<th>F Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.496a</td>
<td>.246</td>
<td>.241</td>
<td>.4962</td>
<td>.246</td>
<td>43.134</td>
<td>3</td>
<td>396</td>
<td>.000</td>
</tr>
</tbody>
</table>

Note: The results of second round are shown as the above Table 6. Adjusted R square value is 0.241 which can be interpreted that 24.1% of the variation affect in purchase intention of high-class condominium real estate of Generation Z customers in Bangkok, Thailand can be explained by the three independent variables in this research which is financial concern, environmental concern, and perceived value.
8.3 Significant Value & Beta Coefficient Analysis

The significance value or commonly known as "p value" below Table 6 is used to test whether the purchase intention is statistically significant. The significant value of financial concern, environmental concern, and perceived value is less than 0.05 which is 0.027, 0.001, and 0.000, respectively. Hence, it can be explained that financial concern, environmental concern, and perceived value significantly affect purchase intention of high-class condominium real estate of Generation Z customers in Bangkok, Thailand.

In addition, the standardized Beta coefficients from the three statistically significant independent variables of financial concern, environmental concern, and perceived value are 0.122, 0.172, and 0.300, respectively. The result can show that for every 1 unit increase in financial concern the purchase intention of buying a high-class condominium real estate of Generation Z customer in Bangkok, Thailand will increase by 12.2%; every 1 unit add in environmental concern the purchase intention of buying a high-class condominium real estate of Generation Z customer in Bangkok, Thailand will add by 17.2%; and every 1 unit augment in perceived value the purchase intention of buying a high-class condominium real estate of Generation Z customer in Bangkok, Thailand will increase by 30.0%.

Table 7 – Multiple Linear Regression Results (2ed round)

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td>Tolerance</td>
</tr>
<tr>
<td>Financial Concern</td>
<td>.122</td>
<td>.055</td>
<td>.122</td>
<td>2.223</td>
<td>.027</td>
</tr>
<tr>
<td>Environmental Concern</td>
<td>.170</td>
<td>.050</td>
<td>.172</td>
<td>3.402</td>
<td>.001</td>
</tr>
<tr>
<td>Perceived Value</td>
<td>.326</td>
<td>.064</td>
<td>.300</td>
<td>5.069</td>
<td>.000</td>
</tr>
</tbody>
</table>

a: Dependent Variable: Purchase Intention

9. Conclusion

Related to the research objectives, the researcher wants to study the factors affected to the purchase intention of high-class condominium real estate of Generation Z customers in Bangkok and study the factors affecting purchase intention of high-class condominium real estate of Generation Z customers in Bangkok.

The mean and standard deviation interpretation shows that the maximum value is financial concern, follow by perceived value, environmental concern, and location respectively. The descriptive analysis shows the current attitude of people who are Thai and Non-Thai, female and male, age 20 to 30 years old, living in Bangkok province, earning income above 30,000 Baht/month, and have plan to stay in Bangkok within the next 2 years.

However, before the research, the researcher believes that the location most likely to affect customers’ purchase intention of buying a condominium. In fact, the influence of location on customers’ purchase intention of buying a condominium is very weak. Based on the correlation relationship between independent variables and dependent variables, it shows that location has very weak relationship with purchase intention. The hypothesis testing result also shows this point. The H1o which is about the influence of location on customers’ purchase intention of buying a high-class condominium of Generation Z in Bangkok, Thailand is failed to reject. On the other hand, the multiple linear regression analysis used to test the null hypothesis shows that financial concern, environmental concern, and perceived value affect purchase intention of high-class condominium real estate of Generation Z customers in Bangkok, Thailand. The perceived value is the
most important factor which affect purchase intention of high-class condominium real estate of Generation Z customers in Bangkok, Thailand. It also can be explained that every 1-unit augment in perceived value the purchase intention of buying a high-class condominium real estate of Generation Z customer in Bangkok, Thailand will increase by 30.4%; every 1 unit add in environmental concern the purchase intention of buying a high-class condominium real estate of Generation Z customer in Bangkok, Thailand will add by 17.4%; every 1 unit increase in financial concern the purchase intention of buying a high-class condominium real estate of Generation Z customer in Bangkok, Thailand will increase by 13.4%.

10. Recommendation

When generation Z customer consider buying a high-class condominium in Bangkok, Thailand perceived value will mostly affect their purchase intention. Generation Z is a young generation, they have different lifestyle and needs with other generation. Based on the research, when generation Z customers consider buying a condominium, they will consider more about the perceived value which is the co-working space, fitness room, swimming pool, spacious and nice garden, 24-hour security, and enough parking space. For this information the researcher gets, the researcher recommends companies improving these facilities as much as possible if their target group is generation Z. Meanwhile, in those facilities, 24-hour security is the most important, companies need to make sure that they have it. On the other hand, companies need to consider the environmental concern and the financial concern of the condominium as well. Based on the research, those two factors are important too. It will help the company to improve their business plans and practices to maintain revenue.

In this research, perceived value is the most important factor, follow by environmental concern and financial concern. When perceived value, environmental concern, and financial concern is analysed in detail through the sub-questions, the mean level of the sub-factors can be evaluated. Firstly, when customer purchase high-class condominium they will consider the perceived value of 24-hour security at maximum mean 4.36. Secondly, when customer purchase high-class condominium they will consider the financial concern of good value for money price at mean 4.34. Thirdly, when customer purchase high-class condominium they will consider the financial concern of fair price at mean 4.33. Then they will consider financial concern of low mortgages rate at mean 4.31. Next, they will consider financial concern of future resale prices at mean 4.27. Then follow by environmental concern of no air pollution (mean 4.24), perceived value of fitness room (mean 4.18), perceived value of swimming pool (mean 4.17), financial concern of low maintenance costs (mean 4.16), perceived value of spacious and nice garden (mean 4.13), perceived value of enough parking space (mean 4.01), perceived value of co-working space (mean 4.01), environmental concern of more vegetation area (mean 3.95), and environmental concern of riverbanks (mean 3.82).

References


Stryjakiewicz, T. (1988), Czynniki lokalizacji i funkcjonowania przemysłu rolno-spożywczego oraz jego struktura przestrzenna w regionie poznanskim, Wydawnictwo Naukowe UAM, Poznan”.


Acceptance of Using Thai Air Asia’s Online Application of Thai Senior Citizens

Krit Witthawassamrankul¹, Nutchirathorn Nualsom² and Weerapong Nanthasing³

Abstract

This research mainly aimed to 1) study the acceptance of Thai Air Asia Airline’s Application and 2) to study the variables affecting the senior citizens’ acceptance of the airline. The research instrument was the questionnaires which were distributed to 400 Thai senior citizens. The statistics were frequency, percentage, mean, standard deviation, t-test, One-Way ANOVA at a statistical significance level of 0.05. The results found that mostly respondents were females, ages between 60-74, having lower than bachelor degree level, the current or previous occupation before retirement was freelancers, staying and learning from their children, frequency of use was 1-2 times per year, and objective of flying was travelling. The results of overall acceptance of Thai Air Asia’s online application was at a high level (mean = 3.70, S.D.= 0.909). The hypothesis testing found that the different education level, occupation, learning, frequency of use and objectives of travelling, not genders and age ranges affected the acceptance level. The results showed that learning and social factor, particularly staying with their children and learning from the children were the factors affecting the senior citizens’ acceptance level of Thai Air Asia Airline’s application.

Keywords: Application, Airline, Senior Citizens

1. Introduction

1.1 Background of the Study

Nowadays, an application technology becomes a useful tool for good and service business. It serves as a channel of communication, buying and selling, persuasion, and also public relations. However, the major reason of offering application for business is to increase sales and expand the new market, particularly customers in the new generations such as gen Y and Alpha, who spend more time with technology and social network (Solomon, 2019). Application is used widely in service industry, such as hotel, tourism, and airline. The application can help the business facilitate the service and connect customers directly by mobile phones.

Because of technological advancement, more and more senior citizens increase globally and tend to be the major buyers of products and services. World Health Organization (WHO) estimated that the senior citizens or the elderly will increase every 3 percent per year and reach to 1.4 billion in 2030 and mostly senior citizens will be Asians (World Health Organization, 2019). Therefore, the business has to consider this market and try to increase numbers of customers from this segment. Though, it is not easy for some business depends on application technology such airline. The senior citizens or the elderly may not accept the application and technology easily due to familiarity, ways of life, tradition, etc. Therefore, the research aimed to study the acceptance level of the online airline application by using Thai Air Asia’s online application and use Thai senior citizens as samples of the study.

1.2 Research Objectives

1.2.1 To study the acceptance level of using Thai Air Asia’s online application of the Thai senior citizens

1.2.2 To study the variables affecting the Thai Air Asia’s online application of the Thai senior citizens.

1.3 Research Questions

1.3.1 What is the acceptance level of using Thai Air Asia’s online application of the Thai senior citizens?
1.3.2 What are the variables affecting the Thai Air Asia’ online application of the Thai senior citizens?

1.4 Research Hypothesis

Different personal factors of the Thai senior citizens (such as gender, age, domestic company, education level, occupation, learning, frequency of use and travelling objectives) affected the different acceptance level of Thai Air Asia’s online application of Thai senior citizens.

1.5 Scope of the Study

1.5.1 Population and Samples were Thai males and females, whose ages more than 60 years old, use the Thai Air Asia Airline.

1.5.2 The independent variables were gender, age, education level, current occupation and before retirement, learning, frequency of use and objective of flying. The dependent variable was the acceptance of using Thai Air Asia’s online application of Thai senior citizens.

1.5.3 Duration of the study was from 1-30 August 2021

1.6 Benefits of the study

The airline can use the results of the study to improve its online application and also find ways to encourage the using of airline application for Thai senior citizens.

2. Literature Review

To the literature review, the research divided this part into concepts and theories, related researches and conceptual framework.

2.1 Concepts and Theories

2.1.1 Senior Citizen or the Elderly

The senior citizen and the elderly are interchangeable. The definition of them refers to the chronological age. World Health Organization (WHO) defined this as the older person or elderly person as people whose ages above 60 years old are defined as the senior citizens or the elderly. United Nation defined 3 levels of aging society as 1) aging society 2) aged society and 3) super-aged society. The aging society started when the senior citizens whose age of 60 or more are more than 10 per cent of a country or senior citizens whose age are more than 65 are more 7 per cent of a country. (WHO, 2001).

Refer to Thai law, the persons whose age are over 60 years old are considered as the senior citizens or the elderly. They are eligible to get benefits mentioned in the law.

2.1.2 Senior Citizen Consumer Behavior

Based the consumer behaviour theory, there are many factors affecting the senior citizen consumer behaviour such as their personal factors, lifestyle, income, social factors, psychological factors and physical limitation. The senior citizens may have different consumer behaviour based on their needs and their social factors involved, such as the recently retired workers. Economically, senior citizens in different stages of family life cycle may have different consumer behaviour, for example, empty nest I and empty nest 2.

Acceptance of the technology is much addressed on the study of senior citizen consumer behaviour as they are considered as the laggard in the innovation adoption. The senior citizens are reluctant to use the innovation and new technology due to numbers of reasons and they are less than 5% who tried the innovation.

2.2 Technology Acceptance Model (TAM)

Davis, Bagozzi & Warshaw (1989) developed the theory of reasoned action: (TRA) and studied the factors affecting the decision to use technology and innovation. The main factors of this study were perceived ease of use, perceived usefulness and behavioral Intention. All of these affect attitude toward use of technology. The further developed theory later added on external factor such as actual system use. This model is frequently referred in the study since it was simple and applicable to people in different ages.
2.3 Conceptual Framework

The developed conceptual framework included the independent variables personal factors as gender, age, domestic company, education level, occupation (current and before retirement) and behavior as learning, frequency of using the airline, and objectives of flying and the dependent variables as acceptance of Thai Air Asia’s online application of Thai senior citizens.

3. Research Methods and Materials

This quantitative research method included population and sampling, research instrument, data collection and data analysis as follow:

3.1 Population and Sampling

The population of the study were Thai senior citizens, whose ages were equal to or more than 60 years old. Refer to Department of Older Persons (2021), there were 11,627,130 Thai senior citizens in 77 provinces in Thailand, counted as 17.57% of overall Thai population, on December 31, 2020.

The sample size of the study was 400 Thai senior citizens. The questionnaire respondents based on Taro Yamane’s formula was equal to or more than 385. The researcher applied purposive sampling. Before doing the questionnaires, the respondents would be asked and informed their experience in using Thai Air Asia’s online Application.

3.2 Research Instrument

The research instrument was the questionnaire, which was developed by the concepts, theories and related research. The questionnaire included 3 parts as part 1) personal factors, which included gender, age, domestic company, education level, occupation (current and before retirement) and behavior as learning, frequency of using the airline, and objectives of flying; part 2) acceptance of Thai Air Asia’s online application of Thai senior citizens and Part 3) other suggestions about this topic.

The questionnaires used Likert’s rating scale ranging from 1-5 (Lowest to Highest) with the class interval of 0.80 from 5 classes. The ranges and meanings were as:

- 4.21-5.00 Highest (5)
- 3.41-4.20 High (4)
- 2.61-3.40 Moderate (3)
- 1.81-2.60 Low (2)
- 1.00-1.80 Lowest (1)

3.3 Instrument Quality

The researcher applied content validity by asking 3 experts to checked IOC (Index of Item Objective Congruence), which was higher than 0.70; and reliability by tryout of 40 sets. The Cronbach Alpha’s Coefficient (α) was
0.976 overall (33 questions) and each item from reliability tests were more than 0.70 showing the high reliability as:

- Perceived Benefits of the Application (6 questions) \( \alpha = 0.915 \)
- Ease of Use of the Application (7 questions) \( \alpha = 0.917 \)
- Attitudes towards Using the Application (5 questions) \( \alpha = 0.899 \)
- Problems of Using the Application (6 questions) \( \alpha = 0.900 \)
- Convenience of Using the Application (5 questions) \( \alpha = 0.884 \)
- Acceptance of the Application (5 questions) \( \alpha = 0.892 \)

### 3.4 Data Collection

The researcher began to collect the data from the secondary data which included concepts, theories and related researches. Then, he collected the primary data by using Google Form questionnaires. The reason of using Google Form questionnaires was from the limitation of study during covid-19 pandemic. Before the researcher distributed the Google Form questionnaire, he asked the experience of using online application of Thai Air Asia of the senior citizens. The non-experienced would not be distributed.

### 3.5 Data Analysis

After distributing the questionnaires, the researcher quantitatively analyzed the data by using SPSS. Quantitatively, the descriptive statistics were mean, frequency, percentage, and standard deviation and the inferential statistics were t-test and One-Way ANOVA. Qualitatively, the content analysis was used to summarize the written part.

### 4. Results and Discussion

The results of the study included the result of personal factors, the results of the acceptance level of using Thai Air Asia’s Online Application of Thai Senior Citizens, the results from the other suggestion part and the results of hypothesis testing.

#### 4.1 Results

**Table 1: Results of Personal Factors**

<table>
<thead>
<tr>
<th>Respondents’ Profile</th>
<th>Frequency (n)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>158</td>
<td>39.5</td>
</tr>
<tr>
<td>Female</td>
<td>242</td>
<td>60.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>400</strong></td>
<td><strong>100</strong></td>
</tr>
<tr>
<td><strong>2. Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60 - 64 years old</td>
<td>205</td>
<td>51.2</td>
</tr>
<tr>
<td>65 - 69 years old</td>
<td>103</td>
<td>25.8</td>
</tr>
<tr>
<td>70 - 74 years old</td>
<td>55</td>
<td>13.8</td>
</tr>
<tr>
<td>75 - 79 years old</td>
<td>26</td>
<td>6.5</td>
</tr>
<tr>
<td>80 years old and above</td>
<td>11</td>
<td>2.8</td>
</tr>
</tbody>
</table>
## Respondents’ Profile

<table>
<thead>
<tr>
<th>Respondents’ Profile</th>
<th>Frequency (n)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>400</td>
<td>100</td>
</tr>
<tr>
<td><strong>3. Domestic Company</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alone</td>
<td>69</td>
<td>17.3</td>
</tr>
<tr>
<td>Spouses/Partners</td>
<td>135</td>
<td>33.8</td>
</tr>
<tr>
<td>Children/Grandchildren</td>
<td>177</td>
<td>44.3</td>
</tr>
<tr>
<td>Friends</td>
<td>18</td>
<td>4.5</td>
</tr>
<tr>
<td>Others</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>Total</td>
<td>400</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>4. Education Level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower than Bachelor Degree</td>
<td>220</td>
<td>55.0</td>
</tr>
<tr>
<td>Bachelor Degree or Equivalent</td>
<td>136</td>
<td>34.0</td>
</tr>
<tr>
<td>Higher than Bachelor Degree</td>
<td>44</td>
<td>11.0</td>
</tr>
<tr>
<td>Total</td>
<td>400</td>
<td>100</td>
</tr>
<tr>
<td><strong>5. Occupation (Current or Before)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Government Officers</td>
<td>68</td>
<td>17.0</td>
</tr>
<tr>
<td>Employees</td>
<td>54</td>
<td>13.5</td>
</tr>
<tr>
<td>State Enterprise Workers</td>
<td>20</td>
<td>5.0</td>
</tr>
<tr>
<td>Businesspeople</td>
<td>86</td>
<td>21.5</td>
</tr>
<tr>
<td>Freelancers</td>
<td>99</td>
<td>28.4</td>
</tr>
<tr>
<td>Housewife/Domestic Workers</td>
<td>64</td>
<td>16.0</td>
</tr>
<tr>
<td>Others</td>
<td>9</td>
<td>2.3</td>
</tr>
<tr>
<td>Total</td>
<td>400</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>6. Learning</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yourself</td>
<td>80</td>
<td>20.0</td>
</tr>
<tr>
<td>Children/Grandchildren</td>
<td>239</td>
<td>59.8</td>
</tr>
<tr>
<td>Friends</td>
<td>52</td>
<td>13.0</td>
</tr>
</tbody>
</table>
Respondents’ Profile | Frequency (n) | Percentage
---|---|---
Television and Media | 26 | 6.5
Others | 3 | 0.8
Total | **400** | **100.0**

7. Frequency of Using the Airline

<table>
<thead>
<tr>
<th>Frequency of Using the Airline</th>
<th>Frequency (n)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2 per year</td>
<td>200</td>
<td>50.0</td>
</tr>
<tr>
<td>3- 4 per year</td>
<td>118</td>
<td>29.5</td>
</tr>
<tr>
<td>5- 6 per year</td>
<td>53</td>
<td>13.3</td>
</tr>
<tr>
<td>7- 8 per year</td>
<td>11</td>
<td>2.8</td>
</tr>
<tr>
<td>More than 8 times per year</td>
<td>18</td>
<td>4.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>400</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

8. Objectives of Flying

<table>
<thead>
<tr>
<th>Objective of Flying</th>
<th>Frequency (n)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Travelling</td>
<td>209</td>
<td>52.3</td>
</tr>
<tr>
<td>Visiting</td>
<td>101</td>
<td>25.3</td>
</tr>
<tr>
<td>Medical Appointment</td>
<td>36</td>
<td>9.0</td>
</tr>
<tr>
<td>Doing Business</td>
<td>53</td>
<td>13.3</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>400</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

The results of the personal data found that in the study, mostly respondents’ gender was females (=60.5%), mostly age ranges was 60-64 years old (=25.8%), mostly, domestic company was with children and grandchildren (=44.3%), mostly, the education level was lower than bachelor degree (=55.0%), mostly respondents’ occupation was freelancers (=24.8%), mostly, the respondents learnt from their children and grandchildren (=59.8%). Mostly their frequency of flying was 1-2 time a year (=52.3%)

<table>
<thead>
<tr>
<th>Acceptance Level of Application</th>
<th>Mean</th>
<th>S.D.</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Perceived Benefits of the Application</td>
<td>3.70</td>
<td>1.033</td>
<td>High</td>
</tr>
<tr>
<td>2. Easy Use of the Application</td>
<td>3.72</td>
<td>0.877</td>
<td>High</td>
</tr>
<tr>
<td>3. Attitudes towards Using the Application</td>
<td>3.78</td>
<td>0.901</td>
<td>High</td>
</tr>
<tr>
<td>4. Problems of Using the Application</td>
<td>3.72</td>
<td>0.970</td>
<td>High</td>
</tr>
<tr>
<td>5. Convenience of Using the Application</td>
<td>3.79</td>
<td>0.893</td>
<td>High</td>
</tr>
<tr>
<td>6. Acceptance of the Application</td>
<td>3.79</td>
<td>0.894</td>
<td>High</td>
</tr>
<tr>
<td>Overall</td>
<td>3.70</td>
<td>0.909</td>
<td>High</td>
</tr>
</tbody>
</table>

Table 2: Results of the Acceptance Level of Using Thai Air Asia’s Online Application of Thai Senior Citizens
Results of the Acceptance Level of Using Thai Air Asia’s Online Application of Thai Senior Citizens

Based on the results, it showed that the overall acceptance level of using Thai Air Asia’s online application was rated at a high level (mean = 3.70, S.D. = 0.909). When considering each item, it found that the highest score was from convenience of using the application (mean = 3.79, S.D. = 0.893) and acceptance of the application (mean = 3.79, S.D. = 0.894). The convenience of using the application is time and place utilities and the acceptance of the application is acceptance of the basic use and use in a daily life. The lowest scores was perceived benefits of the application (mean = 3.70, S.D. = 1.033). The perceived benefits of the application are information of promotion and updated airline information.

Results of the Other Suggestion

The results of the written part found that there were problems of acceptance of using Thai Air Asia’s online application as: 1) Problems of acquaintance and familiarity. The senior citizens prefer the ways which they behaviourally use. They will not invest their time in the complicate way.

2) Problems of seeing. The senior citizens informed that they hardly use the application on mobile phones since it is quite difficult for them to read the small letter on the screen and they prefer to see the symbol.

Table 3: Results of Hypothesis Testing

<table>
<thead>
<tr>
<th>Personal Factors</th>
<th>T-test</th>
<th>One Way ANOVA</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>-0.509</td>
<td></td>
<td>0.611</td>
</tr>
<tr>
<td>Age</td>
<td>1.367</td>
<td>0.245</td>
<td></td>
</tr>
<tr>
<td>Domestic Company</td>
<td>3.386</td>
<td>0.010*</td>
<td></td>
</tr>
<tr>
<td>Education Level</td>
<td>9.702</td>
<td>0.000*</td>
<td></td>
</tr>
<tr>
<td>Occupation</td>
<td>3.278</td>
<td>0.004*</td>
<td></td>
</tr>
<tr>
<td>Learning</td>
<td>7.895</td>
<td>0.000*</td>
<td></td>
</tr>
<tr>
<td>Frequency of Using</td>
<td>4.885</td>
<td>0.001*</td>
<td></td>
</tr>
<tr>
<td>Objectives of Flying</td>
<td>4.886</td>
<td>0.001*</td>
<td></td>
</tr>
</tbody>
</table>

The hypothesis testing results showed that different personal factors as domestic company, education level, occupation, learning, frequency of using, and objective of flying affected different acceptance level of using Thai Air Asia’s online application (P-value < 0.05). However, different personal factors as gender and age did not affect different acceptance level of using Thai Air Asia’s online application (P-value > 0.05).

4.2 Discussion

In this study, it found that major reasons which affected Thai senior citizens to accept Thai Air Asia’s online application as domestic company, learning, education and behavior factors were the factors affecting acceptance of Thai Air Asia’s online application. From the study, it showed that the senior citizens who have bachelor degree and above, staying and learning with children and grandchildren and frequently fly accepted more on the online airline application, rather than the opposite ones.

The results of this study would be similar to the study of communication behavior in line application data sharing of elderly people (Somvatasan, 2016) that the senior citizens or elderly people tends to accept and learn online application technology from their children and grandchildren. They will not create and use the complicate online application. They prefer simple use for the daily purposes and will not try if they found no incentives to use. Children and grandchildren affected them very much. The results also goes with the research titled “Factors Influencing the Adoption of Line Application Using for Elderly Users” (Boonprasert, 2017) that the elderly people learned to use application from their descendants. They used simple functions and rarely tried complicate functions and influencing factors of using the application was perceived benefits and the ease of use. The use of the senior citizens are basically when they needed and they will be encouraged to learn by their children.

5. Conclusions

The results found that the senior citizens accepted using Thai Air Asia’s online application at a high level for every item. They do not use the application because of their familiarity of the old way and seeing problem. The major factors affected the senior citizens to use the application are their social factors, particularly their children. The senior citizens prefer to use basic functions and will not seek the updated information from the application. The hypothesis testing results showed the difference in domestic company, educational level, occupation, learning, frequency of using, and objectives of flying affect the acceptance level of Thai Air Asia’s online application, but gender and age. This showed that genders and ages do not affect but other
affected the use of online application. Social factors and the needs are vital factors.

5.2 Recommendations

5.2.1 Recommendation of the Study

1. The airline should improve its application to fit the senior citizens because they found some problems in the aspect of easiness to use such as complicate words and contents, small font size, etc.

1. The airline should have video clip or personal demonstration attached in the application. The seniors prefer the demonstration, rather than reading the manual and they would like to see the steps of doing.

3. The airline should encourage more online application using by give some marketing promotion. Based on the study, some seniors asked if there is any additional benefit of trying the online application.

5.2.2 Recommendation for the Further Study

1. This study had limitation due to covid-19 spread; therefore, distributing questionnaire may focus on only the persons participating by Google Form. It would be better if the study goes to the actual places, such as airports and airlines.

2. This study mainly used quantitative research instrument. Therefore, it may need more clarification on the other area, which the questions do not appear. The further study should include qualitative research for the in-depth information.

6. References


Generation Z Perception of Employer Attractiveness:  
A Survey Study in Bangkok, Thailand

Younes Parvin

Abstract

Without the right employees, companies cannot operate effectively or efficiently. Employer Branding is a tool used for companies to build a brand for themselves as a place to work for, and Employer Attractiveness is the benefits shown that a potential employee will receive for that company. Although proven as useful, our knowledge of Employer Attractiveness has been insufficient globally and practically nonexistent in Thailand, especially when it comes to the study of a generational perspective. This study aims to investigate the independent variables, which consist of Application Value, Development Value, Economic Value, Reputation Value, Social Value, Work Diversity Value, and Working Environment influencing Employer Attractiveness for Generation Z in Bangkok, Thailand. Although aimed to collect 400 (sample size), a total of 407 responses were collected from online questionnaires distributed through convenience sampling to be analyzed using Multiple Linear Regression, ANOVA, and Independent Sample T-Test to test the hypotheses. Working Environment, Economics Value, Application Value, and Social Value, respectively have a significant influence on Employer Attractiveness for Generation Z in Bangkok, Thailand. Further study is done on the components of each of these Independent Variables, and from them, “A fun working Environment”, “Job satisfaction”, “Strong team spirit and attitude”, “Flexible working hours”, “Retirement benefits”, “Flexible work tasks”, and “Opportunity to apply what was learned at organization” had the most influence on Employer Attractiveness.

Keywords: Employer Attractiveness, Generation Z, Employer Branding, Application Value, Development Value, Economic Value, Reputation Value, Social Value, Work Diversity Value, and Working Environment

JEL Classification Code: M10, M31, Z10, J01, O15

1. Introduction

Companies attempt to differentiate themselves by becoming more competitive in attracting potential talents using Employer Branding. Companies must communicate their employer’s unique and positive aspects and focus on a corresponding employment value proposition so that their employer attractiveness as employer will be strengthened in the labor market, and especially for the potential skilled recruits (Backaus & Tikoo, 2004; Collins & Kanar, 2013; Edwards & Edwards, 2013; Pingle & Sharma, 2013). Newer generations require different methods and tools for employer branding compared to the previous generations, as the attributes attractive, for example, to Generation Y will not be attractive to Generation Z in the same manner. Although this is highly useful for organizations to utilize to create competitive advantage by attracting potential skilled recruits, Biswas and Suar (2014) in their “Antecedents and Consequences of Employer Branding” mentioned that very few studies have been done regarding employer branding and its employer attractiveness.

Berthon et al. (2005) in their “Captivating company: Dimensions of attractiveness in employer branding” defined Employer Attractiveness as the envisioned benefits that potential and current employees perceive by working for a certain organization. Gatewood et al’s (1993) “Corporate image, recruitment image, and initial job choice decisions” explained that Employer attractiveness directly influences recruitment, which was followed by Helm’s (2013) “A matter of reputation and pride” pointing that it also directly influences the selection...
processes and the retention of professionals. Aiman-Smith et al’s (2001) “Are you attracted? Do you intend to pursue? A recruiting policy-capturing study” found that Employer attractiveness shows the good aspects of a company which will create a desire for professionals to be willing to create a relationship with. In the year 2000, Breaugh and Starke’s “Research on employee recruitment: So many studies, so many remaining questions” found that a general confusion exists regarding employer attraction and attraction stage in the recruitment process. The attraction stage in the recruitment process is to draw the interest of applicants for a specific position that the company is offering, but employer attractiveness’ job is to help the company become recognized and to be considered an attractive employer, which is a continuous work, but will eventually facilitate the whole recruitment process, this was concluded by Collins and Stevens’s (2002) “The relationship between early recruitment-related activities and the application decisions of new labor-market entrants: a brand equity approach to recruitment.”

McCrisle, (2010) in “Generations Defined” defined generation as "a cohort of people born within a similar span of time (15 years at the upper end) who share a comparable age and life stage and who were shaped by a particular span of time (events, trends, and developments)”. Generational Segmentation divides groups by their generation which as mentioned are related to their date of birth. This study is about Generation Z, the latest wave entering the labor force born between 1996–2012.

1.1. Research Objectives

This study aims to create a better understanding of the different aspects of Employer Attractiveness which will eventually help Employer Branding from a Generation Z perspective in Bangkok, Thailand. With the combined ideas of previous studies done on Employer Attractiveness and factors influencing it from different generations, the following research objectives have been chosen:

- To explore the perspective factors that influence employer attractiveness from Generation Z perspective in detail.
- To investigate the degree to which each factor influences employer attractiveness from Generation Z’s perspective.
- To study the dimension of factors regarding Employer Attractiveness.

1.2. Scope of Research

This research investigates the influence of Application Value, Development Value, Economic Value, Reputation Value, Social Value, Work Diversity Value, and Working Environment on Employer Attractiveness.

The method chosen for this research is descriptive and with online questionnaire as its research instrument to examine both the independent and dependent variables. By the end of this research, a great understanding of how to what extent each of these factors, as well as their components and demographic factors influence employer attractiveness by Generation Z in Bangkok, Thailand will be gathered which will help organizations to effectively and efficiently emphasize on certain factors that have the most significant influence to create a valuable employer branding for Generation Z in Bangkok, Thailand.

1.3. Significance of Study

Due to the lack of studies done regarding this matter, more in-depth knowledge is revealed about both Employer Branding’s Employer Attractiveness, and Generation Z. This will create a better understanding of both subjects, and companies’ recruitment process can be done more effectively and efficiently which will eventually help Thailand’s economy in the long run.

1.4. Definition of Terms

Application Value: Good promotions within the organization, hands-on inter-department experience which allows the employee to teach and apply what they had learned from the organization (Ambler & Barrow, 1996). Its components are Good promotion opportunities within the organization, Hands-on inter-department experience, Opportunity to teach others what you have learned, and Opportunity to apply what was learned at organization.

Development Value: It contains the value that comes from training and growth opportunities, empowering environment, room for creativity and innovation, as well as mentoring and coaching (Uppal, Wadhwa, & Vashisht, 2017). Its components are Good training opportunities, Opportunities of growth and advancement, Empowering environment, Room for creativity and innovation, Mentoring and coaching.
Economic Value: Economic value consists of possibilities for advancement, security, remuneration, above-average wages, compensation package, job security, and promotion opportunities (Berthon et al., 2005). The components chosen for this study are Non-monetary rewards, Retirement benefits, Above market-related salary, High job security, and Good health benefits.

Employer Attractiveness: The benefits that potential employees envisage they could get by working in a particular company (Berthon et al., 2005; Pingle & Sharma, 2013).

Reputation Value: This includes the company image and well-knownness regarding its leadership, products, company history, and reputation itself which creates attraction and retention for the employees of any company (Crossley & Jamieson, 1997; Regovich, 2014; Uppal et al., 2017). Its components are Company’s public image, Company being well-known, Company’s products being well-known, Good brand name to have on resume, and Company being active on social media.

Social Value: Social Values are values that will satisfy social needs such as recognition, appreciation, which can be done by regular meetings, recognition by supervisors, and emphasis on the importance of the employee’s work in the company (Uppal et al., 2017). Strong team spirit and attitude, Recognition / Appreciation from the supervisors, Company’s environment being family-oriented, The ease of work and timely help in problems, and Having regular social meetings organized by employer are its components.

Work Diversity Value: Support of employees’ creativity and challenging, interesting, and attractive work environment, which was supported by Dabirian et al. (2017) mentioning that challenging, motivating, and interesting job tasks are considered key employer branding areas to improve on. Its components are Flexible work tasks, Challenging work tasks, Job satisfaction, and Interesting tasks.

Working Environment: Working in a peaceful and yet exciting environment, the flexibility of working hours, and the ability to work from home (Uppal et al., 2017). Its components are A fun working Environment, Working in an exciting environment, Flexible working hours, and Ability to work from home.

2. Literature Review

In 2005, Berthon et al defined Employer Attractiveness as “the envisioned benefits that a potential employee sees in working for a specific organization”. It is an important process of Employer Branding, however not enough studies have been done on it.

Uppal et al. (2017) believed that Social Value can be considered: 1- Believing in equality of respect and appreciation in an organization; 2- Regular social meetings organized by employers; 3- Strong team spirit; 4- Recognition/appreciation from management; 5- Family-oriented environment; 6- Ease of work and timely help in work problems.

Reputation Value consists of: 1- Company image and brand being well-known; 2-Company reputation itself; 3-Leadership of the organization; 4-Well-known innovative products; 5- Good brand to have on resume (Uppal et al., 2017). According to Great Place to Work (2014) and Jiang and Iles (2011), reputation and employer attractiveness have a definite positive relationship, as employer attractiveness creates a reputation for the organization.

Based on Berthon et al’s (2005) research, Economic value consists of possibilities for advancement, security, and remuneration and, above-average wages, compensation package, job security, and promotion opportunities. It was stated by Chen and Choi (2008) and Ng et al. (2010) that over the years, recent studies have found the decrease of importance that Economic Value used to possess by the older generations in workplace.

Reis and Braga (2016) had found from their research survey that Generation Y’s preference for characteristics that could significantly attract them were narrowed to development opportunities, remunerations, and social needs and relationships, thus “Development Value”. A study by Plchová and Turáková (2016) had found that in China, the opportunity for career development was considered the most important variable regarding employer branding, and their sample emphasized the importance of the availability of information regarding the working environment and corporation’s training and career development opportunities.

Berthon et al’s (2005) idea of Application Value was to develop employer branding, possibilities to apply and transfer knowledge were significant. The hands-on inter-
departmental experience was added to its definition by Uppal et al. (2017). Ambler and Barrow (1996) believed that application value can also be considered the opportunity to apply expertise and convey knowledge to others, in a customer-oriented and humanitarian workplace. Reis and Braga’s (2015) research concluded that for Baby Boomers, Generation X, and Generation Y, Application Value was considered the least important factor.

Regarding Working Environment, Berthon et al. (2005) considered newer methods and techniques, employees’ creativity being supported, an attractive work environment with interesting and challenging tasks contribute heavily to employer brand development of high significance. They also believed that working in a motivating and stimulating environment helps develop employer branding. Generation Z considers working environment as an important factor of Employer Brand, as they value a fun-loving environment as their workplace (Uppal et al., 2017).

According to Berthon et al. (2005), one of the five elements in employer brand development is interest factors, which consist of newer methods and techniques, employees’ creativity being supported, and an attractive work environment with interesting and challenging tasks, which was supported by Dabirian et al. (2017) mentioning that challenging, motivating and interesting job tasks are considered key employer branding areas to improve on. Uppal et al. (2017) believed that Generation Z prefer to have challenging and fun tasks for their job.

3. Conceptual Framework

The proposed model’s purpose is to ease the analysis of the independent variables’ influence on the dependent variable. The independent variables include Application Value, Development Value, Economic Value, Reputation Value, Social Value, Work Diversity Value, Working Environment which this study will analyze for their influences and significance on Employer Attractiveness so that it’ll help employers improve and come up with new attraction and retention methods for Generation Z.

Research Hypotheses

H10: Social Value doesn’t have a significant influence on employer attractiveness for Generation Z in Bangkok, Thailand.

H1a: Social Value has a significant influence on employer attractiveness for Generation Z in Bangkok, Thailand.

H20: Reputation Value doesn’t have a significant influence on employer attractiveness for Generation Z in Bangkok, Thailand.

H2a: Reputation Value has a significant influence on employer attractiveness for Generation Z in Bangkok, Thailand.

H30: Economic Value doesn’t have a significant influence on employer attractiveness for Generation Z in Bangkok, Thailand.

H3a: Economic Value has a significant influence on employer attractiveness for Generation Z in Bangkok, Thailand.

H40: Work Diversity Value doesn’t have a significant influence on employer attractiveness for Generation Z in Bangkok, Thailand.

H4a: Work Diversity Value has a significant influence on employer attractiveness for Generation Z in Bangkok, Thailand.

H50: Department Value doesn’t have a significant influence on employer attractiveness for Generation Z in Bangkok, Thailand.
H5a: Development Value has a significant influence on employer attractiveness for Generation Z in Bangkok, Thailand.

H60: Application Value doesn’t have a significant influence on employer attractiveness for Generation Z in Bangkok, Thailand.

H6a: Application Value has a significant influence on employer attractiveness for Generation Z in Bangkok, Thailand.

H70: Work Environment doesn’t have a significant influence on employer attractiveness for Generation Z in Bangkok, Thailand.

H7a: Work Environment has a significant influence on employer attractiveness for Generation Z in Bangkok, Thailand.

**NOTE:** Each of these hypotheses have sub-hypotheses.

### 4. Research Methodology

The Method of Research is descriptive and different analytical methods were used to analyze the data collected from the independent variables to dependent variable’s point of view, as well as the demographic data to dependent variable. To examine the influence of the independent variables on the dependent variables, Multiple Linear Regression was used as each independent variable consisted of multiple components, which the researcher also analyzed to see each of those components’ individual influence on the dependent variable. This helps the researcher answer his research question to see the influence of the independent variables as a whole towards the dependent variable, and to investigate further to find each of the independent variables’ components’ deep influence on the dependent variable for further detailed analysis.

ANOVA and Independent Sample T-Test were used to see the influence of Demographic components on the dependent variable, ANOVA for components with more than 2 options, and Independent Sample T-Test for the ones with 2 options. Target Population is the people born between 1996–2002, who also live in Bangkok, Thailand. Sampling Units were described by the year they were born, which are 1996, 1997, 1998, 1999, 2000, 2001, 2002 who live in Bangkok. Research Questionnaire and its method of distribution were discussed and lastly, Pretest and its result were demonstrated which promises the reliability and legitimacy of the data collected by the questionnaire.

### 5. Descriptive Analysis

The year born was divided into 7 groups composed of 1996 (2539), 1997 (2540), 1998 (2541), 1999 (2542), 2000 (2543), 2001 (2544), and 2002 (2545). The result of analysis on the data collected shows that majority of the respondents were born in 1996 (2539) and 2000 (2543) which is 19.2% and 18.9% respectively, followed by 2001 (2544) 16%, 1996 (2542) 12.3%, 1998 (2541) 11.8%, 2002 (2545) 11.1%, and 1997 (2540) 10.8%, sequentially.

Gender has been segmented into Male and Female throughout history, but the existence of other genders has become a fact in recent decades. The researcher has given the respondents 3 choices: Male, Female, as per the traditional way, but has added “Others”, for those who do not identify as Male or Female. The researcher sees this as a necessity, especially for Generation Z as they are more open-minded than the previous generations regarding this matter. The results show that more than half of the respondents were Female covering 65.1%, followed by Male, 29.7%, and Others, 5.2%, respectively.

Occupation was segmented into 3 categories, “Student”, “Working”, and “Student and Working”. The result of the analysis shows that roughly half of the respondents were Students, 52.8%, and closely numbered are “Student and Working” and “Working” covering 23.8% and 23.3% respectively.

Nationality for the respondents was divided into ‘Thai” and “Non-Thai”, with “Thai” covering 92.6% and “Non-Thai” only 7.4%.

The researcher divided the Education level as “Elementary, Junior or High School”, “Undergraduate” and “Postgraduate”. Over half of the respondents were ‘Undergraduate” with 79.9%, followed by “Elementary, Junior or High School” 15.2% and “Postgraduate” 4.9%, respectively.

The respondents were given 7 options to choose for their major, nearly half had their major not amongst the options given which resulted in them choosing “Others” 46.2%, while from the options left, “Business and
Management” 21.4%, “Biology, Agriculture, Forestry or other Sciences” 8.1%, “Engineering” 7.6%, “Accounting, Banking & Finances” 7.4%, and “Economics” and “Social and Psychology” both covering 4.7%, all respectively.

Respondents’ religion was also considered while giving them the option to not answer this question as well. 64.6% of the respondents are Buddhist, 13% have no religion, 11.3% are Muslim, followed by followers of religions such as “Catholicism/Christianity” 5.9%, those who prefer not to say 2.5%, Hinduism 1.5%, Judaism 1.2%, respectively.

6. Summary, Conclusion, and Recommendation

6.1. Summary of Findings

In brief, the answer to the first question, which was to see which independent variables had the most influence on the dependent variable, is that Working Environment has the highest influence on Employer Attractiveness, followed by Economics Value, Application Value, and Social Value, sequentially. The answer to the second question which was to examine which independent variables influenced the dependent variable the least, is that Reputation Value, Work Diversity Value, and Development Value have the lowest influence on Employer Attractiveness. To answer the third question, “What dimension of Application Value, Development Value, Economic Value, Reputation Value, Social Value, Work Diversity Value, and Working Environment needs more attention than others to improve Employer Attractiveness from Generation Z’s point of view in Thailand?”, we must get an in-depth analysis on each of the independent variables including those that have no significant influence on Employer Attractiveness as a whole. To summarize, we begin with the independent variable that has the highest influence down to the independent variable with the lowest influence on the dependent variable. From the components of Working Environment, the statement “A fun working Environment” has the highest influence on Employer Attractiveness, followed by “Flexible working hours”, and “Ability to work from home”

6.2. Discussion

Regarding Social Value, Uppal et al. (2017) stated that their results indicated that a family-oriented environment attracts employees in India, whereas, this research has proven that this factor, in fact this sole factor, lacks significant influence. Bencsik et al. (2016) believed that Generation Zs prefer in-person communication. Social Value as a whole, does have a significant influence, which has led it to be the fourth most influential independent variable. From its components, “Strong team spirit and attitude” and “Having regular social meetings organized by employer” have the highest influence, which confirms Bencsik et al’s (2016) findings, followed by “The ease of work and timely help in problems” and “Recognition / Appreciation from the supervisors”, respectively. To add, Reis and Braga (2015) found that females considered Social Value more important than males for Baby Boomers, Generation X, and Generation Y in Norway, while this research found little to no difference of genders’ influence level regarding Social Value towards Employer Attractiveness.

For Reputation Value, Crossley and Jamieson (1997), Jiang and Iles (2011), Sivertzen et al. (2013), Roongrerngsuke and Liefooghe (2013), Great Place to Work (2014), Regovich (2014), Xie et al. (2015), all believed that there is a positive relationship between Reputation Value and Employer Attractiveness, and at times, is considered the most important variable for employees to consider working in an organization. However, this research’s results found that Reputation Value as a whole does not have a significant influence on Employer Attractiveness, and from its components, “Company’s products being well-known” had the least influence on Employer Attractiveness.

As of Economic Value, it became the second most influential independent variable regarding Employer Attractiveness. Chen and Choi; (2008); Ng et al., (2010) believed that Economic Value’s influence is decreasing in each generation and Rosencrantz’s (2018) result showed that it didn’t have significant importance as their other variables which contradicted Reis and Braga’s (2015) research as they found that Economic Value’s importance has been increasing over the past generations. This was partially supported by Uppal et al. (2017) as their research led to the idea that their respondents preferred market-related salary as the most important factor. Pandita’s (2021) research found that in Generation Z’s career development’s priorities, money wasn’t the only component. This
research’s result showed that Economic Value, as mentioned, became the second most influential independent variable, with its components, such as “Retirement benefits”, having the most significant influence, followed by “High job security”, “A non-monetary (non-cash) reward”, and “Above market-related salary”, respectively.

Regarding Work Diversity Value, it was mentioned that Sampath (2007) and Axten (2015) believed that leaders should provide growth opportunities and training as well as keeping jobs challenging for Generation Y to attract them. Dabirian et al. (2017) stated that challenging, motivating, and interesting job tasks are considered key employer branding areas to improve on, Uppal et al. (2017) believed that Generation Z prefer to have challenging and fun tasks for their job. However, his research didn’t find it as a whole to have a significant influence on Employer Attractiveness, and yet, from its components, “Job satisfaction”, “Flexible work tasks” and “Challenging work tasks” had a significant influence on Employer Attractiveness.

Concerning Development Value, App et al. (2012), Reis and Braga (2016), and Plchová and Turáková (2016) believed that development is of great value when it comes to Employer Attractiveness, important to consider that they evaluated Development Value from Gen Y, X, and previous generations. This study’s results show that Development Value as a whole does not have a significant influence on Employer Attractiveness, however, from its components, “Good training opportunities” had the highest significant influence level, followed by “Opportunities of growth and advancement”, “Mentoring and coaching”, and “Room for creativity and innovation”, sequentially.

When it comes to Application Value, Reis and Braga (2015) found that for Baby Boomers, Generation X and Generation Y, Application Value was considered the least important factor regarding Employer Attractiveness. Nevertheless, this research’s result showed that Application Value as a whole, is considered significantly influential, being the third most influential out of the 7 independent variables from which, 3 were not significant and 4 were significant. From its components, “Opportunity to apply what was learned at organization” had the highest influence, followed by “Good promotion opportunities within the organization”, “Hands-on inter-departmental experience”, and “Opportunity to teach others what you have learned”, respectively.

Regarding Work/Working Environment, Crossley and Jamieson (1997), Cable and Turban (2001), Berthon et al. (2005), Shaw and Fairhurst, (2008) Cavazotte et. (2012), Cogin, (2012), Kian et al. (2013), Regovich (2014), Plchová and Turáková, (2016), Bakanauskiene et al. (2016), Stewart et al. (2017), Uppal et al. (2017), and Pandita, (2021), all agreed that it plays a significant role in Employer Branding and Employer Attractiveness, which was proven by the recent researches done on Generation Y and Generation Z, to be increasing. This research found that Working Environment was the most influential independent variable for Generation Zs in Bangkok, Thailand, regarding Employer Attractiveness. From its components, “A fun working Environment” had the highest influence, followed by “Flexible working hours”, “Ability to work from home” and “Working in an exciting environment”, proportionately.

6.3. Conclusions

Gen Zs in a company expect a social environment where in-person communication is implemented through social meetings, as they desire to be heard and share their ideas with their supervisors to contribute. However, they expect it with feedback, recognition, and assistance in times of need.

Table 1: Multiple Linear Regression done on Social Value’s components and Dependent Variable result.

As Gen Zs expect an honest and transparent company to work for, companies must work on attributes that represent
them as a company of integrity, which is something previous generations valued as well. The new element that companies must work on is their activity on Social Media platforms.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Components</th>
<th>Beta</th>
<th>Sig.</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H21</td>
<td>RV1 Company’s public image</td>
<td>.217</td>
<td>.000</td>
<td>Reject H₀</td>
</tr>
<tr>
<td>H22</td>
<td>RV2 Company being well-known</td>
<td>.178</td>
<td>.005</td>
<td>Reject H₀</td>
</tr>
<tr>
<td>H23</td>
<td>RV3 Company’s products being well-known</td>
<td>.057</td>
<td>.385</td>
<td>Fail to Reject H₀</td>
</tr>
<tr>
<td>H24</td>
<td>RV4 Good brand name to have on resume</td>
<td>.195</td>
<td>.000</td>
<td>Reject H₀</td>
</tr>
<tr>
<td>H25</td>
<td>RV5 Company being active on social media</td>
<td>.183</td>
<td>.001</td>
<td>Reject H₀</td>
</tr>
</tbody>
</table>

Table 2: Multiple Linear Regression done on Reputation Value’s components and Dependent Variable result.

Gen Zs plan ahead and would prefer non-cash rewards, but this doesn’t indicate that they’d be satisfied with below-average salaries. They require high job security, which can be because of their parents losing their jobs due to the economical crises (Tom Yum Kung crisis, global financial crisis (GFC), and COVID-19 pandemic) which has made high job security and plans for the future to be of necessity.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Components</th>
<th>Beta</th>
<th>Sig.</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H31</td>
<td>EV1 A non-monetary (non-cash) reward</td>
<td>.157</td>
<td>.000</td>
<td>Reject H₀</td>
</tr>
<tr>
<td>H32</td>
<td>EV2 Retirement benefits</td>
<td>.283</td>
<td>.000</td>
<td>Reject H₀</td>
</tr>
<tr>
<td>H33</td>
<td>EV3 Above market related salary</td>
<td>.155</td>
<td>.003</td>
<td>Reject H₀</td>
</tr>
<tr>
<td>H34</td>
<td>EV4 High Job security</td>
<td>.234</td>
<td>.000</td>
<td>Reject H₀</td>
</tr>
<tr>
<td>H35</td>
<td>EV5 Good health benefits</td>
<td>.103</td>
<td>.077</td>
<td>Fail to Reject H₀</td>
</tr>
</tbody>
</table>

Table 3: Multiple Linear Regression done on Economic Value’s components and Dependent Variable result.

They prefer flexible work tasks as they desire to be creative and innovative with their work tasks, which will eventually help companies. To add, interestingly challenging work tasks that do not bore them, but yet, challenge them would attract them. Job satisfaction has been a factor that every generation have an inclination for.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Components</th>
<th>Beta</th>
<th>Sig.</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H41</td>
<td>WDV1 Flexible work tasks</td>
<td>.279</td>
<td>.000</td>
<td>Reject H₀</td>
</tr>
<tr>
<td>H42</td>
<td>WDV2 Challenging work tasks</td>
<td>.190</td>
<td>.000</td>
<td>Reject H₀</td>
</tr>
<tr>
<td>H43</td>
<td>WDV3 Job satisfaction</td>
<td>.287</td>
<td>.000</td>
<td>Reject H₀</td>
</tr>
<tr>
<td>H44</td>
<td>WDV4 Interesting tasks</td>
<td>.091</td>
<td>.102</td>
<td>Fail to Reject H₀</td>
</tr>
</tbody>
</table>

Table 4: Multiple Linear Regression done on Work Diversity Value’s components and Dependent Variable result.

Since Gen Zs are expressive and prefer to do things in their way, share their ideas, and yet get feedback, they value room for creativity and innovation, as well as receiving mentoring and coaching. They plan ahead and would desire to be ready for the future, which can be observed as they value growth and advancement as well as training opportunities, which builds and solidifies their post.
which they get the opportunity to both to teach others, and apply the experiences and bits of knowledge to ensure a secure future for oneself.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Components</th>
<th>Beta</th>
<th>Sig.</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H61</td>
<td>AV1 Good promotion opportunities within the organization</td>
<td>.209</td>
<td>.000</td>
<td>Reject H0</td>
</tr>
<tr>
<td>H62</td>
<td>AV2 Hands-on inter-departmental experience</td>
<td>.184</td>
<td>.002</td>
<td>Reject H0</td>
</tr>
<tr>
<td>H63</td>
<td>AV3 Opportunity to teach others what you have learned</td>
<td>.181</td>
<td>.001</td>
<td>Reject H0</td>
</tr>
<tr>
<td>H64</td>
<td>AV4 Opportunity to apply what was learned at organization</td>
<td>.279</td>
<td>.000</td>
<td>Reject H0</td>
</tr>
</tbody>
</table>

Table 6: Multiple Linear Regression done on Application Value’s components and Dependent Variable result.

In conclusion, Gen Zs have shown that they desire an independent, flexible, and innovative environment that comes with flexibility with the place and time of work. They also wish to be an exciting, fun, and result-driven working environment that they can input their ideas into their work process. It must be concluded that although they prefer to be independent, they expect to be mentored and coached rather than controlled.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Components</th>
<th>Beta</th>
<th>Sig.</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H71</td>
<td>WE1 A fun working Environment</td>
<td>.293</td>
<td>.000</td>
<td>Reject H0</td>
</tr>
<tr>
<td>H72</td>
<td>WE2 Working in an exciting environment</td>
<td>.161</td>
<td>.000</td>
<td>Reject H0</td>
</tr>
<tr>
<td>H73</td>
<td>WE3 Flexible working hours</td>
<td>.286</td>
<td>.000</td>
<td>Reject H0</td>
</tr>
<tr>
<td>H74</td>
<td>WE4 Ability to work from home</td>
<td>.203</td>
<td>.000</td>
<td>Reject H0</td>
</tr>
</tbody>
</table>

Table 7: Multiple Linear Regression done on Working Environment’s components and Dependent Variable result.

6.4 Recommendation

6.4.1 Social Value:

As mentioned in Chapter I and Chapter II, Generation Z in a company expect a social environment as they are expressive, where in-person communication is implemented through social meetings, as they desire to be heard and share their ideas with their supervisors to contribute, however, they expect feedback and recognition and assistance in times of need. Following through this as a plan will contribute to companies as Generation Z are quick learners and multitaskers, meaning companies can convey their message and instructions down to their Generation Z employees, and yet, get their response and ideas which will lead to efficient communication throughout the employees and supervisors.

6.4.2 Reputation Value:

The new element that companies must work on would be their activity on Social Media platforms. Caution is required as any negative elements done or said can echo throughout the world through Social Media. Companies can use the availability and exposure that emit from social media platforms to create a better public image for themselves, which will lead to their fame amongst their desired Generation Zs in the labor force. The social media activity should also focus on advertising the company as a place to work for.

6.4.3 Economic Value:

For companies to attract Generation Z, they must emphasize and exhibit the security and future related benefits of the positions that they offer, as well as keeping the salaries at least at an adequate level. They must present themselves as a place where they value their employees and the safety of their positions in the company.

6.4.4 Work Diversity Value:

They prefer flexible work tasks as they desire to be creative and innovative with their work tasks, which will eventually help companies, as well as work tasks that do not bore them, but challenge them as they are competitive. Job satisfaction has been a factor that every generation have an inclination for. Companies must lay out the tasks in a way that input from employees is possible, even if challenging. This will aid companies to attract their desired Generation Z recruits.
6.4.5 Development Value:

Generation Zs are expressive and prefer to do things in their individual way, share their ideas and get feedback, they value room for creativity and innovation, as well as receiving mentoring and coaching. They plan ahead and would desire to be ready for the future, which can be observed as they value growth and advancement as well as training opportunities, as it builds them and solidifies their position and job security.

6.4.6 Application Value:

Companies must create a learning environment, a place that they can learn from different departments and get practical experience and knowledge. Generation Z have a short attention span, which means that they are selective of the information they receive, companies must exhibit the experience and knowledge Generation Z can get as an employee to be of use to them to attract them effectively. Another factor to consider is good promotion opportunities within the company to ensure security and non-monetary rewards.

6.4.7 Working Environment:

Generation Z has shown that they desire an independent, flexible, and innovative work environment, and companies providing such attributes will lead to more productivity from their side. Companies must not be rigid with the place and time of work, but be more result-driven and let their Generation Z employees input their ideas into their work process which will most likely lead to a better operation, and a more exciting and fun working environment for them.

It must be concluded that although they desire to be independent, they expect to be mentored and coached rather than controlled, as that will take away their ability to express their ideas. So leader-style of attitude is more effective on them rather than a traditional manager style. The economic crises and especially, the recent COVID-19 pandemic has contributed to this independent variable and its components’ importance as rigid work environments have failed to operate, and after over a year of battle with the lockdowns, most companies have not adapted to work from home or flexible work hours lifestyle.

Reference


Proposed E-Commerce Platform for Unredeemed Pawned Items

Rasica Kijkunasathian¹, Poonphon Suesaowaluk²

Abstract

Purpose: This work proposes a new e-commerce platform especially for trading unredeemed pawned items, so-called ePawnMart, by complying with the concept of Extended Technology Acceptance Model (ETAM), and then this work measures the user acceptance of the proposed platform. Research design, data and methodology: This study reviews current unredeemed pawned items selling methods and the extended technology acceptance model. This study presents work in two main parts. Firstly, it proposes ePawnMart, including use case diagram, activity flow, system requirements, system architecture, and product features, and analyses how the proposed platform complies with the concept of ETAM. Next, the research measures the user acceptance of the proposed platform by an online questionnaire survey in terms of the buyer side. Results: ePawnMart complies with the concept of ETAM in various features. The usage acceptance survey results suggest that the majority of both existing buyers and non-buyers would use ePawnMart to buy the unredeemed pawned items. This suggests that the proposed platform would help increasing the trading of unredeemed pawned items through online channels. Conclusions: ePawnMart would accelerate the growth of the pawn shop industry by improving pawn shops’ working capital and promoting trustful online unredeemed pawned items trading transactions. Furthermore, it would help promoting the fair trade and Thailand’s sustainable economic growth.

Keywords: E-Commerce, Pawn Shop, Online Platform, Extended Technology Acceptance Model (ETAM)

JEL Classification Code: L81, M15, G21

1. Introduction

The first e-commerce business was started in 1995 from advertising. Since then, it has grown very fast and has become an important means for advertising and sales (K. Laudon & J. Laudon, 2020). Especially during the Covid-19 pandemic, the e-commerce in Thailand had sharp and fast growth in 2020 and is expected to be one of the rising star industries in 2021. The government also has a policy to strengthen local online platforms to be able to compete over the international platforms (Thaiday Dot Com, 2021).

The influence of e-commerce affected various industries, including the pawn shops industry, but it seems that only big players successfully adapted into the online world, e.g., government owned pawn shop and meMoney (Nectar, 2018). According to Rocket Media Lab (2021), there are a total of 730 pawn shops in Thailand, including 277 government owned pawn shops and 453 private pawn shops. There is room for the online platform to provide an opportunity to all pawn shops, including small ones to get into the online world and also promote fair trade to the pawn shops industry.

In addition, to be able to survive in pawn shops industry, working capital is key. Without cash flow, the pawn shops will lack liquidity, not be able to run, lose trust from customers, and finally not be able to continue business (Siririn, 2018). Selling unredeemed pawned items in a short time duration is one of the main parts to maintain working capital. Based on data from one of the big pawn shops chain in Thailand, the average rate of unredeemed pawned items is 5% of total pawned items and will fluctuate according to the economic situation (Supattha, 2020). It is expected that the online platform will be able to help the pawn shops to reach more customers and sell the unredeemed pawned items quickly.

Therefore, the objectives of this study are [1] to propose a new e-commerce platform especially for trading unredeemed pawned items, so called ePawnMart, by complying the concept of Extended Technology Acceptance Model and [2] to measure the user acceptance of ePawnMart.

The rest of this paper presents Literature Review in Chapter 2, Research Methods in Chapter 3, Proposed
2. Literature Review

This study reviews the relevant literature on two main topics, which are unredeemed pawned items selling methods and the extended technology acceptance model. The explanation of each topic is explained below.

2.1. Unredeemed Pawned Items Selling Methods Review

Nowadays, there are several methods that are used by pawn shops to sell their unredeemed pawned items:

2.1.1. Showcase at shop

The most traditional way to sell unredeemed pawned items is to show them at the pawn shop itself. Customers who are interested in buying unredeemed items need to walk-in each pawn shop by themselves. However, most of the pawn shops show unredeemed items behind the traditional grilled store fronts as showcase, which seems to be intimidating to unfamiliar customers. Therefore, some new pawn shops tried to attract new customers by changing their store layouts by using the glasses instead of traditional grille and then show unredeemed items behind the modern showcase (Arty, 2020).

This seems to be more customer-friendly, but each pawn shop may have some struggles to expand the customer base due to distance and awareness limitations of physical shops. On the other hand, the customer needs to visit at each pawn shop and find if there are any interesting unredeemed items or not. Some visits may result in a waste of time and costs without getting any good items.

2.1.2. Seasonal Auction

To make it be more interesting, some pawn shops hold their own seasonal auction of the unredeemed items (Matichon, 2016). The news of the auction event could be promoted through word-of-mouth, public release, and the mass media.

This method allows the pawn shops to gather the unredeemed items from all of their branches to sell at one place. Interested customers can walk-in to participate in an auction. However, this method requires high cost of holding and promoting the auction events. Small players would not be able to afford and also not have enough unredeemed items to do such auction events.

2.1.3. Own Website and Social Media

As well as the traditional ways of selling unredeemed items, some pawnshops started posting unredeemed items on their own website and social media, e.g., Government Pawn Shop Website (Matichon, 2016), Kim Tai Pawnshop Facebook. This method of selling is more convenient for both pawn shops and customers than traditional ways as it allows local pawn shops to reach wider target customers with affordable costs and also allows customer to explore available unredeemed items and price without taking a real visit. However, some pawn shops may face a problem of gaining customer trust, and customers need to explore each site or social media one by one.

2.2. Extended Technology Acceptance Model

Technology Acceptance Model (TAM) was firstly introduced by Davis (1989) and has become one of the most influential models to study the factors influencing the user’s intention to use new technologies. Since then, TAM has been adopted and extended with various acceptance factors to be better in the analysis of individual’s behavior across different industries. (Venkatesh et al., 2012).

To increase the possibility that the prospective users will use ePawnMart, this study enhanced ePawnMart with the concept of the Extended Technology Acceptance Model (ETAM) introduced by Pantano and Di Pietro (2012) which consists of four main areas, i.e., perceived technology safety and cost, personal skills, social pressure and hedonic value.

2.2.1. Perceived Technology Safety and Cost

This area concerns the user’s perception toward the particular technology in terms of security, cost, risk, and trust.

Perceived Cost: This concerns the user’s perceived cost of the usage of the system. Higher perceived cost negatively impacts the usage intention of the particular technology.

Perceived Risk: This concerns the user’s perceived uncertainty and possible negative outcome of using the
particular technology (Lee, 2009). Higher perceived risk negatively impacts the usage intention of the particular technology.

Perceived Security and Trust: This concerns the user’s perceived trust of how well the particular technology is secure. Higher perceived security positively impacts trust and intention of the particular technology (Shin, 2009).

2.2.2. Personal Skills

This area concerns the user’s personal traits that the self-efficacy and the behavioral control influence the user’s decision to use the particular technology.

Self-efficacy: This concerns the user’s perceived ease or difficulty of performing a behavior. Higher self-efficacy positively impacts the usage intention of the particular technology.

Behavioral control: This concerns the user’s perceived control over the performance of a behavior. Higher behavioral control positively impacts the usage intention of the particular technology. (Ajzen, 2002).

2.2.3. Social Pressure

This area concerns the influence of the third on the user’s decision to use the particular technology.

Social Influence: This concerns the influence from family, friends, media, and influencers that increase the user’s intention to perform a specific behavior. Higher social influence positively impacts the usage intention of the particular technology.

Subjective Norm: This concerns the user’s perception of whether the third parties think that he/she should perform a specific behavior. Higher subjective norm positively impacts the usage intention of the particular technology (Pai & Tu, 2011).

2.2.4. Hedonic Value

This area concerns the user’s perception toward the particular technology in terms of enjoyment and satisfaction.

Enjoyment: This concerns the user’s perceived pleasure from the particular technology. Higher enjoyment positively impacts the usage intention of the particular technology. (Venkatesh, 2000).

Satisfaction: This concerns the user’s feeling emerging from the experience with the particular technology (Udo et al., 2010). Higher satisfaction positively impacts the usage intention of the particular technology.

3. Research Methods

This paper presents the work into two parts. Firstly, it proposes the online platform especially for trading unredeemed pawned items (ePawnMart) by complying the concept of ETAM. This includes use case diagram, activity flow, system requirements, system architecture, product features, and the analysis how ePawnMart complied with ETAM (Chapter 4).

The second part, the research measures the user acceptance of ePawnMart by using the online questionnaire survey in terms of the buyer side (Chapter 5). The samples are people whose age is around 18-45 years old in Thailand, including both people who have ever bought unredeemed pawned items in the past and people who did not. The total sample size was 113, which consists of 52 females (46%) and 61 males (54%). There are 5 samples aged 18 to 24 years (5%), 85 samples aged 25 to 34 years (75%), and 23 samples aged 35 to 44 years (20%).

The samples were firstly asked to answer yes/no questions regarding the previous experience of buying unredeemed pawned items. Then, the samples were provided with the description of the proposed system, mainly about the key features which comply with ETAM and the design prototype and asked to answer yes/no questions regarding the intention to use the proposed system. Moreover, the study analyses the data to answer two questions. 1) Do the existing buyers intend to use the proposed platform? 2) Do the non-buyers intend to start buying by using the proposed platform?

4. Proposed Platform (ePawnMart)

4.1. Use Case Diagram

The use case diagram shows the actors and the use cases of the proposed platform (See Figure 1).

4.1.1. Actors

Buyer: This actor represents the customers who visit the platform to register an account to purchase unredeemed pawned items.
Pawn Shop (Seller): This actor represents the pawn shops who register to open its shop on the platform to sell unredeemed pawned items.

Identity Provider: This actor represents the identity provider of the social account used for social login who authenticates the account back to the platform.

Payment Gateway: This actor represents the payment gateway service provider who facilitate the buyer’s online payment and verify the payment back to the platform.

Admin: This actor represents the person who manage the platform by managing users, managing items categories, updating pricing recommendation, and resolving the dispute cases sent by buyers or sellers.

4.1.2. Use Cases

[1]. Buyer Account Management System:

Register Account: This use case describes how the buyer registers a new local account on the platform.

Activate Account: This use case is included in Register Account use case. It describes how the buyer activates an account by clicking the one-link sent to the registered email.

Create Account: This use case describes how a new buyer account is created either when the buyer registers a new local account or the buyer successfully logins through social account for the first time.

Login Local Account: This use case describes how the buyer logins into the platform with a registered account.

Login Social Account: This use case describes how the buyer logins into the platform with a social account.

Manage Account: This use case describes how the buyer manages the account settings on the platform.

Authenticate Account: This use case describes how the identity provider of buyer’s social account authenticates the social account used to login into the platform.

[2]. Shop Management System:

Register Shop: This use case describes how the pawn shop (seller) registers a new shop on the platform.

Verify Shop: This use case is included in Register Shop use case. It describes how the seller verifies registered shop on the platform.

Login Shop: This use case describes how the seller logins into the shop on the platform.

Verify Login: This use case is included in Login Shop use case. It describes how the seller verifies the login.

Manage Shop: This use case describes how the seller manages the shop settings on the platform.

Manage Products: This use case describes how the seller manages the products in the shop on the platform.

[3]. Order Management System:

Search/Browse Products: This use case describes how the buyer searches or browses for products on the platform.

Add/Edit Cart: This use case describes how the buyer adds or edits the products in the cart on the platform.

Bid Auction: This use case describes how the buyer bids auction for the product on the platform.

Checkout: This use case describes how the buyer checkouts products when the buyer clicks to purchase or wins an auction.

Make Payment: This use case describes how the buyer makes a payment to the platform.
Verify Payment: This use case is included in Make Payment use case. It describes how the payment gateway verifies the buyer’s payment back to the platform.

Give Shop Review/Score: This use case describes how the buyer gives a review or score to the shop on the platform.

Review Purchase History: This use case describes how the buyer reviews the account’s purchase history on the platform.

Manage Sales Order: This use case describes how the seller manages the shop’s sales order on the platform.

Make Delivery: This use case describes how the seller makes delivery of the sold products to the buyer.

Receive Payment: This use case describes how the seller receives payment from the platform.

Review Reports/Analytics: This use case describes how the seller review the shop’s reports and analytics on the platform.

Dispute Cases Management System:
Open Dispute Cases: This use case describes how the buyer or the seller open a new dispute case on the platform.

Response Dispute Cases: This use case describes how the admin response to opened dispute cases.

Affiliate Program System:
Generate Affiliate Link: This use case describes how the buyer generate an affiliate link on the platform.

Review Affiliate Report: This use case describes how the buyer reviews the account’s affiliate report on the platform.

Platform Management System:
Manage Users: This use case describes how the admin manage the users on the platform.

Manage Category: This use case describes how the admin manages the categories available on the platform.

Update Price Recommendation: This use case describes how the admin updates the price recommendation on the platform.

4.2. Activity Flow

The main business flow of the proposed platform is as follows (see Figure 2):

[1]. Pawn shop (seller) registers shop on the platform.
[2]. The system creates a new shop account.

[3]. Seller verifies shop by submitting all necessary documents to the platform.
[4]. If shop registration is rejected, the seller needs to rereverify the shop. If shop verification is approved, the seller signs the contract and sends back.
[5]. Seller can manage the shop and manage products on the platform.
[6]. Buyer visits the platform.
[7]. Buyer searches/browses for the items and gets item listings.
[8]. Buyer sees the item page for description and details.
[9]. Buyer adds item(s) to his/her cart.
[10]. Buyer needs to log in to the valid account to be able to check out item(s).
[11]. If buyer logs in with a Social account for the first time, the system verifies the authentication before creating a new buyer account.
[12]. If the buyer does not have a valid account and does not log in with a Social account, he/she needs to register and verify a new buyer account created by the system.
[13]. Buyer can now check-out the item(s).
[14]. The system calculates discount, shipping fees, and displays the total amount to be paid.
[15]. Buyer chooses the payment method.
[16]. If the buyer chooses Cash on Delivery (COD) method, the process will be skipped to [18]. If not, he/she needs to complete the payment on the platform.
[17]. The system verifies the payment with Online Payment Gateway and secures funds in escrow.
[18]. Seller receives the order.
[19]. As seller needs to keep updating the availability of the products, the seller is assumed to accept all orders. For the normal route, the process will be skipped to [21]. In case of emergency, the seller can cancel the order.
[20]. If the buyer chooses COD, the system notifies the cancellation to the buyer. If not, the system sends refund requests to Online Payment Gateway. The flow ends when the buyer gets a notification and/or refund.

[21]. Seller sends item(s) to the buyer.

[22]. Seller notifies the delivery status and tracking code.

[23]. Buyer can check the delivery status.

[24]. Buyer receives and approves the item(s).

[25]. Buyer reviews and gives score to both seller and products.

[26]. If the payment method is COD, the system charges fees to the seller account. The flow ends.

[27]. If not, the system releases funds to the sellers. The flow ends when the seller receives funds.

Besides the normal flow as described above, if there are any problems or concerns, e.g., item has defects, both seller and buyer can open the dispute cases to be solved by the platform admin.

Figure 2: Activity Diagram
4.3. System Architecture

Most parts of the system would be done through Amazon Web Service (AWS) because AWS is regarded as a leader in Cloud Infrastructure and Platform Services. The main strengths of AWS are the Engineering supply chain, large financial commitments, and Innovation leader (Bala et al., 2021). It has a leading wide range of services, SLA, security, and support. Although, it has no data center in Thailand, the closest one in Singapore provides excellent bandwidth, speed, and latency for Thais as 16Tbps Thailand International Internet Gateway is mostly connected to Singapore (Internet Information Research Network Technology Lab, 2021). The overview of the system architecture of the proposed platform is in Figure 3.

4.3.1. System Architecture Modules

The modules details are described as follows.

**Web contents and web resources**: The web content (HTML) will be loaded directly from the application server to ensure the data consistency while the web resources (images, JavaScript files, and CSS files) will be loaded from the nearest Content Delivery Network (CDN) edge server providing by AWS CloudFront service to the users to optimize the downloading speed.

**API access**: The web client and mobile client access the APIs on the application server to retrieve information or update data with authorization, access control, validation, and rate limit control which are done through AWS API Gateway.

**AWS Web Application Firewall (WAF)**: The 7th layer (application layer) firewall will scan every content of the web request and response. Any suspicious attack,
including Distributed Denial-of-Service (DDoS), will be blocked.

**AWS Elastic Load Balancer (ELB):** To enable horizontal scalability and support failover, the application server will be deployed and serves users more than one server at a time. ELB will distribute all requests to all healthy backend application servers in Weighted Round Robin scheme; if any of application servers failed, it will be automatically removed from the pool and no request will be routed to it until it becomes healthy again.

**AWS Elastic Compute Cloud (EC2):** EC2 acts as a virtual machine. Red Hat Linux 8 operating system, NGINX Web Server, and the PHP code files will be deployed into it to serve as application server. EC2 also allow being scaled vertically by resizing to the larger server size. Both NGINX and PHP are free and open-source. They are the most popular web server and server-side programming language on the web, respectively (W3Techs, 2021).

**AWS Elastic File System (EFS):** As there will be multiple EC2 servers at a time, the platform PHP code and configuration files are kept in EFS shared drive. EFS enables one server to write a file then other servers will read a content of the same file. Therefore, with EFS, these multiple EC2 servers are working on the same file workspace.

**AWS Relational Database Service (RDS) for MySQL:** All transactional data is stored in AWS managed MySQL database. It provides cost-efficient, scalable, high-availability, resizable storage, and security.

**AWS ElasticCache for Redis:** The in-memory cache is used for accelerating the overall web and API performance by temporary caching rendered web pages, API responses, and database query results. The Redis works seamlessly with PHP.

**AWS Simple Storage Service (S3):** S3 is a cost-efficient and unlimited storage. S3 is used for storing product videos, product pictures, review videos, review pictures, and upload documentations, i.e., product manuals, seller registration documents.

**AWS Simple Email Service:** The Email Service acts as email sender, which will be used in many scenarios, e.g., confirm email address, password reset, purchase/delivery confirmation, and digital tax invoice delivery.

**AWS Certificate Manager:** The Certificate Manager provides free-of-charge SSL certificates which are bound to ELB and CloudFront. So, with SSL certificates, both web and mobile clients always exchange data with the backend in HTTPS protocol to ensure confidentiality and privacy.

**AWS CloudWatch:** Application logs, usage logs, performance metrics, incident events, and audit information are reported to CloudWatch. Administrators can query CloudWatch for investigating an issue or monitoring service workloads and performance.

**AWS Identity and Access Management (IAM):** IAM manages and controls access keys and credentials to access each AWS service.

**AWS Key Management Service (KMS):** KMS generates and stores rotatable full-disk encryption keys for EC2 disk, EFS, RDS storage, and backup snapshots.

### 4.4. System Requirements

#### 4.4.1. System Requirements for implementation

**Web Application Server Hardware:** AWS Elastic Compute Cloud (EC2) – The platform chooses the general-purpose instance type m5dn.2xlarge that comes with 8 vCPUs and 32 GB RAM x 3 servers as web application server. The servers are guaranteed at least 99.99% SLA and deployed in different AP Southeast-1 (Singapore) availability zones to maximize fault tolerance.

**Web Application Server Software:** Each EC2 is run with Red Hat Enterprise Linux Server 8 as the operating system and PHP 7.4 as the source code interpreter and web application executer. The most recent version 1.21 of NGINX is served as a web server to run the web application.

**Database Hardware:** AWS MySQL Relational Data Services (RDS) – The general-purpose instance type db.m5d.4xlarge which has 16 vCPUs, 64 GB RAM and 99.95% SLA with multi-availability zone (multi-az) deployment to support failover will be used to support huge user transactions.

**Database Software:** The most recent version of MySQL 8.0 is used.

**AWS ElasticCache for Redis:** The 99.9% SLA general-purpose instance type cache.m5.large with 2 vCPUs and 6.38 GB RAM x 2 replicas will be provisioned. The Redis will play the important role to in-memory cache to speed up the web application performance.

For other AWS services, the platform will use as pay-as-you-go with standard AWS specifications.

By having these specifications, the platform is estimated to support approximately 100,000 users per day.
and/or 5,000 transactions per day with efficient cost. Once the number of users has changed, the specifications can be both vertically and horizontally adjusted with minimum downtime thanks to the public Cloud concept. Referring to AWS Service Level Agreement (SLAs) document, the platform should have at least 99.9% service uptime – total downtime must be less than 8h 45m 56s per annual (Amazon Web Services, Inc., 2021).

In terms of the response time, the proposed platform utilizes Cloud Server and Database which are scalable up to the request volume, together with the help of Database caching and Content Delivery Network. Therefore, the response time is expected to be on average two seconds in case of no user device internet connection issues, making the proposed system acceptable by the users.

4.4.2. System Requirements for Client

Web Client: Buyers and pawn shops use standard web browsers to access the platform. Below is the list of supported web browsers:

- Google Chrome version 80 or newer
- Mozilla Firefox version 78 or newer
- Microsoft EDGE browser
- Apple Safari version 14 or newer

Mobile Client: Buyers can also use the application on their smartphones to access the platform. The application can be used on two major smartphone platforms:

- For iPhone and iPad, it supports iOS version 12 or newer.

4.4.1. Landing Page

The first screen that will be seen by all buyers when entering the platform (See Figure 4). Both website and application’s landing pages start from the search on the top, following by Carousel Banner, Shop By Category, Auction Zone, Hot Deals Today, Recently Viewed, and Recommended for you, respectively.

The differences of landing pages between two platforms are Menu and FAQs, T&Cs, and General Information sections.

Personalization: ePawnMart will utilize the personalization based on user data under the privacy policy.

This applies to all items and banners displaying in each section and the notifications sent by CRM Tools. The recommended items are the items that have the most chance of the buyer purchasing by using user data, i.e., gender, age, items in a wish list, search history, item viewing history, purchase history, and third party’s data.

4.5. Product Features

4.5.1. Product Features - Buyer

There are both website and application platforms available for the buyer to use.

4.5.1.1. Landing Page

The first screen that will be seen by all buyers when entering the platform (See Figure 4). Both website and application’s landing pages start from the search on the top, following by Carousel Banner, Shop By Category, Auction Zone, Hot Deals Today, Recently Viewed, and Recommended for you, respectively.

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4.5.1.2. Account Registration

Buyers are required to register an account by providing personal information. The buyers need to accept terms and conditions and a privacy policy in order to use the platform.

Because the e-mail address will be used as the account username and main communication contact, it must not be used by the other account.

Once the account registration is completed, the platform will send an e-mail to the provided e-mail address with one-time link for verifying the ownership of the e-mail. Failure to do so will result in account login being prohibited unless the e-mail address gets verified.

The account information will be used as a contact information if delivery failure or dispute support and an anonymous data to group an interest of items for
personalization service which conforms to a platform privacy policy.

4.5.1.3. Buyer Account Login

Buyers are required to provide the correct e-mail address and password to login into a registered local account.

Account Locking: Five times failed account login attempts will result in account locking; therefore, the user has to wait one minute before he/she is able to retry. This security measure prevents password brute forcing attack.

Forgot Password: The buyers are able to reset their account password if they forgot by providing an e-mail address. Once provided, the platform will match the e-mail address to the associated account information and send one-time password reset link. If the e-mail address is inaccessible, they are required to create a new account.

Social Login (OAuth 2.0): To help buyers with their login, the platform allows buyers to login by using the following popular OpenID providers: Google Account, Facebook Account, or Microsoft Account (Hotmail.com, Outlook.com). If the account has not been registered in the platform before, the required account registration information will be pre-fetched from the account provider and the buyers are required to complete the account registration process before being able to login.

4.5.1.4. Account

Buyer Account Page is a page on application, which contains basic profile information and navigations to Your Orders, Account Settings, Payments, Affiliate Program, Help & Support, and Privacy Policy.

4.5.1.5. Your Order

This section allows buyers to get a full list of purchased orders. When each order is clicked, the full details of the order will be shown.

In each order, buyers also have the following action links and buttons: Cancel the order (if the item has not been shipped), Give a review, and Open a dispute case.

4.5.1.6. Account Settings

The account settings section allows buyers to update their profile, security information, delivery addresses, and platform preferences. The buyers can do the following: Update Profile, Update E-mail Address, Update Account Password, Add/Edit/Remove Delivery Addresses, Set Default Delivery Address, Set Website/App Language, and Update Contact Preferences.

4.5.1.7. Payment

The payment section allows buyers to add, update, or delete their payment details, i.e., Credit Card / Debit Card details and bank account details.

4.5.1.8. Affiliate Program

This section allows buyers to generate affiliate links to share to their social media networks or pages. When there are any other buyers who clicked the link and completed the purchase, the link owner will get a commission in a certain percentage as the credit called My Credit to his/her account. My Credit can be used as a discount or cash to buy items on the proposed platform. The signed-up buyer can also review their performance report in this section.

4.5.1.9. Item Listing

This page is responsible for listing items in the table with limited details based on filtering criteria and sorting preference. This applies to both Search and Category page.

Item Sorting: Item Sorting can be selected to arrange the displaying items in the following orders: By Keyword Relevant, By Popularity, By Discount (High-Low), By Price Ascending (Low-High), By Price Descending (High-Low).

Item Filtering: Item Filtering can be selected to display only related items by using the following criteria: By Brands, By Categories, By Product Properties, By Price Range, and By Delivering Options.

4.5.1.10. Keyword Search

The platform is designed for placing millions of items, so the search is necessary for buyers to find the desired items. Rather than using traditional SQL query search in DBMS, the platform uses the modern search architecture, Elastic Search or Lucene Search, which has the following advantages:

[1]. Able to index by tokenizing word by languages
4.5.1.11. Item Page

An item page displays the photos of selected item, followed by item name, price details, auction details, place bid button, buy now button, add to wishlist button, item description, item detail, seller information, Q&A section, and people also view section respectively. For auction items, buyers can choose whether to place bid to compete against the others or buy now to secure the items.

4.5.1.12. Add to Wishlist

Buyers may add their interested items into a wish list like a bookmark. The platform will periodically track the price of items in the wish list and send a notification whenever the item price is dropped. Buyers also easily add items from the wish list into the shopping cart and vice versa.

4.5.1.13. Shopping Cart

When buyers are satisfied with each item, they will add items into the shopping cart as the common behavior for e-commerce. In case that buyer won an auction, that item will be added to the shopping cart automatically, and the buyer needs to complete the check-out process within a specified period of time.

Figure 5: Application’s Check Out Page of Proposed Platform

4.5.1.14. Check out

When buyers click check-out button from the Cart page, the system will lead buyers to Check-out page (See Figure 5). The system will show the price calculation, and the buyers can alter their coupon code and My Credit usage on this page too. Then, they can choose the preferred payment methods as follows: Credit Card / Debit Card, Bank Transfer, Collect-On-Delivery (COD), Internet Banking, Mobile Wallet (True Money Wallet, Airpay, KPlus, etc.), QR Code (Promptpay), and Credit Card Installs.

Although the platform will utilize an external payment processor suitable for the Thailand market, i.e. 2C2P, Omise, or Adyen, the platform will store credit card / debit card and bank account information so that the platform will comply PCI DSS standard. While the transaction fee for each payment method is different, the platform will collect the fee from sellers at a flat rate, which will include a platform management fee also.

4.5.1.15. Delivery Tracking

Once buyers have successfully ordered the items and the items have been shipped by the sellers, the platform will periodically track the shipping status from the parcel delivery service. If the status changes, it will immediately notify the buyers when the Item has been shipped, Item is out for a delivery, and Item has been delivered.

When the status shows that item has been delivered, there will be a button for buyers to accept the item. After buyers click the accept item button, the platform would start proceeding the fund release to the seller.

4.5.1.16. Seller Review and Satisfaction Scoring

The buyers are convinced to give the 1-5 stars rating to represent their purchasing satisfaction by considering the following key areas: Item Quality, Value of Money, Correctness of Item Description, and Delivery Speed.
The buyers are also able to provide a comment as well as photos to the purchased item and/or provide a comment to the seller. And sellers have a right to reply to buyers' comments.

4.5.1.17. Open Dispute Case

Buyers could open a dispute case in case of any unsatisfaction. Once the case is opened, an admin will review the case and get back to the case owner within 3 working days with instructions to resolve the case.

4.5.2. Product Features - Seller

A legitimate pawn shop can join the platform as a seller. Registered sellers are allowed to sell items in the platform while the platform also provides essential tools for sellers. The seller center is available only on the website.

4.5.2.1. Shop Registration

Pawn shop needs to provide the following information to open seller account on the platform: Shop Full Name, Shop Short Name (in English – unique among all sellers), Shop Profile Pictures, Shop Description with Photos and Videos, Full Address, Shop Latitude and Longitude Coordination, Business Registration Number, VAT Registration ID, Contact number, E-mail address, and Account Password. The shop short name will be used as seller account name.

4.5.2.2. Seller Verification and Contract Signing

Newly registered sellers are required to submit the digital version of the legal documents for a seller verification process. Once the seller information and documentation are reviewed, the two hard copies of seller contract will be sent by post. The seller is required to sign and send back one copy to start selling on the platform.

4.5.2.3. Seller Account Login

Sellers are required to provide the correct e-mail address and password to login into a registered local account.

Account Locking: Same as buyer.
Forgot Password: Same as buyer.

Two-factors Authentication (2FA): To preserve account security and verify the up-to-date e-mail address, a two-factors authentication (2FA) will send one-time pin code to the e-mail address provided in account information for each account login. To enhance the login convenience, the platform will store login data in permanent browser cookie or application storage so buyers can re-login by only providing an account password without typing e-mail address and bypassing 2FA.

4.5.2.4. Dashboard

Dashboard is the first screen that will be seen by all sellers when logging in to the platform (See Figure 6).

Its main purpose is to provide a comprehensive snapshot to the sellers. Seller dashboard starts from shop name, to do list section, business insights section, and performance section. There is menu list on the left of the screen, which sellers can navigate to other pages of the website.

4.5.2.5. Shop Settings

Sellers can view or edit their profile, business information, and operating days & hours in this menu. The seller can do the following things: Update Profile, Shop Decoration, Update E-mail Address, and Update Account Password.

4.5.2.6. Product Management

My Products: This is the menu for managing all products in the seller’s shop. Sellers manage, i.e., add/list/unlist/suspend/delete, products by using this function. They can also filter or search products they are interested in.

Promotions: Sellers can set promotional campaigns, discount codes and free shipping into either shop-wide or specific products with start time and end time.

Reviews: All the reviews which are posted by successfully purchased sellers will be listed here and ordered by the most recent reviews. Sellers can review and reply to the reviews.

Figure 6: Seller Dashboard Page of Proposed Platform
Q&A: Unanswered questions that are asked by buyers for each product will be shown here. Sellers must reply to the questions within SLA to keep the shop at a good response rating.

4.5.2.7. Order Management

My Orders: All the orders that have been placed by buyers will be listed here including: Unpaid, Waiting for Seller To ship, Items Shipped, Items Delivered, Order Cancelled, Items Returned, Refunded, and Failed Delivery.

Sellers can see details of each order such as order datetime, order items, full price, discounted price, shipping fee, promotion discount, customer details, recipient details, shipping method, order status (See Figure 7).

Sellers can also filter the list of orders or make an action on the order, e.g., cancel order, print parcel label, confirm shipment, etc.

Cancellations: The cancelled orders will be listed here. Sellers must respond to buyer’s cancellation request within SLA; otherwise, it will automatically refund the buyer.

Returns / Refunds: As same as the cancellations, all the returned and refunded orders will be list in this menu. Seller must check and record the returned goods within SLA to avoid automatic refund to the buyer if exceeded.

4.5.2.8. Finance

Account Statements: This menu shows the current balance, payout in progress, and recent paid balance. All balance movements will be listed here.

Bank Accounts: Sellers can add/remove bank accounts from this menu.

4.5.2.9. Report / Analytics

Sales Reports: Seller can see shop’s sales reports, e.g., monthly sales amount, monthly transaction fees.

Analytics: Sellers can see shop’s analytics key metrics, e.g., impressions, reaches, new visitors, existing visitors, visitor conversion rate, buyers, buyer conversion rate, sales, and orders statistics filtering by date and/or devices (PC browser, mobile browser, mobile app) in this menu. It can also rank the most viewed, most sales and high time spent in all listed products. Moreover, it will show promotional campaign performance statistics here.

4.6. Compliance Between ePawnMart and ETAM

This section explains how the proposed system complies with ETAM in the features and attributes level.

4.6.1. Perceived Technology Safety and Cost

ePawnMart will build perceived security and trust from users by promoting the following features to the users.

Unauthorized Access Prevention: ePawnMart has account locks feature for buyer and seller and Two-factors Authentication (2FA) verification feature for seller. This helps to prevent password brute forcing attack.

Data Leak & Data Breach Prevention: It would be secured by utilizing AWS, which is monitored by world-class security experts (Amazon Web Services, Inc., 2021).

Laws & Regulations Compliance: ePawnMart would keep credit card information in the system to allow the buyers to make payment as easy as possible, so it will comply PCI DSS standard. Beside this, it will keep log data of both usage and login for at least 90 days from the date on which the data was input into the system as required by Thailand’s Computer Crime Act B.E. 2550 (2007).

It will also keep historical transaction records of buyers and sellers and archived product information for a
certain amount of period. This data could be used for auditing and judicial process, if any.

**Fake Shops & Scammers Prevention:** Buyers can ensure that all shops on the platform is legitimate and reliable as all registered shops on the platform need to go through the process of Legitimate Pawn Shop Verification and sign contract with the platform. This procedure is to prevent fake shops and other scammers from opening a shop on the platform.

**Online Payment Gateway:** During the payment process, the platform sends payment information to Online Payment Gateway, which allows the buyer to entrust with global standardized secure network firewall, e.g., Verified by Visa, MasterCard SecureCode. With the use of one-time password (OTP), it helps to secure both sellers and buyers.

**Escrow & COD:** To promote trustful transactions, the platform shall act like an Escrow to secure funds from the buyer before shipment, and release funds to the seller after the buyers properly receive the items. Besides this, there is also Cash on Delivery (COD) option, which allows seller and buyer to meet to verify the real items before making a payment.

### 4.6.2. Personal Skills

Although this area is more concerned with the personal traits of each individual himself/herself, ePawnMart will indirectly boost up user’s self-efficacy and the behavioral control by promoting the platform regarding its ease of use.

### 4.6.3. Social Pressure

ePawnMart will increase the third parties’ influence on the user’s intention to use by using the following tactics.

**Search Engine Optimization (SEO):** SEO refers to the methods and techniques which help boost up web traffic to the website. According to Lee et al. (2016), well-established SEO techniques could help increasing traffic from the search engines, a greater number of web pages indexed by the search engines, and better keyword ratings. The example of SEO techniques that will be used by the platform to promote the web traffic are URL structure optimization, XML sitemap, Meta tag, and Title tag.

**Affiliate Program:** The key to successfully implement affiliate marketing is to promote a win-win relationship between the advertiser and the affiliate (Duffy, 2005). The proposed platform would allow the buyers to generate affiliate links and share to their social media networks or pages. When there are any other buyers who click the link and complete the purchase, the link owner will get a commission as a certain percentage as the credit to his/her account. The credit can be used as a discount or cash to buy items on the proposed platform. This affiliate program would help the platform to grow at a faster pace.

**Social Media Marketing:** Nowadays, social media plays an important role in people’s daily life, so many brands and companies are currently utilizing social media to create brand awareness. Firstly, an official Facebook page will be created to promote the brand existence to the public and get in touch with the target users. After the Facebook page could gain a follower base, more official pages will be opened on the other social media platforms. Furthermore, there will be campaigns done through micro-influencers. These campaigns will help to increase the content library about the platform, as well as reach and build trust from the niche target audience (Forbes Communications Council, 2020).

### 4.6.4. Hedonic Value

ePawnMart will increase enjoyment and satisfaction by using the following elements.

**Social Login (OAuth 2.0):** OAuth 2.0 allows users to login to the platform with the popular Open ID without registration without the need to login again in the future. This promotes ease of use to the users.

**Personalization:** With personalization, the users would enjoy the recommended items which are analyzed by the system to be interesting for them. This feature would differentiate the platform from the other unredeemed items selling channels.

**Elastic Search:** The users would enjoy exploring items on the platform with elastic search. This feature would help the platform to be smarter in guessing what the users are searching for. This improves the user experience with the platform.

**Short Response Time:** Response time factor could affect the user experience with the platform. ePawnMart is designed with the system architecture which would support performing tasks at an average of two seconds to make the user satisfied using the platform.
5. User Acceptance Results and Discussion

5.1. User Acceptance Results

The samples are broken down into 2 groups, which are 53 samples who have ever bought unredeemed pawned items (existing buyers) and 60 samples who have never bought unredeemed pawned items (non-buyers).

For the usage-intention results, 89% of existing buyers would use ePawnMart to buy the unredeemed pawned items, while 73% of non-buyers would start buying the unredeemed pawned items by using ePawnMart.

5.2. Discussion and Recommendation

The proposed platform complies with Extended Technology Acceptance Model, which would increase the user intention to use. The usage acceptance results suggest that the majority of both existing buyers and non-buyers of unredeemed pawned items intend to use ePawnMart to buy unredeemed pawned items.

The user intention of the buyer side could be regarded as demand of buying the unredeemed pawned items on ePawnMart. When there is demand, there will be supply. It is expected that the pawn shops will be willing to get into the ePawnMart to sell the unredeemed pawned items. This suggests that the proposed platform would help increasing the trading of unredeemed pawned items through online channels.

For recommendations for future work, the user-intention survey could be expanded to pawn shops (seller side) to prove whether they are actually interested in using ePawnMart. In addition, beyond the main purpose of trading unredeemed pawned items, the proposed platform can be developed further in two ways: [1] expands to serve the pawnning process of the pawnshop and/or [2] expands to serve the trading in the second-hand goods industry as well.

6. Conclusions

The pawn shop industry is a niche market that has been developing to be able to survive through the eras. The proposed e-commerce platform so called ePawnMart is designed especially for trading unredeemed pawned items and would act as a portal for pawn shops to open shops and sell the unredeemed pawned items while centralizing the unredeemed pawned items available from various pawn shops for buyers to explore and buy conveniently. From the results, the proposed e-commerce platform would accelerate the growth of the pawn shop industry by improving pawn shops’ working capital and promoting trustful online unredeemed pawned items trading transactions. Furthermore, it would help promoting the fair trade and Thailand’s sustainable economic growth.

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Study Effecting of Halal Logo on Ready-to-eat Meal towards Purchase Intention of Non-Muslim Consumers In Bangkok

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Abstract

Purpose – This paper aims to determine the effects of halal logo on ready-to-eat meals toward purchase intention of non-Muslim consumers in Bangkok. The factors are halal awareness, halal logo and attitude, which are important factors in affecting the intention of consumers.

Research methodology – Data were collected via a questionnaire with a sample of 230 non-Muslim consumers in Bangkok with non-probability sampling, convenience and snowball sampling method.

Results – According to the research results, all factors positively impact non-Muslim consumers' purchase intention towards ready-to-eat meal with the Halal logo. Additionally, the research found that non-Muslim consumers have positive attitudes and awareness of the Halal logo similar to those of the Muslim consumers. Although the study focuses on non-Muslim consumers, most of the respondents who participated in the research were Buddhists.

Research limitations – The respondents were only limited to Thai nationality in Bangkok. The focus was only on Halal's four variables: Halal awareness, Halal logo, attitude, and purchase intention.

Recommendation – This research can support marketing to leverage the understanding of the Halal concept in the food industry to attract Muslim and non-Muslim consumers in domestic and international markets.

Keywords: Purchase intention, Attitude, Halal awareness, Halal logo, non-Muslim consumers

1. Introduction

With the growth of the Muslim population worldwide, the demand for Halal products is significantly increasing to drive halal food marketing from niche market to mass market. All consumers have roughly the same preferences, and the market shows no natural segments (Kotler & Keller, 2012) within decades. Besides the growth of the Muslim population, the COVID-19 pandemic is also the main factor that drives hygienic awareness in consumption behavior. Shortly, it is estimated that the global halal food industry is extensively growing along with the demand for food safety and food traceability from Muslim and non-Muslim populations. As a non-Muslim country, the interest in halal foods and products has also been increasing in Thailand. Although the Muslim population comprises approximately 6 percent (or equal to 4.3 million) of Thailand's total population ("Religions in Thailand | PEW-GRF," 2021), Thailand has established itself as one of the significant halal food producers and exporters in Southeast Asian countries. The country has rapidly become a globally recognized halal hub (Halal food industry during COVID-19, 2021).

Accordingly, it is vital for all stakeholders to better understand Halal concepts, terms, and definitions. The first of these terms to be focused on is the word "Halal." Halal, an Arabic term that means permissible, is mainly associated with Muslim communities. It refers to foods and products produced according to Islamic Law and contains no unlawful ingredients. Halal products also include cosmetics, medicine, ingredients etc. Moreover, Mohd Nawawi et al. (2019) cited that halal consumption has been a significant concern for the Muslim population globally, especially in multi-religious and multi-cultural countries such as Malaysia and the USA and European countries, including non-Muslim-majority countries such as Thailand.

According to the research of Thailand’s Food Industry (2018), Thailand has long been called “the kitchen of the world” as the food industry contributed roughly 23%...
of the country’s GDP. With its abundant natural resources, highly skilled workforce, and strong support from the government, Thai manufacturers are investing significant resources in research and development to enhance their productivity and efficiency. Many companies are using technological systems to control their production processes. Thanks to rapid urbanization, families are becoming smaller and consumer lifestyles are changing to be more hectic (“What's trending in Thai ready meals,” 2019). These significant factors drive convenient, ready meals, and purchases of processed foods tend to be rapidly growing for domestic consumption and export demand. Although lifestyles are changing and pushing consumers to depend on ready-to-eat meals, they are still a concern and awareness of nutrition and quality of the food intake. Therefore, brands in the ready meals market need to communicate the food information clearly on their product to leverage the fact that they offer better hygiene to consumers. Besides common food quality labels, the displayed Halal logo could provide another line of traceability to Halal standards as Halal products. This product is widely receiving recognition in terms of food safety and quality assurance (Septiani & Ridlwan, 2020), which can lead to consumer interest in buying the product at one time.

2. Literature Review

Halal

Halal is an Arabic word meaning lawful or permitted. In reference to food, it is the dietary standard, as prescribed in the Qur'an (the Muslim scripture). The opposite of halal is haram, which means unlawful or prohibited. These terms are commonly used in relation to food products, meat products, cosmetics, personal care products, pharmaceuticals, food ingredients, and food contact materials (“What is halal? A guide for non-Muslims,” 2016). The concept of halal stresses hygiene, safety, purity, manufacture, production, process, honesty and service of foodstuffs and other financial and social activities on the excellent platform of Islam (Hussain et al., 2016). There are several criteria for food belonging to Halal. These criteria are based on the Qur'an. First, food or drink is halal if its basic ingredients come from animals or plants, forbidden in Islam. Therefore, Halal food must contain no pork, alcohol, and other ingredients forbidden in Islamic law. Second, the entire production process must comply with their rules and requirements to be considered Halal; the phrase “Bismillah” (In the Name of Allah) should be invoked immediately before the slaughter of each animal and so on. Moreover, even in terms of substances, the food has been done correctly according to Islamic law, but it is presented in the wrong way; it does not belong to Halal standards. Fourth, all food should be prepared, processed, packaged, transported, and stored to comply with the criteria. Such Halal food can be prepared, processed, transported or stored using facilities that have been previously used for non-halal foods provided that proper cleaning procedures, according to Islamic requirements, have been observed.

Halal awareness

Awareness is the knowledge or understanding of a particular topic or situation, while awareness in the context of Halal means the level of knowledge or understanding of the Halal concept. Such knowledge, not limited to only Muslims, includes understanding what products can be consumed according to Halal law, including the production process. Halal awareness can be an absolute requirement for consumers and producers to consume and produce food (Shaari & Arifin 2010; Ahmad et al., 2013). Therefore, awareness is vital in determining the intention to choose a particular product (Aziz & Chok, 2013). It is a process where a concept of knowledge is applied to a particular behavior. Moreover, awareness reflects the first step in the purchasing process, in which consumers who are primarily unfamiliar with the product or service become familiar with it. In the context of halal, consumer's awareness of halal affects their decisions towards buying ready-to-eat meal with Halal logo. A study of Bashir (2019) concluded that halal awareness has a positive and significant effect on foreign consumers' purchase intention. In addition, consumer's awareness of halal affects decisions towards buying halal food products (Septiani & Ridlwan, 2020). Similarly, Jumani and Sukhabot (2019) revealed that awareness is linked to positive attitudes among non-Muslim consumers towards Halal logo even they are independent from Halal obligations. It is obviously proved that awareness has a positive effect on consumer intention. Accordingly, the findings confirm that awareness of the halal logo positively influences consumers' purchase intention.

Halal logo
During decision-making, the consumers look for quality cues, specifically for the brand and other guarantee signals (Trigui & Giraud, 2012). Before purchasing or consuming food, consumers' decision depends on the food quality, price, packaging, and labeling. The halal logo on the product represents product quality standards based on Islamic nutritional requirements. Its original purpose is to halal to Muslim consumers looking for products that conform to Islamic law and religious belief. It sends the Halal concept, which is not limited to animal slaughtering; another focuses on the processes from the planting or production of raw materials to delivery to the end-user. The logo also serves as a guarantor to confirm that the products are safe for consumption. This helps to simplify the decision-making process for the consumers regardless of their religion. Not only are Muslims the primary customers of Halal foods, but non-Muslim consumers use the Halal logo as a guideline when purchasing foods as the logo indicates safe and hygienic handling of food. Compared to other food safety certifications, Halal logo is a growing trend in the food and beverages industry. Hence, there will be an inclination to use the Halal logo certification to gain competitiveness for manufacturers. It affects consumers' perception of the logo in different levels of trust, confidence and credibility in the products. In addition, different countries have different Halal logos according to their Halal certification institutes.

Attitude

Attitude defines a person's enduring favorable or unfavorable evaluation, emotional feeling, and action tendencies towards some objects (Kotler & Keller, 2012). It characterizes an individual's intention on a specific product as well. This research found attitude is the most significant in predicting the purchase intention of halal products as long as there is a strong relationship between food culture and religion. In addition, Jumani and Sukhabot (2019) pointed out that the purchase intention of non-Muslim consumers towards the products with Halal logo also depends on demographic factors, such as age, educational background, occupation, and income. Accordingly, when purchasing products with Halal logo, consumers' attitude will determine whether they have a favorable or unfavorable attitude towards those products. Additionally, Bashir (2019) also found that attitude strongly influences the consumer's purchase intention.

Purchase intention

According to Che Omar (2015), purchase intention refers to the likelihood that a consumer will select a product in a specific purchasing situation in the future. In other words, it comes about when consumers feel that there is a need that must be available, which can influence and predict the consumers' purchasing decisions in the future. Purchase intention is an essential predictor of actual buying behavior (Sparks & Browning, 2011). It also refers to the mental stage in the decision-making procedure in which consumers already have an interest and willingness to act on a product or brand (Wells et al., 2011). In other words, purchase intention is also perceived as a consumers' willingness to purchase products. The bigger the purchase intention of a consumer, the higher the probability for the consumer to purchase a product or service (Garg & Joshi, 2018).

3. Conceptual framework and hypotheses

This study explains how people's beliefs or perceptions are determined or influenced by their intention to purchase a ready-to-eat meal with the Halal logo. Therefore, in this study, it is predicted that people perform certain behavior based on a predicted conceptual model as suggested by the researcher.

The conceptual framework comprises of independent variables (halal awareness, halal logo and attitude) and dependent variables (purchase intention). Its purpose is to examine the effect of halal awareness, halal logo and attitude on intention to purchase a ready-to-eat meal with Halal logo. Each component of the model was adopted from the theoretical framework of Bashir (2019). Accordingly, four constructs were conceptualized to fit into the current study setting, as shown in Figure 1.

Figure 1

Conceptual Framework
3.1 Hypothesis testing

The hypotheses of this research were based on the conceptual framework to find the relationship among the Halal components; Halal awareness, Halal logo, and attitude of non-Muslim consumers that influence consumer intention to purchase ready-to-eat meal with Halal logo in Bangkok. The hypotheses of this study are:

H1. Halal awareness of non-Muslim consumers has a positive impact on their purchase intention towards ready-to-eat meal.

H2. Halal logo has a positive impact on non-Muslim consumers’ purchase intention towards ready-to-eat meal.

H3. Non-Muslim consumers’ attitude has a positive impact on their purchase intention towards ready-to-eat meal.

4. Research methodology

The researcher uses the quantitative method to conduct this research, including non-probability sampling, convenience, and snowball sampling. The non-probability sampling is applied to collect the target respondents living in Bangkok via online and offline distribution channels. The questionnaire comprises screening questions, demographic questions (comprising gender, age, educational background, marital status, religion, and employment status), and Likert scale questions. Likert-scale questions are applied for rating the opinion by ranking from 5 as "Strongly Agree" to 1 as "Strongly Disagree" to measure consumers' purchase intention. In addition, simple linear regression and Pearson's correlation matrix are also applied to analyze the effect of independent variables on dependent variables. The statistical analysis is applied in the proposed model that was adapted from previous studies.

4.1 Population and sample size

The research questionnaire is conducted with 230 target respondents selected based on some criteria; non-Muslim consumers reside in Bangkok and have experience in ready-to-eat meals. The reason for mainly targeting this group for the study is to clearly understand the effect of halal awareness, halal logo, and attitude on non-Muslim consumers' purchase intention towards a ready-to-eat meal with Halal logo. The questionnaire was in Thai and English and distributed mostly through online channels focusing on social media channels; Google forms, Facebook, Instagram, Twitter, and Line to reach many targets. With convenience and snowball sampling method, the questionnaire is also shared through colleague’s connection to collect quantitative data. The pilot test was conducted with 30 respondents. Even though there are 250 respondents participating in the questionnaire, only 230 respondents met the criteria, or a response rate of 92 percent. The 20 questionnaires were excluded due to incomplete information and failed to comply with criteria set for screening questions.

4.2 Pilot Test

The term pilot test is commonly used in research as it can refer to feasibility studies that are done in preparation for the significant study. In other words, a pilot test can also be the pre-testing of a particular research method. One of the advantages of conducting a pilot test is that it might warn where the main research project could fail, where the research framework may be required to review, or whether applied methods or techniques are inappropriate or too complicated (van Teijlingen & Hundley, 2002). Besides the pilot test, the Cronbach's Alpha coefficient model is applied to help measure the validity and reliability of the questionnaire. Accordingly, 30 respondents of the target group participated in the questionnaire and are accepted because the Cronbach's Alpha coefficient results of all variables are higher than 0.7, proving that this questionnaire is acceptable and reliable in format. After conducting a reliability test, 30 responses were collected from the sample size of this research and the result of the pilot test are shown in Table 1.

| Table 1 |
| Reliability test of variables (N=30) |
5. Results and discussions

Descriptive analysis was presented of the 230 respondents via the questionnaires. The demographic factors in this research consist of gender, age, educational background, marital status, religion, and occupation. These factors were presented with percentage and frequency analysis. The gender of the respondents in this study is evenly distributed between male and female, where 49.6 percent are female (114 respondents) whereas 50.4 percent (116 respondents). The age of most respondents is between 20-29 years old, accounting for 33.5 percent, followed by 50-59 years old with 27.9 percent. Their marital status is single for 50.9% (117 respondents) and married for 49.1% (113 respondents). Most respondents are non-Muslim accounting for 98.7% (227 respondents) while Muslim is 1.3% (3 respondents). Whereby the educational background of major respondents is bachelor's degree with 53.9 percent. In addition, the majority of the respondents are currently employed up to 68.7 percent (158 respondents), where 18.3 percent (42 respondents) of them are self-employed. The descriptive analysis of demographic factors of 230 respondents is shown in Table 2.

<table>
<thead>
<tr>
<th>Variables</th>
<th>No. of items</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Halal awareness (HA)</td>
<td>3</td>
<td>0.730</td>
</tr>
<tr>
<td>Halal logo (HL)</td>
<td>4</td>
<td>0.729</td>
</tr>
<tr>
<td>Attitude (ATT)</td>
<td>4</td>
<td>0.920</td>
</tr>
<tr>
<td>Purchase intention (PI)</td>
<td>4</td>
<td>0.937</td>
</tr>
</tbody>
</table>

5.1 Demographic factors

Table 2. Demographic factors (N=230)

<table>
<thead>
<tr>
<th>Demographic information (N=230)</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>114</td>
<td>49.6</td>
</tr>
<tr>
<td>Male</td>
<td>116</td>
<td>50.4</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-29</td>
<td>77</td>
<td>33.5</td>
</tr>
<tr>
<td>30-39</td>
<td>43</td>
<td>18.7</td>
</tr>
<tr>
<td>40-49</td>
<td>30</td>
<td>13</td>
</tr>
<tr>
<td>50-59</td>
<td>74</td>
<td>32.2</td>
</tr>
<tr>
<td>Above 60</td>
<td>6</td>
<td>2.6</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>117</td>
<td>50.9</td>
</tr>
<tr>
<td>Married</td>
<td>113</td>
<td>49.1</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Below bachelor</td>
<td>5</td>
<td>2.2</td>
</tr>
<tr>
<td>Bachelor’s degree</td>
<td>124</td>
<td>53.9</td>
</tr>
<tr>
<td>Master’s degree</td>
<td>99</td>
<td>43</td>
</tr>
<tr>
<td>PhD</td>
<td>2</td>
<td>0.9</td>
</tr>
<tr>
<td>Religion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Muslim</td>
<td>227</td>
<td>98.7</td>
</tr>
<tr>
<td>Muslim</td>
<td>3</td>
<td>1.3</td>
</tr>
<tr>
<td>Employment status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>158</td>
<td>68.7</td>
</tr>
<tr>
<td>Self-employed</td>
<td>42</td>
<td>18.3</td>
</tr>
<tr>
<td>Unemployed</td>
<td>19</td>
<td>8.3</td>
</tr>
<tr>
<td>Student</td>
<td>11</td>
<td>4.8</td>
</tr>
</tbody>
</table>
5.2 Reliability analysis

Table 4 shows the reliability coefficients and the interrelationship between the factors. A reliability test is conducted to examine reliability items in the questionnaire. The results of all variables are acceptable with the value of 0.7 or higher according to the requirement standard of Cronbach's Alpha Coefficient. It was indicated that 0.7 is an acceptable value of coefficient reliability (Nunnally & Nunnaly, 1978). Refer to Table 3, the Cronbach's Alpha Coefficient falls in a range between 0.824 to 0.927, which is higher than 0.7. This indicates that high internal consistency is met for all research constructs, therefore it could be implied that the questionnaire developed for this study met the standard required for reliability test.

<table>
<thead>
<tr>
<th>Variables</th>
<th>No. of items</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Halal awareness (HA)</td>
<td>3</td>
<td>0.824</td>
</tr>
<tr>
<td>Halal logo (HL)</td>
<td>4</td>
<td>0.803</td>
</tr>
<tr>
<td>Attitude (ATT)</td>
<td>4</td>
<td>0.887</td>
</tr>
<tr>
<td>Purchase intention (PI)</td>
<td>4</td>
<td>0.927</td>
</tr>
</tbody>
</table>

Table 3. Reliability test (N=230)

5.3 Descriptive Analysis of variables

This section analyzes and explains the correlation of variables in this research. The descriptive analysis comprises of halal awareness, halal logo, attitude towards non-Muslim consumers' purchase intention of a ready-to-eat meal with Halal logo in Bangkok. This research applied Likert scale model to describe the level of variables into a five-point scale ranging from "strongly disagree" to "strongly agree". The arbitrary levels shown in Table 4 were used to rate the respondents' perceptions with each statement presented in the questionnaire.

<table>
<thead>
<tr>
<th>Arbitrary levels</th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>4</td>
<td>Agree</td>
</tr>
<tr>
<td>3</td>
<td>Moderate</td>
</tr>
<tr>
<td>2</td>
<td>Disagree</td>
</tr>
<tr>
<td>1</td>
<td>Strongly disagree</td>
</tr>
</tbody>
</table>

Table 4. Likert scale model

5.3.1 Descriptive statistics for halal awareness variables

Regarding the response to the halal awareness variables towards ready-to-eat meal with Halal logo shown in Table 5, it indicates that most respondents agree that they understand the meaning of Halal, where the mean value accounting for 3.50. In addition, they are quite familiar with the Halal logo, where the mean value shows 3.45. However, they are probably aware of the process involved in Halal ready-to-eat meal as the mean value is 3.17. Regarding the result, it could be implied that respondents are informative and knowledgeable about the Halal concept and Halal logo.

5.3.2 Descriptive statistics for halal logo variables

Regarding the response to halal logo variables towards ready-to-eat meal shown in Table 5, most respondents agree that the Halal logo represents high quality, where the mean value is 3.51, and the halal logo is widely popular (mean value 3.37). Moreover, they also perceive that the Halal logo is reliable, resulting in the mean value to be 3.65. However, the Halal logo's benefit does not significantly impact their purchase intention towards ready-to-eat meal with Halal logo as the mean value shows 2.66. Therefore, these descriptive results indicate that even the respondents perceived the attribute of Halal logo, it might not impact enough to drive their purchase intention.

5.3.3 Descriptive statistics for attitude variables

Regarding the response to attitude variables towards ready-to-eat meal, they mostly agree that buying ready-to-eat meal with Halal logo is a good idea as the mean value is 3.37 and it probably makes them feel satisfied (the mean value 3.17). Although it is a good idea and satisfies
them, non-Muslim in Bangkok disagree that it is much better to buy a ready-to-eat meal with the Halal logo as the mean value is 2.90. Respondents agree that buying a ready-to-eat meal with the Halal logo is their ethical goal (the mean value is 3.30). So far, the results indicate the respondents show a positive attitude towards a ready-to-eat meal with Halal logo.

5.3.4 Descriptive statistics for purchase intention variables

Regarding the response to purchase intention variables towards ready-to-eat meal shown in Table 5, some of the respondents agreed that they will buy ready-to-eat meals with halal logo in the future as the mean value shows 3.03. However, they slightly disagree that they intend to buy ready-to-eat meal with the Halal logo despite its availability (the mean value is 2.75). Furthermore, most of them do not intend to continue buying ready-to-eat meal with the Halal logo in the future as the mean value is only 2.51. Accordingly, they do not buy ready-to-eat meal with halal logo unless it is sold close to them (the mean value shows 2.25). Therefore, these descriptive results indicate that non-Muslim consumers' purchase intention towards ready-to-eat meals with Bangkok's Halal logo is quite low despite their positive attitude and familiarity with the Halal logo.

Table 5
Standardized factor loading value, mean and standard deviation (N=230)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Items</th>
<th>Standardized loading</th>
<th>Mean</th>
<th>SD</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Halal awareness</td>
<td>HA 1</td>
<td>0.771</td>
<td>3.50</td>
<td>0.966</td>
<td>0.824</td>
</tr>
<tr>
<td></td>
<td>HA 2</td>
<td>0.725</td>
<td>3.17</td>
<td>1.095</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HA 3</td>
<td>0.776</td>
<td>3.45</td>
<td>1.206</td>
<td></td>
</tr>
<tr>
<td>Halal logo</td>
<td>HL 1</td>
<td>0.745</td>
<td>3.51</td>
<td>0.929</td>
<td>0.803</td>
</tr>
<tr>
<td></td>
<td>HL 2</td>
<td>0.722</td>
<td>3.37</td>
<td>1.065</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HL 3</td>
<td>0.766</td>
<td>3.65</td>
<td>1.050</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HL 4</td>
<td>0.781</td>
<td>2.66</td>
<td>1.148</td>
<td></td>
</tr>
<tr>
<td>Attitude</td>
<td>ATT 1</td>
<td>0.867</td>
<td>3.37</td>
<td>1.06</td>
<td>0.887</td>
</tr>
<tr>
<td></td>
<td>ATT 2</td>
<td>0.832</td>
<td>3.17</td>
<td>1.09</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ATT 3</td>
<td>0.825</td>
<td>2.90</td>
<td>1.13</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ATT 4</td>
<td>0.895</td>
<td>3.30</td>
<td>1.24</td>
<td></td>
</tr>
<tr>
<td>Purchase intention</td>
<td>PI 1</td>
<td>0.931</td>
<td>3.03</td>
<td>1.13</td>
<td>0.927</td>
</tr>
<tr>
<td></td>
<td>PI 2</td>
<td>0.889</td>
<td>2.75</td>
<td>1.23</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PI 3</td>
<td>0.882</td>
<td>2.51</td>
<td>1.17</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PI 4</td>
<td>0.914</td>
<td>2.25</td>
<td>1.17</td>
<td></td>
</tr>
</tbody>
</table>

5.4 Hypothesis testing results

This research applied the Simple Linear Regression method to examine hypothesis in the effects of halal logo on ready-to-eat meal towards purchase intention of non-Muslim consumers in Bangkok. The hypothesis was derived from the objective of this research and based on the conceptual framework as follows:

H1. Halal awareness of non-Muslim consumers has a positive impact on their purchase intention towards ready-to-eat meal.

H2. Halal logo has a positive impact on non-Muslim consumers’ purchase intention towards ready-to-eat meal.

H3. Non-Muslim consumers’ attitude has a positive impact on their purchase intention towards ready-to-eat meal.
Table 6
Regression model summary

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Estimate</th>
<th>SE</th>
<th>t</th>
<th>p</th>
<th>Stand. Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-0.398</td>
<td>0.2186</td>
<td>-1.82</td>
<td>0.070</td>
<td></td>
</tr>
<tr>
<td>HA Avg</td>
<td>0.180</td>
<td>0.0631</td>
<td>2.86</td>
<td>0.005*</td>
<td>0.159</td>
</tr>
<tr>
<td>HL Avg</td>
<td>0.206</td>
<td>0.0871</td>
<td>2.36</td>
<td>0.019*</td>
<td>0.161</td>
</tr>
<tr>
<td>ATT Avg</td>
<td>0.549</td>
<td>0.0694</td>
<td>7.91</td>
<td>&lt;.001*</td>
<td>0.505</td>
</tr>
</tbody>
</table>

Table 7
Collinearity Statistics

<table>
<thead>
<tr>
<th>Predictor</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Halal Awareness Avg</td>
<td>1.46</td>
</tr>
<tr>
<td>Halal logo Avg</td>
<td>2.18</td>
</tr>
<tr>
<td>Attitude Avg</td>
<td>1.92</td>
</tr>
</tbody>
</table>

The regression model summary in table 8 shows that the value of R2 is 0.519 indicating that 51.9% of all independent variables in this research; Halal awareness, Halal logo, and attitude could well explain non-Muslim consumers' purchase intention, which is the dependent variable, at significant level of 0.05 or 95% of confident level. The P-values of the independent variables are less than 0.05 showing that H1, H2, and H3 are supported and significant. SE value are below 0.1 indicating all variables are positively supported. Accordingly, Halal awareness, Halal logo, and attitude have statistically positive effect on non-Muslim consumers' purchase intention towards ready-to-eat meal with the Halal logo. In addition, the variance inflation factors (VIFs) were verified to validate the multicollinearity problem. All VIFs were less than 5.00, considered as no critical multicollinearity problem in this research.

6. Discussion and conclusion, Limitation, and Recommendations

6.1 Discussion

This research aims to study the effects of the Halal logo on ready to eat meal towards purchase intention of non-Muslim consumers in Bangkok with the use of Simple Linear Regression model from Jamovi program software. The result of 230 respondents participating in this research has shown that Halal awareness, Halal logo, and attitude positively impact purchase intention. Since the hypotheses H1, H2, H3 are supported and interrelated, all variables are significant at the p-value of less than 0.05, respectively. According to the findings, there was an agreement with H1 that halal awareness influences non-Muslim consumers' purchase intention towards ready-to-eat meal with Halal logo, as shown in Table 6. In addition, this result aligns with findings of the studies (Bashir et al., 2019) as non-Muslim consumers are aware of the Halal concept, and they are informative to make rational decisions to purchase ready-to-eat meal with Halal logo. Additionally, the agreement of H2 indicates that the Halal logo positively impacts non-Muslim consumers' purchase intention. Halal logo has become a quality label and plays an increasingly important role in the global food industry. In other words, this implied that more Halal are widely popular, the more technological methods of production and traceability are becoming important for manufacturers, traders, certifiers and consumers. Furthermore, attitude also has a positive impact on non-Muslim consumers' purchase intention in agreement with H3. As consumers who have a positive attitude, normally they have a positive direct impact on their intention (Ajzen, 1991).
6.2 Conclusion

In conclusion, Halal logo and attitude were determined as the most significant factor influencing the purchase intention of ready-to-eat meal with Halal logo, followed by halal awareness. This indicates the fact that non-Muslim consumers are aware and informative of the Halal concept, including Halal logo attribute. Understanding these consumers' purchase intention and their perception of Halal products helps the manufacturers in the food industry to better analyze the factors that significantly influence their production and develop the product to serve consumers' needs better.

H1. Halal awareness of non-Muslim consumers supports their purchase intention towards ready-to-eat meal.
H2. Halal logo supports non-Muslim consumers’ purchase intention towards ready-to-eat meal.
H3. Non-Muslim consumers’ attitude supports their purchase intention towards ready-to-eat meal.

6.3 Limitation

The research result contributes to the stakeholders in the food industry and supports the results of previous studies, but this research also has unavoidable limitations. As most resposoto analyze betteri nationality, it would be better to retrieve foreign consumers' perception of Bangkok and provide other interesting information. Moreover, the target group of this research is limited to Bangkok only, which might not apply to other provinces in Thailand due to their demographic profile, behavioral practice, and population density. For example, in the southern part of Thailand, where the majority is Muslim population. Besides the limited location, this research focuses only on ready-to-eat meals. It does not cover other Halal food products, such as ready-to-cook ingredients, raw material, and freshly cooked meals.

6.4 Further research

Manufacturers and marketers might improvise the attribute from this research to leverage the benefit of the Halal concept in the dimension of strategies, marketing communication, product concept, and brand planning to penetrate the Halal market in Thailand. These will enable the business to gain a competitive edge in terms of differentiation among players in the market as they might outperform in meeting consumers' needs and generate sales profit. In addition, the research assessed only Halal awareness, Halal logo and attitude factors; other factors such as Halal quality, Halal regulation, product variety and income should be considered in future studies. It is also suggested that future research should consider the effect of demographic characteristics, gender, age, income, and educational background on consumers’ purchase behavior towards halal food products in Bangkok.

References


Consumer Attitudes Toward Mobile Advertising in India: The Role of Personalization

Smitha Siji¹ and Joseph Nelson²

Abstract

Mobile phones happen to be one of the gadgets that has attained rapid proliferation among people. Marketers have realized the immense potential this gadget possesses to reach their target consumers and have started using mobile phones as a medium to communicate with their customers. This study is carried out with an objective to examine the factors that affect the attitude of customers towards mobile advertising in India with particular emphasis on personalization. Data was collected from 201 respondents selected from all over India who were aged 18 years and above and use mobile phones. The results of regression and SEM analysis proved that personalization, entertainment, irritation and informativeness have significant influence on attitude and attitude, then, influences the intention to purchase. However, credibility was not found to have any significant influence on attitude.

Keywords: Mobile Advertising, Personalization, Credibility, Entertainment, Irritation, Informativeness, Attitude, Intention

JEL Classification Code: M

1. Introduction

Mobile phones happen to be one of the gadgets that has attained rapid proliferation among people. Marketers have realized the immense potential this gadget possesses to reach their target consumers and have started using mobile phones as a medium to communicate with their customers. The present research investigates the factors that will affect consumer attitudes toward mobile advertising in India with particular emphasis on personalization.

The growing popularity of short messaging services (SMS) has created a means of advertisement called mobile advertising. As India has a high growth rate in the global mobile phones and SMS penetration, it has a huge market potential and the business is lucrative. Furthermore, as most studies in the past were conducted within developed societies holding specific perceptions and value toward mobile advertising, those studies can hardly be applied to study the problem in the Indian context. Therefore, India is a country worthwhile to be studied on the topic of mobile advertising. In particular, it is important to know how customers feel about the mobile ads delivered to their mobile phones, what variables can impact their attitude, and how their advertising designs can be better strategized by designers and marketers.

This study covered how the influence of Personalization affect the Consumer Attitudes toward Mobile Advertising in India. The respondents were from different parts of India. The population was those individuals who are experienced in using mobile devices and are aged above 18 years. The usable responses received were 201 and the time period for the study was from November 2020 to January 2021.

2. Review of Literature

The high rate of cell phone penetration has led to the growing use of portable devices to advertise goods and services. Using interactive wireless media, mobile marketing provides consumers with time and location-sensitive, personalized information that promotes products, services and ideas, creating value for all stakeholders (Dickinger, 2004). Wireless marketing, fueled by the interactive and quick-response capabilities of the Internet, is
a very promising direct marketing channel. For location-sensitive and time-critical activities, one would expect mobile ads to be more beneficial to customers. A very significant category of m-commerce applications is mobile ads. Based on information given by consulting the customer at an earlier stage or by the background of purchase habits of users, the advertisement messages can be customized. Advertisements sent to a customer can also be location sensitive and can warn a customer in nearby areas about different products/services available.

As more wireless bandwidth becomes usable, content-rich ads can be created for individual users with unique needs, desires, and inclinations, including audio, photographs, and video clips. This limitation is solved by innovations like the Multimedia Messaging Service (MMS). Higher resolution phones and multicolor screens may provide visual elements for imaginative marketing strategies (Dickinger, 2004).

Due to specific features, such as personalization, mobile advertising has gained considerable attention (Kalakota, 2001). These give marketers new opportunities to put successful and efficient promotions on mobile environments. In order to reliably achieve the competitive advantages, personalization in real time would most likely be needed by using personalization technology (Murtaza, 2003). The intrusive tactics advertisers employ when competing for consumers’ attention can be annoying to the audiences (Zhang, 2000). Social economic status is also a predictor of consumption patterns from the perspective of social science; consumers of similar backgrounds express similar consumption patterns (Schor, 1999). Rao and Minakakis (2003) argue that marketing strategies focused on knowledge of consumer profiles, history, and their needs are urgently needed. Yan et al. (2004) state that a customized mobile ad targets those consumers reliably and meets their specifications according to their order of choice and shopping habits. Doing so can also activate their resonance that enhances input and responses and enhances the images of companies. In any case, customers would like to tailor the content of mobile services to their interests (Robins, 2003) and relevant for them. Personalization will help advertisers to meet their prospective customers in a very personal way and thereby strengthen the relationship with the customers. The personalization aspect makes mobile ads a very valuable m-commerce application, as it facilitates the use of demographic information obtained by cellular service providers and information about a mobile user’s current location. Thus, advertising can be carried out very precisely and with a clear focus on the target group (Varshney U. a., 2002). In addition to customizing the input of customers, the ability to identify consumers makes it possible to understand the particular situation of users. As a result, promotional activities may be tailored to things related to time and time, such as local events.

Mobile advertising personalization refers to the degree to which the advertising message is personalized to match the desires, wants, attitude, lifestyle, and unique cultural and geographical features of a customer (Leppäniemi, 2008). In consumer perceptions of mobile ads, the degree of personalization plays a critical role, in that a mobile phone is seldom used by someone other than its user. Consumers thus demand highly personalized messages that they think of as intimate gadgets on their cell phones (Bauer, 2005). In order to gather information about their tastes and tailor the promotional messages and deals accordingly, mobile marketers may use customer reviews. Personalizing the advertisement message often helps advertisers to meet and thus establish connections with their potential consumers in an individualized manner. Consumers are more sensitive to customized and appropriate advertisement messages (Carroll, 2005).

In mobile ads, entertainment is also a key element. It is critical that the message is succinct and humorous, thus capturing the attention of consumers immediately (Katterbach, 2002).

Entertainment is the ability to satisfy the need for escape, diversion, aesthetic gratification, or emotional enjoyment of an audience (Huq, Alam, & Akhtar, 2015). Entertainment has become one of the key advertising building requirements and is used as a method to draw customer interest and improve advertising effectiveness (Haider, 2018). Entertainment plays an essential role in mobile marketing (James & DuyBinh, 2016). A positive relationship between entertainment and customer attitude has been seen in mobile advertising and is considered to be the most significant factor that helps define the attitude towards mobile advertising (Tsang & Ho, 2004)

The credibility of advertising is described as the expectations of consumers of the truthfulness and credibility of advertising in general (Xu, 2007). Reliability in ads is one of the perceptual dimensions underlying ad credibility and is the degree to which the customer perceives honest and
accurate statements made about the brand in the advertisement.

Advertising credibility is the understanding of the truthfulness and credibility of advertising by customers in general (Huq, Alam, & Aktar, 2015). Different factors affect the credibility of an advertising, primarily the credibility of the business and the delivery of the message (Chowdhury, Parvin, & Weitenberner, 2006). By using credibility and their expertise to select the advertising source, customers will estimate that the service is actually real (Chowdhury, Parvin, & Weitenberner, 2006). In mobile advertising it has been showed that a positive relationship between credibility and consumers attitude toward mobile advertising (Chowdhury, Parvin, & Weitenberner, 2006).

Information given to customers via mobile devices needs to demonstrate qualitative characteristics such as precision, timeliness and consumer usefulness (Siau, 2003). In addition to this, users need easy access to the data they are searching for in their current use material. There is also the possibility that the data will be distributed to customers automatically (Kaasinen, 2003). The distinction between informativeness and personalization is that personalization emphasizes that the content of mobile services is personalized to and important to the interests of customers.

Informativeness, the ability of ads to notify customers of product and service choices can be specified such that purchases contribute to the greatest possible satisfaction from purchases (James & DuyBinh, 2016). One of the advertisements aims is to warn the public of new products or new features of existing products and to alert them of any increases in the price of products (Huq, Alam, & Aktar, 2015). Informativeness is a valuable incentive in mobile advertising when the advertising provides users with a variety of resources and useful information (Fern, Ling, Boon, & Fong, 2018). Consumers' attitudes towards mobile ads are affected by informativeness. Therefore, it can be found that behaviors have a positive impact on the informativeness of mobile ads. However, Nicolaas (2016) found that informativeness does not influence consumer purchase behavior toward mobile advertising when advertising employs techniques that annoy, offend, insult, or are overly manipulative, consumers are likely to perceive it as unwanted and irritating influence. Mobile ads may provide a variety of information that confuses and distracts the recipient and overwhelms the customer with data (Pavlou, 2002). Consumers can feel confused and react negatively to them.

Consumers are likely to perceive it as an unwelcome and annoying effect when advertising uses tactics that upset, offend, ridicule, or are quite manipulative. Irritation has often been one of the big advertising critiques (Almossawi, 2014). Advertising irritation can be characterized as advertising that causes frustration, unhappiness and brief intolerance (Huq, Alam, & Aktar, 2015). Unwanted texts, regularly known as spam, are another possible nuisance. Spam imposes anonymity on the user and strangles customer acceptence James and DuyBinh (2016) perceived irritation of mobile advertising does affect consumers’ attitudes toward mobile advertising (Tsang & Ho, 2004). However, unwanted texts, regularly known as spam, are another possible nuisance (Hashim & Normalini, 2018). Spam imposes anonymity on the user and strangles customer acceptence (Tsang & Ho, 2004).

During the past two decades, customer expectations of emerging technical technologies and technology acceptance have fascinated researchers a lot. There are a few well-designed and well-tested behavioral models that describe user behaviors and new technology adaptation, such as the Expected Behavior Theory (Ajzen, 2003) and the Technology Acceptance Model (Venkatesh et al., 2003). The core factors in each of these models are the attitude and intention of the person to conduct a given action. The decision of a person to participate in a specified activity is determined by their intention to conduct the behavior, which is partly determined by their attitude towards (reflecting their outstanding behavioral beliefs) the behavior. Attitude is an important aspect of purchasing decisions that can be used to predict online purchase transactions.

Intention can be defined as subjective decisions about how an individual will act in the future (Blackwell, 2001) Intention gives an insightful indicator of the performance of a specific organization while maintaining its clients (Blackwell, 2001). It is prevalent that customers normally do what they expect to do. In parallel, several previous studies have shown that purpose provides a powerful predictor of how individuals will act in the future (Altuna, 2009). From the perspective of marketing, purchase intention is part of consumers’ intention.
(Blackwell, et al., 2001) and very helpful to act as an indicator for many marketing activities. It is therefore necessary for organizations to take proactive steps to ensure that their clients have a positive view of goods and services (Blackwell, 2001). The buying purpose of customers will also be dependent on the promotional strategy, their attitude and how much they know about deals highlighted by a specific business (Blackwell, 2001).

Kotler suggested that an attitude toward some object or idea is a person’s enduring favorable or unfavorable evaluations, emotional feelings, and tendencies to action (Tsang & Ho, 2004). Consumer attitudes toward advertisement messages, advertising agencies and media are affected by the impact of advertising activities. If businesses want to initially send their message through mobile media, they actually need to know how customers view, estimate mobile as a source of advertisement, and what kinds of attitudes consumers display (Tsang & Ho, 2004). Consumers have a negative attitude to mobile ads and a strong correlation between consumer attitudes and consumer behavior. Ene (2015) deduced that mobile advertisement users who have different demographic criteria, might have different attitudes and behaviors. Noor & Sreenivasan (2013) found that the attitude of customers has an important relationship with their intention to buy the advertised goods and services, and variables such as types of products and services, costs, and timing are important to understand the attitude of the customer to buy. The attitude towards mobile advertising was found to be same across genders (Padmanabhan & Anand, 2015). However, it was also found that consumers have a negative attitude towards advertisements that they receive in mobiles if the advertiser sends them without taking their consent (Salamah & Ma, 2017).

Thus, based on the literature review, the objectives of this research is to identify the consumers feeling about the mobile advertising delivered to their mobile phones and to identify the factors that affect the consumers attitude towards intention to receive mobile ads.

The hypotheses derived from the literature are:

- **Hypothesis 1:** The perceived entertainment of mobile advertising significantly influences the attitude toward mobile advertising.
- **Hypothesis 2:** The perceived informativeness of mobile advertising significantly influences the attitude toward mobile advertising.
- **Hypothesis 3:** The perceived irritation of mobile advertising significantly influences the attitude toward mobile advertising.
- **Hypothesis 4:** The perceived credibility of mobile advertising significantly influences the attitude toward mobile advertising.
- **Hypothesis 5:** The perceived personalization of mobile advertising significantly influences the attitude toward mobile advertising.
- **Hypothesis 6:** Attitude toward mobile advertising significantly influences consumer intention to receive mobile advertising.

### 3. Conceptual Model

**Factors Contributing to Attitude and Intention toward Mobile Advertising**

```
Entertainment
Informativeness
Irritation
Credibility
Personalization
```

### 4. Research Methodology

Descriptive research design was followed to conduct the study. Using convenience sampling technique more than 300 respondents were identified and questionnaire was sent to them as Google form. 201 usable responses were received. The scale consisted of items from already existing literature and each item was measured on a 7-point scale. The items for measuring Credibility, Informativeness, Irritation and entertainment was adopted from Tsang et al. (2004), Personalization from Mittal and Lassar (1996) and Chellapa and Sin (2005). Structural equation modeling (SEM) using the partial least squares method was used for the analysis, through which the hypotheses were tested for the proposed model. Warp PLS 7.0 software was used for the analysis.
5. Sample Profile

The study relies on a sample size of 201 in which the number of male’s respondents are 114 (56.7%) and number of female respondents are 87 (43.3%). 50.2 per cent of the respondents were aged between 18-23 years, 27.4 per cent of the respondents are between 24-30 years, 9 per cent of the respondents are between the ages 30-40 years and 13.4% are aged above 40 years.

6. Reliability

Table 1: Reliability analysis using Cronbach’s alpha

<table>
<thead>
<tr>
<th>Construct</th>
<th>Cronbach’s alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intention</td>
<td>.875</td>
</tr>
<tr>
<td>Attitude</td>
<td>.879</td>
</tr>
<tr>
<td>Entertainment</td>
<td>.875</td>
</tr>
<tr>
<td>Informativeness</td>
<td>.825</td>
</tr>
<tr>
<td>Irritation</td>
<td>.803</td>
</tr>
<tr>
<td>Credibility</td>
<td>.815</td>
</tr>
<tr>
<td>Personalization</td>
<td>.883</td>
</tr>
</tbody>
</table>

Table 1 explains the reliability analysis using the indication of Cronbach’s Alpha for the variables of the study. The seven factors intention, attitude, entertainment, informativeness, irritation, credibility and personalization have a reliability of more than 0.7 on Cronbach’s Alpha Assessment. The dependent variable intentions reliability test indicated a value of 0.875. The mediating variable attitude has a reliability value of 0.879. These variables show that the reliability analysis is exceeding 0.6 and these variables are valid and reliable for further statistical analysis.

Table 2: Descriptive Statistics

<table>
<thead>
<tr>
<th>Construct</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intention</td>
<td>1</td>
<td>7</td>
<td>4.29</td>
<td>1.294</td>
</tr>
<tr>
<td>Attitude</td>
<td>1</td>
<td>7</td>
<td>4.56</td>
<td>1.307</td>
</tr>
<tr>
<td>Entertainment</td>
<td>1</td>
<td>7</td>
<td>4.15</td>
<td>1.459</td>
</tr>
<tr>
<td>Informativeness</td>
<td>1</td>
<td>7</td>
<td>4.32</td>
<td>1.333</td>
</tr>
<tr>
<td>Irritation</td>
<td>1</td>
<td>7</td>
<td>4.25</td>
<td>1.310</td>
</tr>
<tr>
<td>Credibility</td>
<td>1</td>
<td>7</td>
<td>4.24</td>
<td>1.246</td>
</tr>
<tr>
<td>Personalization</td>
<td>1</td>
<td>7</td>
<td>4.42</td>
<td>1.276</td>
</tr>
</tbody>
</table>

The mean and standard deviation for all the variable is mentioned in table 2. Mean value is above 4 and hence it indicates that respondents are in agreement towards most of the statements.

6.1. Inferential Statistics

The figure shows the result of SEM analysis. The variables such as Entertainment, Personalization, Informativeness and Irritation have p value less than 0.01 hence the hypotheses have been approved. While the variable Credibility has p value of 0.46 hence the variable is insignificant.
Table 3: Hypothesis Testing Results.

<table>
<thead>
<tr>
<th>HYPOTHESES</th>
<th>VARIABLES</th>
<th>P VALUE</th>
<th>β VALUE</th>
<th>RESULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Entertainment - Attitude</td>
<td>&lt;0.01</td>
<td>0.35</td>
<td>Accepted</td>
</tr>
<tr>
<td>H2</td>
<td>Informativeness - Attitude</td>
<td>&lt;0.01</td>
<td>0.23</td>
<td>Accepted</td>
</tr>
<tr>
<td>H3</td>
<td>Irritation – Attitude</td>
<td>&lt;0.01</td>
<td>0.15</td>
<td>Accepted</td>
</tr>
<tr>
<td>H4</td>
<td>Credibility – Attitude</td>
<td>0.46</td>
<td>0.01</td>
<td>Rejected</td>
</tr>
<tr>
<td>H5</td>
<td>Personalization – Attitude</td>
<td>&lt;0.01</td>
<td>0.21</td>
<td>Accepted</td>
</tr>
<tr>
<td>H6</td>
<td>Attitude – Intention</td>
<td>&lt;0.01</td>
<td>0.57</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

Figure 2 shows the path values and path coefficients of independent variables to dependent variables. It shows direct relation between an independent and dependent variable.

From the given table we can analyze that, p-value for the Entertainment to Attitude is <0.01. Therefore, the null hypothesis is rejected and it is evident that significant relation exists between the variables. They are statistically significant because they are less than 0.001 at 1% of significance level. Perceived entertainment of mobile advertising thus significantly influences the attitude toward mobile advertising (H1). p-value for Informativeness to Attitude is <0.01. Therefore, the null hypothesis is rejected. The relationship is statistically significant because they are less than 0.001 at 1% of significance level. Perceived informativeness of mobile advertising thus significantly influences the attitude toward mobile advertising (H2). p-value for Irritation to Attitude is <0.01. Therefore, the null hypothesis is rejected. Thus, the perceived irritation of mobile advertising significantly influences the attitude toward mobile advertising. (H3). p-value for the Credibility to Attitude is 0.46. Thus the relationship is insignificant. Therefore, the null hypothesis is accepted. They are statistically insignificant because they
are greater than 0.001 at 1% of significance level. The perceived credibility of mobile advertising does not significantly influence the attitude toward mobile advertising (H4). p-value for Personalization to Attitude is <0.01. Therefore, the null hypothesis is rejected. The perceived personalization of mobile advertising, thus, significantly influences the attitude toward mobile advertising (H5). p-value for the Attitude to Irritation is <0.01. Therefore, the null hypothesis is rejected. Attitude toward mobile advertising thus significantly influences consumer intention to receive mobile advertising to consume (H6).

7. Findings

The present study focused on the Influence of Personalization in Affecting Consumer Attitudes toward Mobile Advertising in India. The study determined the influence of the dependent and independent variables, with the help of the mediating variable – Attitude. From the research it was inferred that all the hypothesis, except for H4 has been accepted.

Entertainment, personalization, informativeness and irritation are positively correlated to the overall attitude, whereas credibility is negatively correlated to the overall attitude. Although the emphasis of the study is on the personalization factor, it is not the major contributor in the regression model. This means other factors like entertainment, information and attitude also have a key role to play. Another reason is that personalized mobile advertising are not yet fully available, and as the vast majority of the respondents most likely have not experienced actual personalized mobile advertising. Therefore, their appreciation of the associated benefits may at this point be limited.

The major result of the study is that attitude towards mobile advertising is a good indicator of intention to receive mobile advertising. Therefore, hypothesis 6 is supported. Consumers attitudes toward mobile advertising are affected by the Entertainment component.

8. Suggestions

This research has revealed many questions in need of further investigation. Further research may be undertaken in the following areas: exploration of underlying factors, impacts of cultural factors, determinants of credibility and entertainment in advertising, the influence of attitudes on behavior toward mobile advertising, the different attitudes among types and forms of mobile advertising, or the investigation of advertising value and effectiveness of mobile advertising. To provide a greater degree of accuracy in this research, improvements on a number of items, such as variables, methodology and demographic variables, should be considered. Future trials should be assessed by increasing the sample size, changing the data collection method to random sampling and using more advanced analytical tools. In this way, the study could be more generalized. Furthermore, qualitative research is highly recommended to gain further insight into the theoretical framework and to build the most appropriate questionnaire for people of India.

9. Limitations of The Study

Although based on real-world data, the study has certain limitations. First, the data were collected in a convenience sampling, which may have resulted in sampling biases. Second The data was self-reported by various individuals which could have resulted in various biases such as selective memory or exaggeration. On the whole, mobile advertising has been developing as an important channel for advertising in India, based on the astonishing growth of SMS and mobile phone users. Research may find that personalization is a magic tool in affecting consumer attitudes. Practitioners will gain insight from the findings on how to design effective mobile advertising campaigns.

10. Conclusion

The findings of the study show that, the understanding of consumer attitude and intention toward mobile advertising is important for marketers to design a high-quality promotion campaign. As SMS and MMS are continually growing at an enormous rate in India, their business application in mobile advertising must be systematically evaluated and properly integrated into a merchant's business strategies and marketing initiatives. This research identifies specific factors affecting attitudes toward mobile advertising. Entertainment, informativeness and personalization are the three most important factors that will affect consumer's attitude toward mobile advertising. Further, Entertainment is an important element that will improve consumer attitude toward mobile advertising.
Bibliography


Psychological Well-being, Resilience and Team Effectiveness among IT/ITES Employees

Pramodh U Korula¹ and Dr. Joseph I Injodey²

Abstract

The current study intends to explore the relationship between psychological well-being, resilience and team effectiveness among IT/ITES employees. The primary intent was to test and validate the model explaining the linkage between psychological well-being, resilience and team effectiveness. The findings of the study reveals that the constructs psychological well-being and resilience are positively and significantly influence team effectiveness. The sub-constructs of psychological well-being such as autonomy, environmental mastery, positive relations with others, purpose in life, personal growth and self-acceptance has direct effects on psychological well-being. All the sub constructs of team effectiveness such as task clarity, cohesion, autonomy, confrontation, support, collaboration and accountability directly and collectively contributes to team effectiveness. This is a Quantitative Study and the research design is Descriptive in nature. Study is conducted among the employees in IT/ITES companies in Infopark, a cluster of companies, in Cochin. There are 30,000 employees estimated as working in different companies in Infopark. Considering the size of the population, the researcher targeted 1200 sample respondents. The collected data were analysed using structural equation modelling with the help of Smart PLS 3.0 and SPSS 20.0 softwares.

Keywords: Psychological well-being; resilience; team effectiveness; IT/ITES employees.

Introduction

It is a known fact that employees need to be psychologically mature and emotionally balanced in order to perform effectively at work. A person who enjoys psychological well-being will be able to better contribute at work, have healthy relationships with colleagues, deal with problems effectively, and be productive at work. Similarly, a person with high resilience will be able to deal with hurdles in a smooth manner and get back to normalcy without affecting self or others. Rajeswari and Magesh (2017) who record that highly satisfied and motivated people are an asset to any organization. They believe that people with positive attitude adapt to change quickly, work hard and are cheerful at all times. Furthermore, they state that when the employees have high job satisfaction, the psychological trauma of the employees reduces and they have a healthy well-being. Hence, employers prefer employees who are psychologically mature and resilient. Therefore, enhancing the positive attitudes of employees is important for the health and well-being of the employees.

In current corporate scenario, employers are paying increased attention for developing psychological well-being and resilience in employees. Furthermore, many researchers have thrown light on the importance of studying psychological well-being and resilience among employees for providing them with work conditions that are conducive and satisfying. On the other hand, working in teams has taken a higher momentum with diversity, globalization and work flexibility. Both employers and employees have understood the benefits of working in teams and are taking all measures for team productivity.

These concepts under discussion have been studied in various perspectives in terms of employee health, job satisfaction, and emotional intelligence, performance and so on with particular reference to either psychological well-being or resilience. Similarly, experts and researchers have been studying and debating on team effectiveness and measuring team effectiveness. Though there are several studies conducted on psychological well-being and resilience, there is a dearth of literature in terms of psychological well-being and resilience correlate team effectiveness. Literature is lacking particularly among IT / ITES professionals and more so in the Indian context. Hence, there is a gap in knowledge, which has been
instrumental in taking up this topic for research. The present research focuses on finding the relationship between psychological well-being, resilience, and team effectiveness among IT /ITES professionals in Kochi.

Literature review

Several studies on psychological well-being, resilience, and team effectiveness have been conducted as an independent factor for research or to find the relationship between well-being and resilience. These studies have been made across different countries and further, cross-cultural comparisons have been made too. Few of the studies are presented in the following paragraphs. Ryff and Singer (2003) in their study argued that ‘resilient individuals were generally capable to maintain their physical and psychological health and had the ability to recover more quickly from stressful events’. There was found to be positive relationships between psychological wellbeing and resilience in a study conducted among middle and late adolescents (Sagone and Caroli, 2014).

Some of the other studies which have shown that there is significant positive correlation between resilience and subjective well-being are by Mahmood and Ghaffar, (2014) and Resilience, optimism and psychological well-being by Souri, and Hasanirad, (2011). Guzzo and Dickson (1996) considered performance-relevant factors such as group composition, cohesiveness, and motivation in their study to find the effectiveness of teams at work in organizations. A study by Omar and Ahmad (2014) revealed that different input factors influenced different aspects of team effectiveness. In addition, team climate is a key input factor that influences team effectiveness.

Tonkin (2018) in his research brought forth the unique contribution that employee resilience makes to employees’ attitudes and wellbeing, that also showed how the wellbeing intervention resulted in small increases in employee resilience and wellbeing. Nielsen et al. (2017) in their study identified workplace resources at the individual, group, and organizational levels related to employee well-being and organizational performance. The study showed stronger relationships with well-being and performance.

Not much literature is available in the Indian context in this study topic. Verma et al. (2011) made a study to assess the impact of need pattern on team effectiveness and among other findings reported that task clarity was high among the respondents as compared to autonomy. The authors concluded that task clarity alone is not sufficient to make employees work and hence autonomy is required along with it. The study by Verma et al. (2012) found that highly empowered teams have better team effectiveness. Further, the employees from public sector had higher cohesion, confrontation and team functioning, while the employees from private sector had higher factors such as support, task clarity and accountability.

Literature review revealed that several studies are available on well-being and resilience. Team effectiveness has also been studied from various perspectives. Several authors and experts in the field have conducted studies on team effectiveness, resilience, and well-being in relation to factors such as emotional intelligence, self-efficacy, personality and so on. These studies have clearly shown that there is a relationship between psychological well-being and resilience. Similarly, few studies are available on resilience and team effectiveness. However, a thorough review of literature shows that there is a dearth of literature available on psychological well-being and resilience as correlated with team effectiveness. Particularly, studies are not available with reference to India and among IT / ITES professionals. Hence, the researcher attempts to find out the relationship among psychological well-being, resilience, and team effectiveness in the context of IT/ITES employees.

Research methodology

Since the main aim of the study is to understand, measure and to find out the relationship between selected Socio-economic & demographic conditions, Psychological Well Being, Resilience and Team Effectiveness by the Employees in IT / ITEs organizations, this is a Quantitative Study and the research design is Descriptive in nature. Study is conducted among the employees in IT/ITES companies in Infopark, a cluster of companies, in Cochin. There are 30,000 employees estimated as working in different companies in Infopark. The researcher has used Cochran’s sample size formula to decide the sample to be covered in this study. The formula is given below:

As per this computation the sample size is estimated as \((1.96)^2 \times (0.5) \times (0.5)/ (0.05)^2 = 385\). Hence the researcher assumed that any sample size equal to or more than 385 will be representative of the population under study. Considering the size of the population, the researcher targeted 1200 sample respondents (covering 4 percent of the
population) and distributed 1400 questionnaires to IT/ITES employees of different companies in Infopark.

The response rate was 78 per cent, hence, the researcher could get back 1092 filled questionnaires. However, out of 1092, filled questionnaires, 24 questionnaires (2.20 per cent) were found to be either incomplete or with mistakes and hence not in usable nature. These were eliminated from the final sample. The final sample for this study is (1092 - 24) thus taken as 1068 IT/ITES employees (3.56 per cent) in Infopark, Kochi. The collected data were analysed using structural equation modelling with the help of Smart PLS 3.0 and SPSS 20.0 softwares.

Conceptual Model

The conceptual model developed for the current study is given below:

![Conceptual Model](image)

The total sample for the study consisted of 1068 respondents who were the employees of IT/ITES firms. Their demographic and socio-economic profile was enquired into. Their age, gender, income, level of employment and their work experience were enquired into. Among the total 511 males, 183 are below 25 years and 173 are between 25 and 40 years. As regards the 557 female respondents, 193 are below 25 years, while 183 are above 40 years. It is seen that among the male respondents, 135 belongs to ‘between Rs. 15,000 and Rs. 30,000’ and 134 to ‘above Rs. 45,000’. Among the female category, 143 respondents fall into the ‘above Rs. 45,000’, and 141 to the ‘between Rs. 30,000 and Rs. 45,000’ group. Among the male respondents, it is seen that 179 have a experience ‘between five and 15 years’, while 176 have a experience ‘less than five years’. Among the female respondents, 199 of them have an experience between ‘five and 15 years’, while 188 have an experience ‘above 15 years’. Among the male respondents, 254 belong to the lower management, while 206 belong to middle management. Among the female respondents, 257 are employed in the ‘lower level’ management, while 244 are employed in the middle level.

Based on the mean scores of the indicators for the components of psychological well-being, resilience and team effectiveness, a component-wise mean score was computed, which is then used to arrive at an overall psychological well-being, resilience and team effectiveness. The following table presents the results.

### Results and Discussions

<table>
<thead>
<tr>
<th>Components</th>
<th>Mean</th>
<th>S. D.</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomy</td>
<td>2.998</td>
<td>0.524</td>
<td>0.112</td>
<td>-0.192</td>
</tr>
<tr>
<td>Environmental Mastery</td>
<td>3.477</td>
<td>0.426</td>
<td>0.010</td>
<td>-0.204</td>
</tr>
<tr>
<td>Positive Relations with others</td>
<td>3.509</td>
<td>0.433</td>
<td>0.040</td>
<td>-0.219</td>
</tr>
<tr>
<td>Purpose in Life</td>
<td>4.004</td>
<td>0.830</td>
<td>0.063</td>
<td>0.411</td>
</tr>
<tr>
<td>Personal Growth</td>
<td>3.904</td>
<td>0.305</td>
<td>0.011</td>
<td>-0.284</td>
</tr>
<tr>
<td>Self Acceptance</td>
<td>2.977</td>
<td>0.560</td>
<td>-0.051</td>
<td>-0.346</td>
</tr>
<tr>
<td>PSYCHOLOGICAL WELL-BEING</td>
<td>3.493</td>
<td>0.179</td>
<td>0.105</td>
<td>-0.094</td>
</tr>
<tr>
<td>RESILIENCE</td>
<td>3.507</td>
<td>0.296</td>
<td>0.129</td>
<td>-0.138</td>
</tr>
<tr>
<td>Task Clarity</td>
<td>3.496</td>
<td>0.530</td>
<td>-0.012</td>
<td>0.213</td>
</tr>
<tr>
<td>Cohesion</td>
<td>2.989</td>
<td>0.705</td>
<td>-0.045</td>
<td>-0.312</td>
</tr>
</tbody>
</table>
The above table shows that the mean level of psychological well-being is 3.493 ± 0.179. The skewness is found to be 0.105 and kurtosis is –0.094. Mean level of resilience of the respondents is 3.507 ± 0.296. The skewness is found to be 0.129 and kurtosis is –0.138. The respondents have a comparatively higher level of ‘task clarity’ followed by ‘collaboration’ and ‘accountability’. Lower levels are seen among respondents in ‘cohesion’ and ‘support’. ‘Autonomy’ and confrontation have moderately high mean scores, while ‘confrontation’ also showed a slightly above moderate level. The level of skewness (within a range of -0.045 to +0.045) and kurtosis (within a range of -0.445 to +0.213) show that the data follows normal distribution.

**Measurement Model evaluation**

Psychological well-being is a higher order construct composed of six lower order components - autonomy, environmental mastery, personal growth, positive relations with others, purpose in life and self-acceptance. Each of the components is measured using seven indicators. The evaluation of the components in terms of its reliability and validity is discussed below. The figures 4.6 to 4.11 presents the results of measurement model evaluation run in Smart PLS 3.0. Team Effectiveness is a higher order construct composed of seven lower order components - task clarity, cohesion, autonomy, confrontation, support, collaboration, and accountability. Each of the components is measured using four indicators. The evaluation of the components in terms of its reliability and validity is discussed below. The figures 4.12 to 4.18 presents the results of measurement model evaluation run in Smart PLS 3.0.

The latent variable scores of the lower order components included in the first stage are computed and added into the data set. These serve as the manifest variables of the second order constructs. Thus, all the indicators of the lower order component is composed into a single item, and it resembles the indicator of the higher order construct. This helps in solving the multicollinearity issues and prevents the double counting in two stages (Arnett, Laverie & Meiers, 2003). Thus the higher order construct becomes an endogenous model in the structural model. Thus the second stage measurement model consists of the three constructs (psychological well-being, resilience and team effectiveness) and its indicators. The model is run in SmartPLS and run, resulting in the following output values.

**Figure 2: Measurement Model**
Table 2: Factor Loadings & Indicator Reliability

<table>
<thead>
<tr>
<th>Construct</th>
<th>Indicator</th>
<th>Factor Loading</th>
<th>Indicator Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological Wellbeing</td>
<td>Autonomy</td>
<td>0.791</td>
<td>0.626</td>
</tr>
<tr>
<td></td>
<td>Environmental Mastery</td>
<td>0.782</td>
<td>0.612</td>
</tr>
<tr>
<td></td>
<td>Personal Growth</td>
<td>0.782</td>
<td>0.612</td>
</tr>
<tr>
<td></td>
<td>Positive Relations with Others</td>
<td>0.776</td>
<td>0.602</td>
</tr>
<tr>
<td></td>
<td>Purpose in Life</td>
<td>0.808</td>
<td>0.653</td>
</tr>
<tr>
<td></td>
<td>Self-Acceptance</td>
<td>0.815</td>
<td>0.664</td>
</tr>
<tr>
<td>Resilience</td>
<td>Resi_01</td>
<td>0.838</td>
<td>0.702</td>
</tr>
<tr>
<td></td>
<td>Resi_02</td>
<td>0.723</td>
<td>0.523</td>
</tr>
<tr>
<td></td>
<td>Resi_03</td>
<td>0.842</td>
<td>0.709</td>
</tr>
<tr>
<td></td>
<td>Resi_04</td>
<td>0.780</td>
<td>0.608</td>
</tr>
<tr>
<td></td>
<td>Resi_05</td>
<td>0.821</td>
<td>0.674</td>
</tr>
<tr>
<td></td>
<td>Resi_06</td>
<td>0.721</td>
<td>0.520</td>
</tr>
<tr>
<td></td>
<td>Resi_07</td>
<td>0.708</td>
<td>0.501</td>
</tr>
<tr>
<td></td>
<td>Resi_08</td>
<td>0.861</td>
<td>0.741</td>
</tr>
<tr>
<td></td>
<td>Resi_09</td>
<td>0.744</td>
<td>0.554</td>
</tr>
<tr>
<td></td>
<td>Resi_10</td>
<td>0.759</td>
<td>0.576</td>
</tr>
<tr>
<td></td>
<td>Resi_11</td>
<td>0.865</td>
<td>0.748</td>
</tr>
<tr>
<td></td>
<td>Resi_12</td>
<td>0.861</td>
<td>0.741</td>
</tr>
<tr>
<td></td>
<td>Resi_13</td>
<td>0.706</td>
<td>0.498</td>
</tr>
<tr>
<td></td>
<td>Resi_14</td>
<td>0.731</td>
<td>0.534</td>
</tr>
<tr>
<td></td>
<td>Resi_15</td>
<td>0.823</td>
<td>0.677</td>
</tr>
<tr>
<td>Team Effectiveness</td>
<td>Task Clarity</td>
<td>0.775</td>
<td>0.601</td>
</tr>
<tr>
<td></td>
<td>Cohesion</td>
<td>0.762</td>
<td>0.581</td>
</tr>
<tr>
<td></td>
<td>Autonomy</td>
<td>0.819</td>
<td>0.671</td>
</tr>
<tr>
<td></td>
<td>Confrontation</td>
<td>0.820</td>
<td>0.672</td>
</tr>
<tr>
<td></td>
<td>Support</td>
<td>0.817</td>
<td>0.667</td>
</tr>
<tr>
<td></td>
<td>Collaboration</td>
<td>0.805</td>
<td>0.648</td>
</tr>
<tr>
<td></td>
<td>Accountability</td>
<td>0.811</td>
<td>0.658</td>
</tr>
</tbody>
</table>

Source: SPSS Results

Discriminant Validity was established through Fornell-Larcker criterion and HTMT criterion. The F-L values of all three constructs (psychological well-being (0.778), resilience (0.792), and team effectiveness (0.802)) are higher than its corresponding correlation with all other constructs, as suggested by Hair et al. (2014). This indicates discriminant validity of the constructs. HTMT criterion values show that the disattenuated correlations between constructs are low - psychological well-being is correlated to resilience (0.517) and team effectiveness (0.506); correlation between team effectiveness and resilience is 0.497. Since all the computed values are well below the suggested threshold of 0.85 (Henseler et al., 2016), discriminant validity is established.

Table 4: HTMT Ratio

<table>
<thead>
<tr>
<th>Constructs</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological Wellbeing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resilience</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Team Effectiveness</td>
<td>(3)</td>
<td>0.506</td>
<td>0.497</td>
</tr>
</tbody>
</table>

Source: Smart PLS Results

Convergent validity is tested using Average Variance Extracted (AVE) of the three constructs is found to be as follows: psychological well-being (0.628), resilience (0.621), and team effectiveness (0.643). Since the computed AVE is above the acceptable limit of 0.50 (Barclay, Higgins & Thompson, 1995), convergent validity is achieved. Factor loadings are within the range of 0.776 to 0.815 (psychological well-being), 0.706 to 0.865 (resilience), and 0.762 to 0.820 (team effectiveness). Since all values are above the recommended value of 0.708 (Hair et al., 2017), convergent validity is achieved.

Table 5: Cronbach’s Alpha, Composite Reliability & AVE

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Cronbach’s Alpha</th>
<th>Composite Reliability</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological Wellbeing</td>
<td>0.946</td>
<td>0.628</td>
<td>0.628</td>
</tr>
<tr>
<td>Resilience</td>
<td>0.811</td>
<td>0.621</td>
<td>0.621</td>
</tr>
<tr>
<td>Team Effectiveness</td>
<td>0.955</td>
<td>0.640</td>
<td>0.643</td>
</tr>
</tbody>
</table>

Source: Smart PLS Results

The measurement model was evaluated for its reliability and validity. Since the model is composed of hierarchical constructs, disjoint two stage approach was used for evaluation. The construct reliability, indicator reliability, convergent validity and discriminant validity were established employing measures like factor loadings,
Cronbach’s alpha, composite reliability, AVE, F-L criteria, and HTMT ratio. The study moves to assess the structural model.

Assessment of the Structural Model

The following structural model is assessed.

![Figure 3: Structural Model](chart)

Path coefficients reflect the relations between the latent variables (Table 6).

### Table 6: Structural Model Assessment: Path Coefficients

<table>
<thead>
<tr>
<th>Paths</th>
<th>Path Coefficients</th>
<th>T-static</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychological Well-being -- Resilience</td>
<td>0.509</td>
<td>17.340</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Resilience -- Team Effectiveness</td>
<td>0.426</td>
<td>12.032</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

Source: Smart PLS Results

The path coefficient results show that both the paths in the structural model are significant. Psychological well-being is found to cause a 0.509 unit change in resilience (T-static = 17.340; p value <0.001). Resilience is found to cause a 0.426 unit change in team effectiveness (T-static = 12.032; p value <0.001).

Coefficient of Determination (R^2) is the percent of variance in the dependent variable explained by the predictor variable.

### Table 7: Structural Model Assessment: Coefficient of Determination

<table>
<thead>
<tr>
<th>Paths</th>
<th>R^2</th>
<th>T-static</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resilience</td>
<td>0.459</td>
<td>11.721</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Team Effectiveness</td>
<td>0.381</td>
<td>09.168</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

Source: Smart PLS Results

For the two predicted variables (resilience and team effectiveness), the R^2 values are 0.459 and 0.381. This means that 45.9 percent of the change in resilience is accounted for by the predictor (psychological well-being) (T-static = 11.721; p value <0.001), while 38.1 percent of the change in team effectiveness is explained by its predictor resilience (T-static = 09.168; p value <0.001).

Q 2 (Predictive Relevance) is the cross-validated predictive relevance of the path model. An omission distance of 5 was selected. Since all the Q 2 are above 0.00, it can be concluded that the model has a good degree of predictive relevance with regard to the endogenous factors – resilience and team effectiveness. In case of resilience, all the values are above 0.15, but below 0.35, indicating that the predictor has a medium effect size. In case of team effectiveness, the predictor has a high effect size since all the values are above 0.35 (Cohen, 1988).

### Table 8: Structural Model Assessment: Q^2

<table>
<thead>
<tr>
<th>Dependents</th>
<th>Total</th>
<th>Case 1</th>
<th>Case 2</th>
<th>Case 3</th>
<th>Case 4</th>
<th>Case 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resilience</td>
<td>0.344</td>
<td>0.301</td>
<td>0.278</td>
<td>0.299</td>
<td>0.194</td>
<td>0.319</td>
</tr>
<tr>
<td>Team Effectiveness</td>
<td>0.367</td>
<td>0.390</td>
<td>0.344</td>
<td>0.378</td>
<td>0.339</td>
<td>0.356</td>
</tr>
</tbody>
</table>

Source: Smart PLS Results

Effect Size Measure (f^2) criteria is the measure of R2 change effect. It is based on the change in R2 values when a specified exogenous construct is omitted from the model. In the study, the measure is computed by removing resilience and team effectiveness from the model and examining the change in R2.

### Table 9: Structural Model Assessment: f^2

<table>
<thead>
<tr>
<th>Dependents</th>
<th>R^2 when the exogenous variable is removed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Psychological Wellbeing</td>
</tr>
<tr>
<td>New R^2</td>
<td>f^2</td>
</tr>
<tr>
<td>Resilience</td>
<td>0.459</td>
</tr>
<tr>
<td>Team Effectiveness</td>
<td>0.381</td>
</tr>
</tbody>
</table>

Source: Smart PLS Results

The table shows that the exogenous variables (psychological well-being and resilience) have a good effect on the model. When psychological well-being is dropped, the R2 of resilience drops from 0.459 to 0.378 (f^2 = 0.150), showing a medium effect size. When resilience is dropped, the R2 of team effectiveness drops from 0.381 to 0.287 (f^2 = 0.152), showing a medium effect size. Thus, it can be concluded that the effect of dropping both the exogenous constructs from the model is medium (Cohen, 1988).
The change in the predictive relevance (Q2) is the effect size q2. In the study, the measure is computed by removing resilience and team effectiveness from the model and examining the change in Q2.

<table>
<thead>
<tr>
<th>Dependents</th>
<th>Q2 when the exogenous variable is removed</th>
<th>Q2 when the exogenous variable is removed</th>
<th>Q2 when the exogenous variable is removed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Psychological Wellbeing</td>
<td>Resilience</td>
<td>Psychological Wellbeing</td>
</tr>
<tr>
<td>Resilience</td>
<td>0.34</td>
<td>-</td>
<td>0.277</td>
</tr>
<tr>
<td>Team Effectiveness</td>
<td>0.36</td>
<td>-</td>
<td>0.293</td>
</tr>
</tbody>
</table>

*Source: Smart PLS Results*

The Table shows that the exogenous variables (psychological well-being and resilience) have a good effect on the model. When psychological well-being is dropped, the Q2 of resilience drops from 0.344 to 0.277 (q2 = 0.102), showing a small effect size. When resilience is dropped, the Q2 of team effectiveness drops from 0.367 to 0.293 (f2 = 0.117), showing a low effect size. Thus, it can be concluded that the effect of dropping both the exogenous constructs from the model is low (Cohen, 1988).

The hypotheses are tested on the basis of p value and confidence interval. The study assumes that there is a positive effect of psychological well-being on resilience. The following hypothesis is formulated:

**H4: Psychological Well-being has a significant positive effect on Resilience**

Test results prove that the direct effect of psychological well-being on resilience is significant and positive (path coefficient = 0.509; p value < 0.001; Confidence Interval [0.362, 0.659]). Hence, the hypothesis H4: Psychological Well-being has a significant positive effect on Resilience is supported.

The study assumes that there is a positive effect of resilience on team effectiveness. The following hypothesis is formulated:

**H5: Resilience has a significant positive effect on Team Effectiveness**

The test results (Table 11) prove that the direct effect resilience on team effectiveness is significant and positive (path coefficient = 0.426; p value < 0.001; Confidence Interval [0.213, 0.623]). Hence, the hypothesis H5: Resilience has a significant positive effect on Team Effectiveness is supported.
The study evaluated the relationship between psychological well-being, resilience and team effectiveness among IT/ITES employees. The primary intent was to test and validate the model explaining the linkage between psychological well-being, resilience and team effectiveness in Kerala context. It was also attempted to identify whether there were any major differences in psychological well-being, resilience and team effectiveness among IT/ITES employees based on their socio-economic and demographic profile. The results of the overall analysis revealed that the empirical results are in agreement with the hypothesized path model relationships among the constructs. The findings of this study are conforming to the findings of Kleine & Muschalla (2021); Rotonda et al. (2021); Mahmood and Ghaffar, (2014); Souri, and Hasanirad, (2011); Yu & Chae (2020); Sharma & Sharma(2020) and Tonkin et al (2018). The constructs psychological well-being and resilience are positively and significantly influence team effectiveness. The sub-constructs of psychological well-being such as autonomy, environmental mastery, positive relations with others, purpose in life, personal growth and self-acceptance has direct effects on psychological well-being. All the sub constructs of team effectiveness such as task clarity, cohesion, autonomy, confrontation, support, collaboration and accountability directly and collectively contributes to team effectiveness. Hypotheses H4 and H5 were statistically significant and hence were supported. Hence it was concluded that psychological well-being, resilience and team effectiveness among IT/ITES employees do not significantly differ with respect to their socio-economic and demographic profile.

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Impact of COVID 19 on Student Mobility in India

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Abstract

The Pandemic COVID 19 has left humanity stranded with a question ‘what next’. The student community is perplexed to make decisions on where to pursue their education from. The fear of contracting the disease along with many other associated challenges has altered decisions of many students. This paper examined the preferred destinations of Indian Students for graduation, factors affecting the decisions, the impact of gender on student mobility. The paper attempts to factor in all the major reasons which contribute in deciding where the students will be moving for their Higher Education Studies. The paper is based on survey method. A self-constructed questionnaire was administered online and the data was collected from a sample of 147 XII grade students. T statistic employed shows that COVID 19 has impacted the decision of students to study abroad.

Keywords: Pandemic, student mobility, Higher Education

Introduction:

Corona virus has wreaked havoc across cultures in unprecedented ways. The new coronavirus (SARS-CoV-2) is a highly infectious disease that caused an epidemic of acute respiratory syndrome (COVID-19)(Dryhurst et al., 2020). No country was spared from its widespread disaster. The government of India acted swiftly and a complete lockdown was announced from March 25, 2020. The largest democracy of the world came to a standstill. The impact was so huge that board exams for some of the major subjects were postponed. Everyone felt the jolt of Corona. Students who were waiting for the exams to get over and plan for admissions in the college of their dream were taken for a toss. All the dreams were shattered and new logistics were searched for looking into psychological perspective and insecurity overshadowing all the spheres of Indian life.

International student mobility has existed for decades(Choudaha, 2017) and Indian students who could afford it always pursued this dream of studying besides their hometowns. There is no question that internationalization, and particularly international student mobility, has transformed the higher education landscape in the last decade(Knight, 2012). Students are traditionally considered to be a mobile sub-set of the population(Prazeres, 2013). Transitions to higher education generally involve geographical mobility as students. Education has become an internationally traded commodity. And for those Indian students who are not able to cherish this dream of a foreign degree have to settle with doing their graduation from institutes of excellence in India. India is the second largest country in South Asia and has one of the largest systems of education(Misra, 2012). India has over 800 universities and approximately 40,000 colleges, reflecting the overall severe fragmentation and small size of HEIs currently in the country(Government of India, 2019). Every Indian has started realizing that higher education institutes are a contributor for sustainable living. The rising demand for higher education in institutes of excellence has been growing among the Indian student community.

Students basically long to have a good job. But the Corona Crisis has hugely impacted the education sector.
Most governments around the world have temporarily closed educational institutions in an attempt to contain the spread of the COVID-19 pandemic. These nationwide closures are impacting over 89% of the world’s student population (UNESCO, 2020). India bears testimony to this scenario. All the schools were completely shut and some of the exams even for board students were postponed leaving many students anxious.

Research Methodology

The researchers were curious to know whether COVID 19 would alter the plans of students pursuing higher education. Researchers wanted to know the whether COVID 19 altered the mindset of students who completed their XII and all excited to step into higher education and who otherwise in normal conditions would have pursued higher education from abroad. With this intend an survey was undertaken in the month of April 2020 when coronavirus was slowly spreading in the subcontinent and India was into a complete lockdown. A self constructed questionnaire was administered online. The questionnaire was validated by an expert in research. An survey approach was adopted to find the factors effecting student mobility during the COVID 19 Pandemic. A subsequent survey was conducted in the month of August to ascertain the student decision on pursuing further studies. August was month when the cases were growing, however people had learned to live with it and they were in a stage of exploring and prioritizing livelihood and future prospects over life. So the same questionnaire was administered again to note the difference in the mindset of XII grade students wanting to pursue their higher education from a foreign land.

Objectives of the study:

- To find the preferred destination of Indian Students for graduation.
- To identify factors effecting the choice of higher education
- To assess the impact of COVID 19 on the decision making of students
- To study the difference between the preference of girls and boys for pursuing their further studies

Sample of the study

147 students from class XII studying in various schools of Central India responded to the online survey. 74 girls and 73 boys participated in the survey.

Limitation

The survey was limited to India particularly to central India. The survey was carried out among English medium students having access to smart phones and acquainted with answering on google forms. The survey was conducted only among XII grade students. Lot of data from the pre covid times indicated that a majority of students at international destinations are Indians. The researchers wanted to know whether COVID 19 altered the plans of XII grade students.

Data Analysis

O1: To find the preferred destination of Indian Students for graduation

Our findings (Table 1.1) indicate that COVID-19 has impacted the decision of students to pursue their further education hugely. Only 10.95 pc of students wanted to pursue their higher education abroad. Contrary to last decade where a greater number of Indian students went abroad for graduation and post-graduation. One reason was the growing Indian economy and enhanced affordability of Indian Parents. However with the fear surrounding the pandemic the “pull factor” drawing many Indian students abroad has diminished.

Our study finds that 46.57 pc students still preferred a place besides their hometown in India to pursue their further studies. India has successfully created one of the biggest higher education systems in the world (Chakrabarti, 2016) and this is slowly but surely impacting the decision of students to study abroad. The COVID 19 pandemic has rekindled the thoughts of students and parents to pursue their education in safe haven not far from homes ie in their home country.

36.3 pc students prefer to pursue their further study in their home town only. Eventually this is the resultant of the pandemic fear and also the financial crisis the families were facing due to job losses and layoffs. Also 6.16 pc students prefer to take a drop due to COVID-19
Table 1.1: Students Preference to pursue their further studies (in the month of April)

<table>
<thead>
<tr>
<th>Parameters</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abroad</td>
<td>10.95</td>
</tr>
<tr>
<td>Anywhere besides my Hometown in India</td>
<td>46.57</td>
</tr>
<tr>
<td>My Hometown</td>
<td>36.3</td>
</tr>
<tr>
<td>Would take a drop due to COVID 19</td>
<td>6.16</td>
</tr>
</tbody>
</table>

Figure 1.1: Students Preference to pursue their further Studies.

And when Students were asked their preferences in terms of where they wish to study in the month of August the responses were quite shrinking job opportunities and personal reasons like ill health of a family member, divorce of parents, death of a very near one.

The secondary reasons were the effect of the coronavirus fallout. This finding is coinciding with previous research findings. Financial crisis is a pre- eminent barrier to mobility (González et al., 2011). The pandemic was the first witness of a major crisis by most of the generation Z and was slowly impacting the decision-making process.

O2: To identify factors effecting the choice of higher education

The students cited personal reasons, Competition and limited career opportunities as the major reasons for the preference of destination with regards to their further studies. Other reasons cited were health concerns, Insecurity and Financial crisis. The major reasons cited were accounted in the perspective of high competition and

The graph shows that 37.4% of students strongly feel that COVID 19 has altered their plans of further education and 34.7% students were in dilemma during the month of April 2020 when the survey was conducted. The data was subjected to a t test analysis and the results are presented in the table below

<table>
<thead>
<tr>
<th>Standard Deviation</th>
<th>1.30</th>
</tr>
</thead>
<tbody>
<tr>
<td>T test</td>
<td>0.25</td>
</tr>
</tbody>
</table>

The calculated value of t test is 0.25 and the table value is 3.091 which indicates that the hypothesis fails to get rejected.
O4: To study the difference between the preference of girls and boys for pursuing their further studies.

Ho: There is no significant difference between the preference of girls and boys for pursue their further studies.

Table 1.2: Difference between the preference of girls and boys for pursue their further studies.

<table>
<thead>
<tr>
<th>Group</th>
<th>Category</th>
<th>Mean</th>
<th>SD</th>
<th>DF</th>
<th>t-Value</th>
<th>Table Value at 0.001 level of Sig</th>
<th>Sign</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>73</td>
<td>65</td>
<td>76</td>
<td>145</td>
<td>8.833</td>
<td>3.091</td>
<td>Significant</td>
</tr>
<tr>
<td>Male</td>
<td>74</td>
<td>66</td>
<td>73</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Interpretation: Above table shows that the calculated t-value is 8.833 which is very high than the table value at 0.001 level of significance (3.091) at 145 degree of freedom. So, the null hypothesis “there is no significant difference between the preference of girls and boys for pursuing their further studies” is rejected.

Conclusion

In the progressive economies’ student mobility has become very prominent and a strong indicator of the nations progress. Gross enrolment ratio in India as per AISHE reports 2019 is 26.3%. However, students going abroad for pursuing higher education have been always fluctuating like last year 21% less Indian students went abroad for their higher education. COVID 19 pandemic has been devastating and India has been fighting dual battles both on the economic front and healthcare. This has definitely impacted the decisions on students venturing abroad for further studies. The study revealed that majority of students preferred to study in Indian institutes besides their hometown. Students have expressed competition, limited career opportunities and health concerns as their primary concerns. Also the findings of the study indicate that 37.4% of the students feel that COVID 19 has altered their plans of educational future. The pandemic has impacted the lives of one and all but one on the crossroads are the students especially ones stepping into their higher education. But every dark cloud has a silver lining. COVID 19 has opened the doors for digital education. By improving the digital infrastructure and the right kind of twinning programs and associations lot more students can be given access to world class education without actually leaving the country. This will in the long run help the economy to grow and also curb brain drain.

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The Evolving Dynamics of Digital Banking: An Indian Perspective

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Abstract

Purpose: The present research aims to explore the rapidly changing perception of the customers towards digital banking services provided by Indian banks. The constructs observed under the scope of this study were the awareness and behavioural aspects, perceived risk, usefulness, accessibility, trust and cost and time saving factor. The study attempts to evaluate how the satisfaction of customers with regards to digital banking services is affected by each of these constructs. Design / Methodology/ Approach: In order to prepare a methodical approach to the research, detailed opinion about the satisfaction of the digital banking customers was collected through a self-prepared and self-administered structured questionnaire. The relationship between the constructs was attempted to be studied through a descriptive research design. Snowball sampling was adopted while collecting data through google form. G*power suggested the sample size to be 89. Structural equation model was assessed using Smart PLS software. Findings: The result of the study clearly indicates that the perception and acceptability of the customers for E-banking services in India varies with different age groups and occupation groups. The results also reveal that the perceived risk has a direct & significant impact on the satisfaction of customers while availing E banking services as compared to the other factors like perceived accessibility, trust, usefulness, ease of use and cost & time saving which have negligible or no impact on the satisfaction level of customers. Originality Value: It was observed that there has been a lot of research work on the importance of technology adoption and the factors that influence technology adoption in the Indian setting. However, there appears to be a research deficit in terms of understanding how customers feel about technology adoption, what they want from Indian banks and what factors are actually bothering them for absolute adoption of E-banking services. This research paper tries to fill that void in the literature.

Keywords: E-banking, information technology, internet banking, Customer’s Satisfaction, India

1. Introduction

E-banking has become a worldwide phenomenon, one of the most revolutionised components of today's economic growth in the age of information technology. It is a priceless and influential tool for heavy development, growth, innovation, and increased competitiveness. With the widespread use of the internet and computers, e-banking has become an excellent way for banks to satisfy their customers' expectations. Banks are putting in a lot of effort these days to attract clients and keep their market share by offering a variety of innovative services through e-banking. Due to its clear benefits to the people and businesses, e-banking is gaining prominence on the global banking map day by day.

Electronic banking is a multi-channel distribution system which encompasses more than just online banking and can be defined in a variety of ways. In its most basic form, it can refer to a bank's delivery of information or services to its customers via computer, television, telephone, or mobile phone. Customers can conduct financial transactions via Online Banking, Internet Banking, or E-banking through a secure website operated by the banks or financial institution, which can be a retail bank, virtual bank, or a cooperative like credit union. Some of the most popular E-banking services include Credit Cards Debit Cards Automated Teller Machines (ATM), Smart Cards are electronic cards that are used to store information, Mobile Banking, Internet Banking, Telephone Banking, and Electronic Clearing Services are all examples of mechanism of electronic funds transfer (EFT). The concept and scope of E-banking is continuously evolving. It provides an efficient payment and accounting system, resulting in a significant increase in the speed with which banking services are delivered.

In India, the Government, and the Reserve Bank of India (RBI) are making continuous efforts to make the online banking journey more and more seamless to the
customers. However, the banks are still facing some obstacles to adoption of digitalization by the customers like, Security threats, financial illiteracy, lack of awareness among the customers and fear factor. The removal of friction from the client journey is one of the top priorities of digital banks today. Banks are battling an influx of FinTech businesses and start-ups that specialise in fixing common banking difficulties and streamlining the client journey through better mobility. Forward-thinking banks have expanded their in-house capabilities in response to market disruptions. Others have teamed up with FinTech’s to create new digital products. And some have just been bought out by their competitors. Customers simply want a straightforward and safe transactional trip, facilitated by technology and a variety of digital channels. Banks are re-evaluating how to give more value to their customers with digital innovations in the banking sector, emerging financial models and delivery methods to meet their customer’s expectations. Therefore, with the ever-growing demand for embracing latest technologies, we wonder where the banks in India stand with regards to adoption of technology and if they really meet the expectations of their customers?

The researchers have aimed to explore the perception of customers towards e banking. For the present study, the researchers have considered five independent parameters and analysed each of these parameters with the satisfaction of customers while using online banking services. The aim of the study is to find out whether the perception of the customers is associated with cost, accessibility, trust, risk and usefulness.

2. Review Of Literature

(Harchekar, 2018) In the research paper “Digitalization in Banking Sector” the researcher stated that to improve the customer service and MIS reporting, the need for automation was felt in the Indian banking sector in 1980s. The author also stated that Digitalization is the process of transforming data into a digital format, in which the information is organized into bits. Research paper is based on secondary data. The public sector banks in India account for more than 92 percent of the total banking business in India giving a leading position in the banking sector.

(Surya Prakash Rao Surya Prakash Rao, B., Vol, I., Agarwalla, S. K., Barua, S., Jacob, J., Varma, J. R., Jaya Priya, O. M., Corresponding, K., Com, M., Uk, A., Uk, C., Chaudhery, J., Mittal, V., Agarwal, N., Jisha, V. G., Go Mathi 2 Assistant Professor, V., Sah, V. P., Lourrine, A., Nairobi, O,Nayak, R. 2018) In the research paper “A Conceptual Study on Digitalization of Banking - Issues and Challenges in Rural India” The researcher focused that Digitalization of rural banking is very helpful in financial inclusion of rural sector in India and will also help India economy to grow faster which will lead to development of all other sectors. The author stated that Demonetization of 2016 is the best obvious example explaining importance of digitalization in banking sector especially in rural India. The Survey report stated that 29% of rural population lack literacy, making this one of the greatest challenges in implementation of digitalization to rural banking. This conceptual paper concluded that for banking sector it is necessary to take measures like creating awareness among people on importance of digital banking services, increasing financial literacy through various modes of creating awareness among the rural people.

(Kudryavtseva, A. E., & Bondarev 2018) In the research paper “Digitalization of banking in Russia: Overview” the author stated that purpose of this research is to find out what is the current stage of digitalization of Russian banks. The current processes in the Russia were compared to international ones. The research paper concluded that currently it can be said that despite a lot of new initiatives introduced both by businesses and the government in the recent years in Russia, the Russian banking services do not keep up with those provided by global counterparts.

(Litvishko, Beketova, Akimova, Azhmukhamedova, & Islyam, G. 2020) In the research paper Impact of the Digital Economy on the Banking sector. The paper was focused on banking sector in Kazakhstan wherein the author stated that E-payments and e-Commerce are an integral part of the financial sector. The development of the digital banking industry requires the efforts of every commercial Bank, as well as support from the State Bank. commercial banks should also focus on managing communications, social media information, updating information technology platforms, developing network security management schemes, and classifying customers for better management in this digital age.
(Meena, 2019) In the review research paper “Implications of Digitalization in Banking Sector: A Review of Literature” the author concluded that Banks in various parts of the world are strengthening up their long-haul systems so as to tackle the open doors offered by digitization.

(Sbarcea, 2019) In the research paper “Banks Digitalization - A Challenge for The Romanian Banking Sector” The author concluded that an accelerated dynamics in the use of mobile telephony and the Internet that has facilitated the use of banking services that use them, such as internet banking and mobile banking, the use of mobile phones overcoming the use of computers for access to online banking services. technology and digitization are one of the defining features of the developed banking sectors and one of the biggest challenges in banking for developing economies, as is the case with Romania. Technology and digitization are one of the defining features of the developed banking sectors and one of the biggest challenges in banking for developing economies, as is the case with Romania.

(Shailaja & Ramesh, 2021) In the research paper “A Study on Mobile Banking services in India” the researcher has discussed about mobile banking applications and basic mobile banking services and their benefits to its customers. Mobile banking alone serves the purpose of different banking transactions in convenience to its customers which in turn saves the time and cost of its customers. Mobile banking is adopting by customers at an increasing pace.

(Haralayya, 2021) In the research paper “How Digital Banking has Brought Innovative Products and Services to India” the paper stated that there are 10 different methods of digital payment available in India namely Banking cards (Debit/credit or prepaid cards), Unstructured Supplementary Service Data (USSD), Aadhaar Enabled Payment System (AEPS), Unified Payments Interface (UPI), Mobile Wallets, Bank Prepaid Cards PoS (Point of Sale), Terminals Internet Banking, Mobile Banking and Micro ATMs. The paper concluded that Digital transformation is an almost top priority for every bank today. Investments in technology and innovation are skyrocketing. With diminishing margins on deposits, rising competition, and an evolving consumer mindset, digitalization is no longer a choice but a necessity for businesses and bank.

(Akilandeswari, 2014) In the research paper “Customer’s perception towards online banking services”. The researcher has assessed the degree of customer satisfaction of banks provided by the public sector with their online banking services. A scaling technology was employed to analyse the perception of sample customers of the dimensions efficiency, satisfaction, trust and responsibility. It is noted that most customers are moderately satisfied with banks' online banking services. In addition to providing a platform for offering added value services to the customer, online banking increases operational efficiencies and reduces costs, thus satisfying all the essential requirements for a flourishing banking industry. Customers have to be educated in the use of every new technology, as they have been used only to the traditional banking system.

(Ganpathi, 2016) In the research paper “Customer Perception towards Internet Banking Services in Sivagangai District, Tamil Nadu”. The research was conducted to find out how the customer can use online banking services. The educational level of the respondents influences the use of internet banking facilities and is highly satisfied with the maintenance, updating of transactions, transfer of accounts and easy access to them during use.

The review shows that most customers are moderately satisfied with banks' online banking services. Online banking increases operational efficiencies and reduces costs, satisfying all the requirements for a flourishing banking industry. Customers have to be educated in the use of every new technology, as they have been used only to the traditional banking system.

3. Hypothesis

Keeping the conceptual framework in mind, the following hypothesis were developed

H1 There is no significant relationship between customer satisfaction and perceived accessibility of the online banking services offered by Indian banks.

H2 There is a no significant relationship between customer satisfaction and perceived cost involved in the use of online banking services offered by Indian banks.

H3 There is a no significant relationship between customer satisfaction and perceived risk involved in the use of the online banking services offered by Indian banks.
H4 There is a no significant relationship between customer satisfaction and perceived usefulness of the online banking services offered by Indian banks.

H5 There is a no significant relationship between customer satisfaction and perceived trust of the customers while using online banking services offered by Indian banks.

4. Conceptual Framework

A concept is a visual or symbolic representation of an idea. Figure 1 clearly depicts the model of the study, which shows the independent and dependent variables as a diagram. Customer satisfaction is a critical component of any business's success and banking business is not an exception to this. As a result, the researchers spend the significant amount of their time looking at aspects that influence customer satisfaction in E banking. Different dimensions of service quality and their influence on customer satisfaction has been considered in this research. The perception of the customers regarding the five independent variables, namely, Perceived Trust, Perceived Risk, Perceived Usefulness, Perceived Accessibility and Perceived Cost and their relationship with Customer satisfaction is explored. Keeping all the constructs in mind, the researchers have devised a five-hypothesis conceptual model.

5. Research Methodology

For collection of data, structured questionnaire was used. The suitability of the sample size was determined using G* Power software. The software estimates the sample size for the research based on the number of predictors (i.e., independent variables) and the desired effect size and probability error. With five predictors, the estimated sample size given by the software was 89. Though the sample size of 89 (figure 2 & 3) was considered as adequate but the research was conducted using data of 107 respondents. The 6 constructs which were taken consideration for analysis includes one dependant variable namely Satisfaction of customers in banking sector and five independent variables namely Perceived Accessibility, Perceived Cost, Perceived trust, Perceived usefulness and Perceived Risk. The data was collected using snowball sampling through google form questionnaire. After collection, the data was analysed through Smart PLS SEM. Structural equation model was assessed using Smart PLS software.

![Figure 1](image1.png)

**Figure 1:** Conceptual framework

![Figure 2](image2.png)

**Figure 2:** Sample size using G Power software.

**Source:** Authors own calculation

![Figure 3](image3.png)

**Figure 3:** Sample size using G Power software.

**Source:** Authors own calculation

6. Discussion and Analysis

The demographic profile based on gender showed that 47.70% were female respondents (51 participants) followed by 52.30% male (56 participants). The demographic profile show that 47.70% (51 Participants) of the total respondents were aged between 18 – 25 years, 39.30% (42 Participants) of the respondents were aged between 26 – 45 years, 13.1% (14 Participants) of the respondents were aged between 46-60 years. The demographic profile further shows that the highest educational level of respondents is Masters’ degree (PG) with 57.90% (62 participants) followed by Bachelor’s degree (UG) with 38.3% (41 participants) and Senior
Secondary School Level - 12th Standard with 3.7% (4 participants). Majority of the respondents are earning income between INR 5,00,000 – 10,00,000 with 35.5% (38 participants) of the respondents, followed by earning group between INR 2,50,001 – 5,00,000 with 26.2% (28 participants) of the respondents. 14.00% (15 participants) of the respondents earned income INR between 10,00,001 – 25,00,000 and 5.6% (6 participants) of the respondents earned income between INR 25,00,001 – 50,00,000 and only 0.9% (1 participant) of the total respondents earned income above INR 50,00,000. The demographic profile based on occupation showed that out the total respondents 28% (30 participants) were salaried employee of private sector, 26.30% (28 participants) were students, 20.60% (22 participants) were public sector employees, 5.6% (6 participants) were and unemployed and 1.9% (2 participants) were home maker and retired people respectively.

Table 1: Summary of demographic profile (using counts, percentage and cumulative %)

<table>
<thead>
<tr>
<th>Levels</th>
<th>Counts</th>
<th>% Of Total</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>51</td>
<td>47.7%</td>
<td>47.7%</td>
</tr>
<tr>
<td>Male</td>
<td>56</td>
<td>52.3%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-25</td>
<td>51</td>
<td>47.7%</td>
<td>47.7%</td>
</tr>
<tr>
<td>26-45</td>
<td>42</td>
<td>39.3%</td>
<td>86.9%</td>
</tr>
<tr>
<td>46-60</td>
<td>14</td>
<td>13.1%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Qualification</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelor’s degree</td>
<td>41</td>
<td>38.3%</td>
<td>38.3%</td>
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<tr>
<td>Master’s / M.Phil / PhD / Professional degree</td>
<td>62</td>
<td>57.9%</td>
<td>96.3%</td>
</tr>
<tr>
<td>Senior Secondary School Level - 12th Standard</td>
<td>4</td>
<td>3.7%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home maker</td>
<td>2</td>
<td>1.9%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Retired person</td>
<td>2</td>
<td>1.9%</td>
<td>3.7%</td>
</tr>
<tr>
<td>Salaried Employee (Government or Public sector)</td>
<td>22</td>
<td>20.6%</td>
<td>24.3%</td>
</tr>
<tr>
<td>Salaried Employee (Private sector)</td>
<td>30</td>
<td>28.0%</td>
<td>52.3%</td>
</tr>
<tr>
<td>Self-employed / Business owner</td>
<td>17</td>
<td>15.9%</td>
<td>68.2%</td>
</tr>
<tr>
<td>Student</td>
<td>28</td>
<td>26.2%</td>
<td>94.4%</td>
</tr>
<tr>
<td>Unemployed (looking for a job)</td>
<td>6</td>
<td>5.6%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Family income (Yearly, INR)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10,00,001–25,00,000</td>
<td>15</td>
<td>14.0%</td>
<td>14.0%</td>
</tr>
<tr>
<td>2,50,001–5,00,000</td>
<td>28</td>
<td>26.2%</td>
<td>40.2%</td>
</tr>
<tr>
<td>25,00,001–50,000,000</td>
<td>6</td>
<td>5.6%</td>
<td>45.8%</td>
</tr>
<tr>
<td>5,00,001–10,000,000</td>
<td>38</td>
<td>35.5%</td>
<td>81.3%</td>
</tr>
<tr>
<td>Above 50,00,000</td>
<td>1</td>
<td>0.9%</td>
<td>82.2%</td>
</tr>
<tr>
<td>Below 2,50,000</td>
<td>19</td>
<td>17.8%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Source: Authors’ own work on Jamovi
7. Confirmatory Composite Analysis

7.1. Measurement Model

Confirmatory composite analysis was analysed for the reliability of the constructs. For the purpose of study Cronbach’s Alpha with a value of 0.7 was taken into consideration. Cronbach’s Alpha value for all the 6 constructs (table 2) was above 0.7 thus questionnaire was reliable based on this model. The threshold for Composite reliability and Rho_A is above .70. From table 2 it is evident that questionnaire stands true for these tests also. For Average Variance Extracted (AVE) the ceiling limit is 0.50 i.e., above 0.50 is accepted. It’s evident from the table 2 that the questionnaire meets the criteria for AVE also. Thus, it can be concluded that data meets all the criteria for reliability. In Smart PLS software factor loading is calculated based on partial least squares which should be more than 0.70. For all the indicators the factor loading is more than 0.70 (figure 4) thus it can be concluded that all the indicators are proper and there was no need to reduce any indicator.

Table 2: factor loadings, Cronbach’s Alpha, rho_A, Composite Reliability and AVE

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Factor Loadings</th>
<th>Cronbach's Alpha</th>
<th>rho_A</th>
<th>Composite Reliability</th>
<th>Average Variance Extracted (AVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Accessibility</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PA1</td>
<td>0.841</td>
<td></td>
<td>0.892</td>
<td>0.893</td>
<td>0.925</td>
</tr>
<tr>
<td>PA2</td>
<td>0.907</td>
<td>0.856</td>
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<td></td>
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</tr>
<tr>
<td>PA3</td>
<td>0.873</td>
<td>0.841</td>
<td>0.892</td>
<td>0.893</td>
<td>0.925</td>
</tr>
<tr>
<td>PA4</td>
<td>0.873</td>
<td>0.841</td>
<td>0.892</td>
<td>0.893</td>
<td>0.925</td>
</tr>
<tr>
<td>Perceived Cost</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PC1</td>
<td>0.801</td>
<td>0.781</td>
<td>0.884</td>
<td>0.890</td>
<td>0.912</td>
</tr>
<tr>
<td>PC2</td>
<td>0.781</td>
<td>0.780</td>
<td>0.884</td>
<td>0.890</td>
<td>0.912</td>
</tr>
<tr>
<td>PC3</td>
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<td>0.788</td>
<td>0.884</td>
<td>0.890</td>
<td>0.912</td>
</tr>
<tr>
<td>PC4</td>
<td>0.788</td>
<td>0.873</td>
<td>0.884</td>
<td>0.890</td>
<td>0.912</td>
</tr>
<tr>
<td>PC5</td>
<td>0.749</td>
<td>0.781</td>
<td>0.884</td>
<td>0.890</td>
<td>0.912</td>
</tr>
<tr>
<td>PC6</td>
<td>0.781</td>
<td>0.780</td>
<td>0.884</td>
<td>0.890</td>
<td>0.912</td>
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<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PR1</td>
<td>0.897</td>
<td>0.883</td>
<td>0.881</td>
<td>0.892</td>
<td>0.914</td>
</tr>
<tr>
<td>PR2</td>
<td>0.883</td>
<td>0.751</td>
<td>0.881</td>
<td>0.892</td>
<td>0.914</td>
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<td>PR3</td>
<td>0.751</td>
<td>0.848</td>
<td>0.881</td>
<td>0.892</td>
<td>0.914</td>
</tr>
<tr>
<td>PR4</td>
<td>0.848</td>
<td>0.731</td>
<td>0.881</td>
<td>0.892</td>
<td>0.914</td>
</tr>
<tr>
<td>PR5</td>
<td>0.731</td>
<td>0.897</td>
<td>0.881</td>
<td>0.892</td>
<td>0.914</td>
</tr>
<tr>
<td>Perceived Trust</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>PT1</td>
<td>0.930</td>
<td>0.904</td>
<td>0.911</td>
<td>0.912</td>
<td>0.938</td>
</tr>
<tr>
<td>PT2</td>
<td>0.904</td>
<td>0.918</td>
<td>0.911</td>
<td>0.912</td>
<td>0.938</td>
</tr>
<tr>
<td>PT3</td>
<td>0.918</td>
<td>0.911</td>
<td>0.912</td>
<td>0.912</td>
<td>0.938</td>
</tr>
</tbody>
</table>
Table 3 below represents results of Fornell-Larcker criteria which indicate that, discriminating validity of the study is achieved as square root of the average variance is higher than crossed correlation constructs.

The Heterotrait-monotrait ratio is the approach based on the correlations (HTMT) to assess discriminant validity. HTMT is the average between heterotrait-heteromethod correlations and monotrait-heteromethod correlations. Threshold proposed for HTMT by some authors is maximum of .85 (Kline., 2011; Henseler et al., 2015) while by others is maximum of .90 (Teo et al., 2008; Gold et al., 2001). We can see in table 4 that all the values of HTMT are below to .90 thus it can be concluded that construct is having discriminant validity. Thus, further analysis for model fit can be done. Table 5 presents data relating to Model fit summary which indicates that the model is fit as SRMR is 0.073 which is less than maximum of 0.08 and NFI is 0.745 which is though less than 0.90 but can still be considered.

### 7.2 Discriminant Validity

Discriminant validity was used to further analyse the variables under the study and finding out whether they are truly different to each other or not. Discriminant variables defines whether measurements that are not hypothetical to be interrelated are unrelated. To test discriminant validity Fornell-Larcker Criterion (Fornell, 1981) and HTMT criteria was used. Fornell- Larcker Criterion is a method based on the degree to shared variance.

<table>
<thead>
<tr>
<th>PT4</th>
<th>0.799</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Usefulness</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PU1</td>
<td>0.818</td>
<td>0.916</td>
<td>0.920</td>
<td>0.937</td>
</tr>
<tr>
<td>PU2</td>
<td>0.876</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PU3</td>
<td>0.891</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PU4</td>
<td>0.851</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PU5</td>
<td>0.889</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SA1</td>
<td>0.934</td>
<td>0.931</td>
<td>0.931</td>
<td>0.956</td>
</tr>
<tr>
<td>SA2</td>
<td>0.934</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>SA3</td>
<td>0.943</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**Figure 4: Structural Equation Model**

**Source:** Authors’ own work on Smart PLS
### Table 3: Fornell - Larcker

<table>
<thead>
<tr>
<th></th>
<th>Perceived Accessibility</th>
<th>Perceived Cost</th>
<th>Perceived Risk</th>
<th>Perceived Trust</th>
<th>Perceived Usefulness</th>
<th>Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Accessibility</td>
<td>0.870</td>
<td></td>
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</tr>
<tr>
<td>Perceived Cost</td>
<td>0.581</td>
<td>0.796</td>
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<tr>
<td>Perceived Risk</td>
<td>0.735</td>
<td>0.582</td>
<td>0.825</td>
<td></td>
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</tr>
<tr>
<td>Perceived Trust</td>
<td>0.814</td>
<td>0.642</td>
<td>0.753</td>
<td>0.889</td>
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<td></td>
</tr>
<tr>
<td>Perceived Usefulness</td>
<td>0.790</td>
<td>0.547</td>
<td>0.771</td>
<td>0.782</td>
<td>0.866</td>
<td></td>
</tr>
<tr>
<td>Satisfaction</td>
<td>0.725</td>
<td>0.672</td>
<td>0.789</td>
<td>0.762</td>
<td>0.722</td>
<td>0.937</td>
</tr>
</tbody>
</table>

Source: Authors’ own work on Smart PLS

### Table 4: Heterotrait-Monotrait Ratio (HTMT)

<table>
<thead>
<tr>
<th></th>
<th>Perceived Accessibility</th>
<th>Perceived Cost</th>
<th>Perceived Risk</th>
<th>Perceived Trust</th>
<th>Perceived Usefulness</th>
<th>Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Accessibility</td>
<td>0.651</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived Cost</td>
<td>0.829</td>
<td>0.657</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived Risk</td>
<td>0.903</td>
<td>0.710</td>
<td>0.840</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Perceived Trust</td>
<td>0.869</td>
<td>0.591</td>
<td>0.852</td>
<td>0.850</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived Usefulness</td>
<td>0.795</td>
<td>0.732</td>
<td>0.866</td>
<td>0.828</td>
<td>0.776</td>
<td></td>
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</tbody>
</table>

Source: Authors’ own work on Smart PLS

### Table 5: Model Fit

<table>
<thead>
<tr>
<th></th>
<th>Saturated Model</th>
<th>Estimated Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRMR</td>
<td>0.073</td>
<td>0.073</td>
</tr>
<tr>
<td>d_ULS</td>
<td>1.992</td>
<td>1.992</td>
</tr>
<tr>
<td>d_G</td>
<td>1.346</td>
<td>1.346</td>
</tr>
<tr>
<td>Chi-Square</td>
<td>757.351</td>
<td>757.351</td>
</tr>
<tr>
<td>NFI</td>
<td>0.746</td>
<td>0.746</td>
</tr>
</tbody>
</table>

Source: Authors’ own work on Smart PLS

### 7.2. Structural Model Assessment

The study was assessed by bootstrapping in the PLS SEM structural model. Bootstrapping process with 5000 bootstraps were used to analyse the predictive power of the model and to test the hypothesis. Figure 5 and Table 6 shows the results of the analysis.

P-value indicate results of hypothesis. Hypothesis H1, H2, H4 and H5 are accepted and Hypothesis H3 failed to accept the null hypothesis which implies that there is a
significant relationship between Perceived Risk associated with digital banking and the Satisfaction of customers in Banking Industry.

![Figure 5: Structural Equation Model](image)

Table 6: Hypothesis Accepted / Failed to accept

| Hypothesis                                      | Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | T Statistics (|O/STDEV|) | P Values | Accepted/ Failed to Accept |
|------------------------------------------------|---------------------|-----------------|----------------------------|-----------------------------|-----------|--------------------------|
| Perceived Accessibility - Satisfaction         | 0.094               | 0.087           | 0.163                      | 0.578                       | 0.563     | Accepted                 |
| Perceived Cost - Satisfaction                  | 0.231               | 0.284           | 0.147                      | 1.578                       | 0.115     | Accepted                 |
| Perceived Risk - Satisfaction                  | 0.385               | 0.362           | 0.092                      | 4.196                       | 0.000     | Failed to Accept         |
| Perceived Trust - Satisfaction                 | 0.182               | 0.164           | 0.156                      | 1.172                       | 0.241     | Accepted                 |
| Perceived Usefulness - Satisfaction            | 0.082               | 0.071           | 0.111                      | 0.735                       | 0.462     | Accepted                 |

Source: Authors’ own work on Smart PLS

8. Conclusion

The research was undertaken to study customers perception towards digitalisation in banking services. It is concluded that there is significant relationship of perceived risk associated with banking transactions and satisfaction achieved by banking customers. In a country like India the focus of the customer is more on risk factors associated with given service as compared to other factors. People prefer their privacy over and above any other factor. The mental satisfaction that their data is not being misused plays a primary role in determining the adoption of any new technology. The study also suggests there is no significant relationship of Perceived Accessibility, Perceived Cost, Perceived Trust and Perceived Usefulness on the Satisfaction of customers on online Banking services.
The review found that most customers are moderately satisfied with online banking services provided by banks. Thus it is concluded there is significant relationship of Perceived risk and customer Satisfaction of customers on online Banking services.

9. Limitation and Further Study

The data for study was primarily collected by residents of Bhopal (Madhya Pradesh, India) and its surroundings. Moreover, data have been collected by means of a Google Form and distributed to people who are known to the researchers directly or indirectly. The study ignored a broader segment of society, including people from remote areas, countries and people from across the world, their online digital banking experience would certainly affect the findings of this report. The study has conducted research on 107 samples as G* Power Software suggests, further study should consider the wider universe. The analysis also avoids constructs that have shown the relevance of the current study and suggests that rigorous research will be conducted on these constructs using longitudinal cross-country data in the future.

References


https://www.smartpls.com/
https://www.psychologie.hhu.de/arbeitsgruppen/allgemeine-psychologie-und-arbeitspsychologie/gpower
Development of a Teacher Guideline for Wisdom Education Management in Teaching and Learning in Yunnan’s Secondary Schools

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Abstract

The purposes of this study were to survey current situations of teachers on wisdom education in teaching and learning in secondary schools in Yunnan, China, and to propose a teacher guideline for wisdom education in teaching and learning and evaluate its effectiveness in view of experts. This research adopted two sets of questionnaires of quantitative methodology as data collection methods, one was for surveying 100 secondary school teachers in terms of wisdom education teaching and learning preparation ability, wisdom education teaching and learning implementation ability, wisdom education teaching and learning evaluation reflection ability, wisdom education teaching and learning innovation ability; and another was for verifying the effectiveness of the proposed guideline by views of 5 experts based on the criteria of 4 abilities, including the preparation, implementation, evaluation reflection and innovation abilities of wisdom education in teaching and learning. Firstly, the survey results showed that the overall four components of wisdom education in teaching and learning was at a high level with the mean score of 3.96. Secondly, the expert reviews showed that the effectiveness of the wisdom education guideline for teachers in teaching and learning was very positive and enlightening.

Keywords: Wisdom Education, Wisdom Education in Teaching and Learning, Teacher Guideline

Introduction

In recent years, with the rapid development of technologies such as cloud computing, big data, and the Internet of Things (IoTs), technology has completely penetrated into all aspects of social life, particularly education, from the initial auxiliary media tools. It has brought a great impact on educational resources, traditional learning and teaching modes and other educational factors. The comprehensive and in-depth use of modern information technology is therefore more essential than ever before.

Wisdom education refers to education for wisdom with technology (Wang, 2012). It can be understood as the use of information technology to digitally collect educational information, use intelligent information technology to process and intelligently determine the collected information, and provide feedback and serve education through information terminals, so as to improve the efficiency of teaching and management, and ultimately promote education reform and development (Yun & Rong, 2017). It is a more comprehensive, rich, diverse and education. By constructing a wisdom learning environment and using wisdom teaching methods of wisdom education, it promotes learners to learn vigorously, and cultivates people with high intelligence and creativity (Zhu & He, 2012).

Wisdom education is the current hot spot and trend of education. China has always regarded education as a very important part of its national strategy. The Ministry of Education of China has formulated the relevant policy “Education Informatization 2.0 Action Plan” and invested a large amount of education funds to expand the scale of the wisdom education market to ensure that wisdom education is faster and more efficient. Good generated in the field of
education. This is also a necessary choice for China to promote education informatization to support and lead the development of education modernization and to adapt to the development of education in a wisdom environment.

Secondary education in China is regarded equal importance. The government attaches great importance to compulsory education (primary school and secondary school), and sufficient investment funds for the compulsory education stage. As the age, physical and psychological conditions of secondary school students have developed well, they can concentrate their attention for a longer period of time according to the requirements of teaching. Therefore, improving the teachers’ wisdom education ability of secondary school is essential to help learners better individualized development. However, China's secondary wisdom education is still in the development stage and needs to promote the development of teachers' educational wisdom ability, including educational concepts, and the knowledge structure of teaching and learning. Through the study of wisdom education in teaching and learning, it can help stakeholders involved realize the current situation and can deploy the study findings to rectify the problem and to create a good wisdom learning environment for students. Therefore, the main purposes of this research were to develop a guideline for teachers’ wisdom education in teaching and learning in secondary school level and evaluate its effectiveness by views of experts, so as to enhance teachers' ability of wisdom education in teaching and learning. This guideline will help teacher better manage wisdom teaching activities, promote teachers’ educational wisdom ability, including the development of educational concepts and the knowledge structure of teaching and learning. Through wisdom education in teaching and learning of teachers, it is expected to create a good wisdom learning environment for students. Figure 1 exhibits the research framework for this study.

**Materials and Methods**

In this research, there were two main studies of quantitative methodology.

Firstly, the study was to survey the current situation of wisdom education in teaching and learning. Due to a COVID-19 pandemic and the difficulty in data collection, the samples were 100 teachers determined by a quota sampling from 4 regions of Kunming, Yunnan Province, 25 from Wuhua District, 25 from Panlong District, 25 from Xishan District and 25 from Guandu District, and a convenient sampling was applied for each of the districts. A questionnaire with Sun’s wisdom education teaching and learning ability (Sun, 2018), involving wisdom education teaching and learning preparation ability, wisdom education teaching and learning implementation ability, wisdom education teaching and learning evaluation reflection, and wisdom education teaching and learning innovation ability), was adopted. The questionnaire consisted of 2 parts. Part I included personal information of respondents and Part II comprised of 22 items based on Sun’s wisdom education teaching and learning ability (Sun, 2018) with five degrees of perception ranked on 5-point Likert scale.

Secondly, the study was to propose a teacher guideline for wisdom education in teaching and learning, and evaluate the effectiveness of the proposed guideline. Another set of a 5-point Likert scale evaluation questionnaire with the integration of management functions:
planning, organizing, leading and controlling and Sun's wisdom education teaching and learning ability (Sun, 2018) was employed, where 5 experts were purposively selected to verify the effectiveness of the questionnaire. The selection criteria for experts were as follows, firstly, considering that the wisdom education guideline in teaching and learning is to improve teachers' ability to apply wisdom education in the classroom, the 5 experts in this research then needed to teach in secondary schools in Yunnan Province and Kunming City and are leaders in teaching and learning. Secondly, they needed to serve as a teacher in the school's wisdom classroom and to be able to carry out wisdom education activities on a regular basis. Following that, the experts needed to be key secondary school teachers with more than 8 years of teaching experience. The last selection criterion was that they needed to be able to make full use of information technology to innovate education and teaching methods and methods. There were 31 items in the questionnaire.

Both questionnaires were verified for its content validity by means of Item-Object Congruence (IOC) by three educational management experts, and the results of each item were between 0.67-1.00. In addition, reliability of the survey questionnaire of wisdom education in teaching and learning was tested by 30 respondents who were not included in the study population prior to the use by the actual respondents. Cronbach’s Coefficient (1970) was used to calculate the result, and the result of Cronbach’s Alpha Value of the questionnaire was 0.94. Table 1 illustrates the IOC and Cronbach’s Alpha Value for each component of Sun’s wisdom education ability in teaching and learning.

Results and Discussion

The study analyzed the data through statistical analysis using computer program. The findings of this study can be divided into three sections as follows.

1) Current situations of teachers on wisdom education in teaching and learning in secondary schools in Yunnan, China.

The overall findings on current situations from teachers’ perspectives using descriptive statistics such as mean, standard deviation and level are illustrated in Table 2.

Table 1: Cronbach’s Alpha Value of each of the Item in the Questionnaire

<table>
<thead>
<tr>
<th>No.</th>
<th>Components</th>
<th>IOC</th>
<th>Cronbach’s Alpha Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Wisdom education teaching and learning preparation ability</td>
<td>1.00</td>
<td>0.94</td>
</tr>
<tr>
<td>2.</td>
<td>Wisdom education teaching and learning implementation ability</td>
<td>1.00</td>
<td>0.93</td>
</tr>
<tr>
<td>3.</td>
<td>Wisdom education teaching and learning evaluation reflection</td>
<td>1.00</td>
<td>0.93</td>
</tr>
<tr>
<td>4.</td>
<td>Wisdom education teaching and learning evaluation reflection</td>
<td>1.00</td>
<td>0.92</td>
</tr>
</tbody>
</table>

Table 2: Overall Teachers’ Wisdom Education Ability in Teaching and Learning

<table>
<thead>
<tr>
<th>No.</th>
<th>Components</th>
<th>( \bar{x} )</th>
<th>SD</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Wisdom education teaching and learning preparation ability</td>
<td>3.97</td>
<td>0.85</td>
<td>High</td>
</tr>
<tr>
<td>2.</td>
<td>Wisdom education teaching and learning implementation ability</td>
<td>3.91</td>
<td>0.83</td>
<td>High</td>
</tr>
<tr>
<td>3.</td>
<td>Wisdom education teaching and learning evaluation reflection</td>
<td>4.00</td>
<td>0.83</td>
<td>High</td>
</tr>
<tr>
<td>4.</td>
<td>Wisdom education teaching and learning evaluation reflection</td>
<td>4.07</td>
<td>0.88</td>
<td>High</td>
</tr>
<tr>
<td>Overall</td>
<td>3.97</td>
<td>0.85</td>
<td>High</td>
<td></td>
</tr>
</tbody>
</table>

Note: 1.00-1.80 Lowest, 1.81-2.60 Low, 2.61-3.40 Moderate, 3.41-4.20 High, 4.21-5.00 Highest (Best & Kahn, 1998).

As per the findings, the overall mean score of teachers’ wisdom education ability in teaching and learning was 3.97 at a high level, which clearly indicated that the current teachers’ basic recognition of the 4 components of wisdom education in teaching and learning, including preparation ability, implementation ability, evaluation reflection ability, and innovation ability. The mean score of wisdom education teaching and learning evaluation reflection component received the highest mean score of 4.07 (SD=0.88) among them.

The results of the first component of Sun’s wisdom education ability (Sun, 2018) are presented in Table 3. There were 6 items under this dimension.
### Table 3: Items under Wisdom Education Preparation Ability Component

<table>
<thead>
<tr>
<th>No.</th>
<th>Wisdom education teaching and learning preparation ability</th>
<th>$\bar{x}$</th>
<th>SD</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>I understand the basic concepts and basic knowledge of wisdom education.</td>
<td>3.71</td>
<td>0.82</td>
<td>High</td>
</tr>
<tr>
<td>Q2</td>
<td>I think information technology (multimedia, etc.) help wisdom classroom teaching and learning activities.</td>
<td>4.26</td>
<td>0.77</td>
<td>Highest</td>
</tr>
<tr>
<td>Q3</td>
<td>I can skilfully apply wisdom education to the daily teaching and learning content in the classroom.</td>
<td>3.78</td>
<td>1.01</td>
<td>High</td>
</tr>
<tr>
<td>Q4</td>
<td>I can clearly position the learning objectives of the teaching subjects.</td>
<td>4.05</td>
<td>0.81</td>
<td>High</td>
</tr>
<tr>
<td>Q5</td>
<td>I can make a plan for students’ thinking ability according to their characteristics based on the situations of wisdom education.</td>
<td>3.90</td>
<td>0.86</td>
<td>High</td>
</tr>
<tr>
<td>Q6</td>
<td>I think wisdom education in teaching and learning can help students to learn and understand knowledge points faster and easier.</td>
<td>4.13</td>
<td>0.83</td>
<td>High</td>
</tr>
</tbody>
</table>

**Overall**

<table>
<thead>
<tr>
<th>$\bar{x}$</th>
<th>SD</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.97</td>
<td>0.85</td>
<td>High</td>
</tr>
</tbody>
</table>

**Note:** 1-1.80: lowest, 1.81-2.60: low, 2.61-3.40: moderate, 3.41-4.2: high, 4.21-5.00: highest (Best & Kahn, 1998).

As per the result from the survey questionnaire, this component was overall rated high with a mean score of 3.97 (SD=0.85). The item Q2 had the highest mean score of 4.26 (SD=0.77), indicating that teachers are more proficient in applying information technology as a medium of modern education to teaching and learning activities in wisdom classrooms, whereas the item Q1 had the lowest mean score of 3.71 (SD=0.82), indicating that teachers’ awareness of the basic concepts and knowledge of wisdom education is lower than other aspects.

### Table 4: Items under Wisdom Education Implementation Ability Component

<table>
<thead>
<tr>
<th>No.</th>
<th>Wisdom education teaching and learning implementation ability</th>
<th>$\bar{x}$</th>
<th>SD</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q7</td>
<td>I can integrate subject education and intelligent information technology to assist students in wisdom classroom teaching and learning activities.</td>
<td>3.86</td>
<td>0.83</td>
<td>High</td>
</tr>
<tr>
<td>Q8</td>
<td>I can use wisdom technology to monitor students’ learning in time and make timely adjustments in the teaching process.</td>
<td>3.76</td>
<td>0.83</td>
<td>High</td>
</tr>
<tr>
<td>Q9</td>
<td>I can acquire subject resource knowledge through different channels (network, book or self-created).</td>
<td>4.17</td>
<td>0.79</td>
<td>High</td>
</tr>
<tr>
<td>Q10</td>
<td>I have the ability to solve technical problems in the wisdom classroom.</td>
<td>3.75</td>
<td>0.83</td>
<td>High</td>
</tr>
<tr>
<td>Q11</td>
<td>I am proficient in using multimedia for daily teaching and learning activities.</td>
<td>4.03</td>
<td>0.88</td>
<td>High</td>
</tr>
</tbody>
</table>

**Overall**

<table>
<thead>
<tr>
<th>$\bar{x}$</th>
<th>SD</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.91</td>
<td>0.83</td>
<td>High</td>
</tr>
</tbody>
</table>

**Note:** 1-1.80: lowest, 1.81-2.60: low, 2.61-3.40: moderate, 3.41-4.2: high, 4.21-5.00: highest (Best & Kahn, 1998).

As can be seen from Table 4, the item Q9 had the highest mean score of 4.17 (SD=0.79), indicating that teachers are relatively good at acquiring knowledge of subject resources through different channels, whereas the item Q10 had the lowest mean score of 3.75 (SD=0.83), suggesting that teachers need to improve their ability to solve technical problems in the wisdom classroom.

The results of wisdom education teaching and learning evaluation reflection ability component, which contained 5 items, are illustrated in Table 5.
Table 5: Items under Wisdom Education Teaching and Learning Evaluation Reflection Ability Component

<table>
<thead>
<tr>
<th>No.</th>
<th>Wisdom education teaching and learning evaluation reflection ability</th>
<th>x</th>
<th>SD</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q12</td>
<td>I can make multiple evaluations based on the students' mastery of knowledge.</td>
<td>3.95</td>
<td>0.73</td>
<td>High</td>
</tr>
<tr>
<td>Q13</td>
<td>I can generally use some auxiliary means to give feedback on wisdom teaching and learning effects.</td>
<td>4.08</td>
<td>0.91</td>
<td>High</td>
</tr>
<tr>
<td>Q14</td>
<td>I can conduct self-evaluation regularly.</td>
<td>3.94</td>
<td>0.80</td>
<td>High</td>
</tr>
<tr>
<td>Q15</td>
<td>I can communicate with other teachers or experts to get advice and feedback on wisdom teaching and learning.</td>
<td>3.99</td>
<td>0.88</td>
<td>High</td>
</tr>
<tr>
<td>Q16</td>
<td>I can help students make personalized teaching and learning choices based on their learning feedback and evaluation.</td>
<td>4.03</td>
<td>0.82</td>
<td>High</td>
</tr>
</tbody>
</table>

Overall 4.00 0.83 High

Note: 1-1.80: lowest, 1.81-2.60: low, 2.61-3.40: moderate, 3.41-4.2: high, 4.21-5.00: highest (Best & Kahn, 1998).

As depicted in the table, the item Q13 gained the highest mean score of 4.08 (SD=0.91), signifying that teachers are more proficient in the feedback on the effects of wisdom teaching and learning through some auxiliary means. On contrary, the item Q14 had the lowest mean score of 3.94 (SD=0.80), indicating that teachers pay less attention to the regular self-evaluation part than other items.

Lastly, the results of the wisdom education innovation ability, with 6 items measurement, are presented in Table 6.

Table 6: Items under Wisdom Education Innovation Ability Component

<table>
<thead>
<tr>
<th>No.</th>
<th>Wisdom education teaching and learning innovation ability</th>
<th>x</th>
<th>SD</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q17</td>
<td>I am willing to accept, try and explore new lesson preparation methods (for example, through wisdom education intelligent systems).</td>
<td>4.16</td>
<td>0.75</td>
<td>High</td>
</tr>
<tr>
<td>Q18</td>
<td>I can accept differentiated teaching and learning in wisdom education.</td>
<td>4.17</td>
<td>0.79</td>
<td>High</td>
</tr>
<tr>
<td>Q19</td>
<td>I believe wisdom classrooms can improve the quality of teaching and learning in the classroom.</td>
<td>4.17</td>
<td>0.99</td>
<td>High</td>
</tr>
<tr>
<td>Q20</td>
<td>I can create a wisdom learning environment that effectively improves students' learning effects.</td>
<td>3.95</td>
<td>0.89</td>
<td>High</td>
</tr>
<tr>
<td>Q21</td>
<td>I realise that wisdom education can form good ideological and moral qualities and scientific and cultural literacy, and lay the foundation for lifelong learning and development.</td>
<td>3.91</td>
<td>0.90</td>
<td>High</td>
</tr>
</tbody>
</table>

Overall 4.07 0.86 High

Note: 1-1.80: lowest, 1.81-2.60: low, 2.61-3.40: moderate, 3.41-4.2: high, 4.21-5.00: highest (Best & Kahn, 1998).

As exhibited in Table 6, this component was overall rated at a high level with a mean score of 4.07 (SD=0.86). The items Q18 and Q19 were both perceived with the highest mean score of 4.17 (SD=0.79 and SD=0.99, respectively). This shows that teachers have a higher degree of acceptance of differentiated teaching and learning in wisdom education. Additionally, teachers agree that the current wisdom classroom can improve the quality of teaching and learning. On the other hand, the item Q21 received the lowest mean score of 3.91 (SD=0.90), depicting
that teachers still need to improve their ability to complete the wisdom classroom through the situational method of intelligent information technology. Although teachers agree and accept the use of wisdom classrooms, they are relatively new and immature to incorporate new scenarios compared to other wisdom technologies.

2) Development of a teacher guideline of wisdom education in teaching and learning in secondary schools by means of expert review

The survey results were summarized and used to formulate a teacher guideline of wisdom education in teaching and learning, under the integration of Sun’s wisdom education teaching and learning ability (Sun, 2018) and 4 functions of management –planning, organizing, leading and controlling. Table 7 illustrates the results.

### Table 7: A Teacher Guideline of Wisdom Education in Teaching and Learning

<table>
<thead>
<tr>
<th>Component</th>
<th>Planning</th>
<th>Implementation ability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wisdom education teaching and learning preparation ability</td>
<td>GP1: Teachers should understand the importance of wisdom education in teaching and learning.</td>
<td>GP7: Teachers should design and combine multiple forms of intelligent technology in teaching to make learning more open, let students have a sense of actual participation, and stimulate students’ interest in learning, enthusiasm and innovation.</td>
</tr>
<tr>
<td></td>
<td>GP2: Teachers should actively apply wisdom education related plans to wisdom classroom teaching to create a wisdom learning environment.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GP3: Teachers should prepare themselves to understand the basic concepts of wisdom education in teaching and learning, and know how to apply them to the teaching and learning of wisdom classrooms.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GP4: Teachers need to understand how to use modern information technology to carry out normalized wisdom education activities in teaching and learning.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GP5: Teachers must prepare to analyze the thinking ability of students according to the situation of wisdom education and the characteristics of learners.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GP6: Teachers need to make a plan to implement new modern education technology (wisdom education platform or knowledge resource library) to continuously supplement rich learning resources and improve their professional ability development to achieve the expected wisdom education goals.</td>
<td></td>
</tr>
</tbody>
</table>

### Table 7: A Teacher Guideline of Wisdom Education in Teaching and Learning (continued)

<table>
<thead>
<tr>
<th>Component</th>
<th>Organizing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GP8: With the help of wisdom technology, teachers should make plans to understand students’ learning and welcome feedbacks in order to reflect on the deficiencies in teaching.</td>
</tr>
<tr>
<td></td>
<td>GP9: Teachers should make multiple evaluation plans based on students' knowledge mastery.</td>
</tr>
<tr>
<td></td>
<td>GP10: Teachers have to design a hierarchical teaching and learning process according to different subject attributes.</td>
</tr>
<tr>
<td></td>
<td>GP11: Teachers should be equipped with the knowledge about innovation creation prior to delivering classes.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Organizing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wisdom education teaching and learning implementation ability</td>
<td>GO1: While implementing the wisdom education, teachers must guide students to use modern information technology reasonably and widely disseminate relevant operating rules and moral and ethical concepts to students.</td>
</tr>
<tr>
<td></td>
<td>GO2: Teachers have to clarify the responsibilities of students in the learning process of wisdom education.</td>
</tr>
<tr>
<td></td>
<td>GO3: Teachers must proficiently apply the basic operations of various intelligent technologies (such as multimedia).</td>
</tr>
<tr>
<td></td>
<td>GO4: Teachers have to use software packages or educational technology to create activities related to course contents.</td>
</tr>
<tr>
<td></td>
<td>GO5: Teachers must form group activities with experienced teachers to discuss and reflect on students’ weaknesses and ways to improve.</td>
</tr>
</tbody>
</table>
evaluation reflection

Wisdom education teaching and learning innovation ability

GO6: Teachers should regularly conduct teaching research and demonstrate lessons in the form of group activities in order to summarize and find a better way to conduct teaching and learning activities.

GO7: Teachers should use the wisdom education platform to communicate with their peers and clarify their rights and responsibilities in teaching and learning.

GO8: Teachers should combine modern information technology with the teaching and learning of daily courses, rationally allocate the learning resources brought by wisdom education, create a good wisdom learning environment, and promote the development of students' expression, understanding and exploration capabilities.

GO9: Teachers should organize wisdom education lessons on innovation creation so that students can develop their innovation skills.

As illustrated in Table 7, the proposed guideline is composed of 11GPs (Guideline for Planning), 9GOs (Guideline for Organizing), 5GLs (Guideline for Leading, and 6GC (Guideline for Controlling), each of which is incorporated under Sun’s wisdom education teaching and learning ability (Sun, 2018).
3) Evaluation of the effectiveness of the proposed teacher guideline for wisdom education in teaching and learning in secondary schools by means of expert review

Applying Sun’s wisdom education teaching and learning ability (Sun, 2018) as evaluation criteria, Table 8 presents the results of expert reviews toward the proposed teacher guideline.

**Table 8: Overall Expert Reviews toward the Proposed Teacher Guideline for Wisdom Education in Teaching and Learning**

<table>
<thead>
<tr>
<th>Management Functions</th>
<th>$\bar{x}$</th>
<th>SD</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning (11GPs)</td>
<td>4.71</td>
<td>0.58</td>
<td>Highest</td>
</tr>
<tr>
<td>Organizing (9GOs)</td>
<td>4.58</td>
<td>0.84</td>
<td>Highest</td>
</tr>
<tr>
<td>Leading (5GLs)</td>
<td>4.60</td>
<td>0.61</td>
<td>Highest</td>
</tr>
<tr>
<td>Controlling (6GCs)</td>
<td>4.47</td>
<td>0.54</td>
<td>Highest</td>
</tr>
<tr>
<td><strong>Overall</strong></td>
<td><strong>4.59</strong></td>
<td><strong>0.55</strong></td>
<td>Highest</td>
</tr>
</tbody>
</table>

Note: 1.1-1.80: lowest, 1.81-2.60: low, 2.61-3.40: moderate, 3.41-4.2: high, 4.21-5.00: highest (Best & Kahn, 1998).

As illustrated in Table 8, the overall mean score of expert reviews was 4.59 (SD=0.55) at a highest level. The Planning components with 11 items had the highest mean score ($\bar{x} = 4.71$, SD=0.58), followed by the Leading component ($\bar{x} = 4.60$, SD=0.61), the Organizing component ($\bar{x} = 4.58$, SD=0.84) and finally, the Controlling component ($\bar{x} = 4.47$, SD=0.54). All results can be interpreted that the 5 purposively selected experts expressed their most highly positive views toward the proposed guideline.

In teaching and learning of wisdom education, teachers can use the teaching interactive platform as the basis to realize the interaction between students and intelligent systems. At the same time, they can use new media to push technology to broaden the knowledge resources of teachers and students, and realize student learning, teachers and students. Communication. Real-time education technology is used for teaching and learning feedback to form an efficient teaching and learning evaluation.

**Conclusions**

This research was mainly aimed at providing an effective teacher guideline for wisdom education in teaching and learning in Yunnan’s secondary schools. Although the wisdom education has been a promising area of research, affirmed elsewhere that it is essential and that the ability of teachers’ wisdom education can help foster student learning in the digital era, the similar studies are still limited in the secondary education level in China. Teachers’ attitudes and beliefs towards information technology and their knowledge and their skills in information technology are the most direct and critical factors for the integration of technology into teaching. Their acceptance of information technology directly affects the depth of the integration of information technology and curriculum (Wang & Tang, 2017). Only teachers who are proficient in the application of information technology, the integration of information technology and education, and the creation of a wisdom teaching classroom environment, can better promote sustainable students' wisdom learning ability and promote student diversity development.

Especially now during the COVID-19 pandemic, students cannot go to the classroom for learning activities. Teachers are required to use modern and/or intelligent information technology for teaching and learning activities much more than ever before, through the integration of education resources and information to analyze and monitor the classroom, manage teaching and learning, provide feedback and evaluation to improve the efficiency of teaching and learning, and to create wisdom and efficient classrooms. This study has provided an affirmation that every teacher should be encouraged and promoted to have the ability of wisdom education.

**Acknowledgment**

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**References**


and middle school (Ph.D.). Northeast Normal University.


The Relationship of Burmese High School Students’ Motivation, Perception of Teachers’ Effectiveness and Self-Efficacy in Learning English as a Foreign Language

Phyo Ma Ma Aung¹
Richard Lynch²

Abstract

The purpose of this quantitative correlational study was to determine whether there was a significant relationship between Grades 10 and 11 students’ motivation for learning English as a foreign language and perception of teachers’ effectiveness with self-efficacy for learning English as a foreign language at Mingalar Education Center Private High School, Sanchaung, Yangon, Myanmar. Research design, data and methodology: A total of 82 Grades 10 and 11 students participated in this study. In order to measure participants’ levels of motivation, perception of teachers’ effectiveness and self-efficacy in learning English, data were gathered through administering a survey questionnaire, which was adapted from the international version of Gardner’s (2004) Attitude/Motivation Test Battery and Questionnaire for English Self-efficacy. For the analysis of the collected data, descriptive statistics, and correlational analysis (using multiple correlation coefficient) was used. Results: The findings of the research indicated that there was a significant, positive, and strong relationship between students’ motivation for learning English as a foreign language and their perception of teachers’ effectiveness for learning English as a foreign language with self-efficacy for learning English as a foreign language. Conclusions: Based on the findings, the researchers provide recommendations for teachers, students, school administrators, Ministry of Education (Myanmar) and future researchers.

Keywords: English as a Foreign Language, Motivation, Perception of Teachers’ Effectiveness, Self-Efficacy, Myanmar Education

JEL Classification Code: C12, I20, I21, N35

1. Introduction

If an individual is motivated, he/she has reasons for engaging in the relevant activities, attends to the tasks, shows the desire to achieve their learning goals, and shows enjoyment in the classroom activities (Gardner, 2010). When students are not motivated to learn, they will not be as systematic in their learning efforts. Language classroom environment affects the students’ motivation. As well as, the nature of the course, and the curriculum, the characteristics of the teacher, and the behaviors of the students can also affect the motivation and self-efficacy of an individual (Bandura, 1994; Gardner, 2010).

Traditional teaching methods center on the teachers as leading actors, with students learning passively as information is provided in a single teacher-to-student direction. Under the traditional teaching method, the students’ attitude toward learning Chinese is usually not positive (Lai, 2013).

Teachers as models are an indirect source of motivation and self-efficacy for the students (Pintrich & Schunk, 1996). Students’ perceptions of their teachers’ effectiveness refer to students’ views or opinions of teachers’ abilities in different aspects that teachers use to help them to learn, which can influence students’ learning behavior and academic performance.

Self-efficacy refers to an individual’s belief in his/her capabilities to organize and execute the courses of action required to manage prospective situations (Bandura, 1995). Teachers’ planning efforts, how they deliver instruction, and monitor students’ performance have an important impact on students’ motivation (Pintrich & Schunk, 1996).

1.1 Research Objectives

The students enrolled in Mingalar Education Center Private High School, which is located in Sanchaung

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Township, Yangon, Myanmar, follow their teachers’ instructions during the English Language lesson, and they seem to believe in their teachers and trust their teachers. On the other hand, these students seem to have a lack of confidence in using English in class or in their daily life. The researchers, concerned with the traditional teaching method of English language education at Mingalar Education Center Private High School, designed this quantitative correlational study to address the following objectives.

1. To determine the level of Grades 10 and 11 students’ motivation for learning English as a foreign language at Mingalar Education Center Private High School, Sanchaung, Yangon, Myanmar.
2. To determine the level of Grades 10 and 11 students’ perception of teachers’ effectiveness for learning English as a foreign language in Mingalar Education Center Private High School, Sanchaung, Yangon, Myanmar.
3. To determine the level of Grades 10 and 11 students’ self-efficacy for learning English as a foreign language at Mingalar Education Center Private High School, Sanchaung, Yangon, Myanmar.
4. To determine whether there is a significant relationship of Grades 10 and 11 students’ motivation for learning English as a foreign language and perception of teachers’ effectiveness with self-efficacy for learning English as a foreign language at Mingalar Education Center Private High School, Sanchaung, Yangon, Myanmar.

1.2. Theoretical Framework

In this study the researchers used two theories to examine the variables of this research study: (1) The socio-educational model of second language acquisition theory by Gardner (2010), to explain, measure, and analyze the motivation for learning EFL and the perception of teachers’ effectiveness in teaching EFL; and (2) the social cognitive theory by Bandura (1986), which was used to explain, measure, and analyze the self-efficacy component.


Highly motivated students do better than those who have lower levels of motivation because of their desire to achieve their learning goals (Gardner, 2005). Second/Foreign language learning motivation is the major focus of this theory. In the socio-educational model of second/foreign language acquisition, there are three components to assess motivation; the desire to learn English as a second/foreign language, attitude toward learning English as a second/foreign language, and motivational intensity to learn English as a second/foreign language (Gardner, 2010).

1.2.2. Bandura’s (1994) Self-Efficacy Theory

In this study, the theory of self-efficacy in learning English as a foreign language is based on Bandura’s (1994) social cognitive theory and is used to determine the students' self-efficacy in learning EFL. Self-efficacy is an individual’s belief in their ability to achieve their goals. According to Bandura (1994), self-efficacy beliefs determine how students think, feel, motivate themselves, and how they behave in their language learning class. Students with high assurance in themselves and what they can do are willing to do or challenge themselves to do more difficult tasks in their lessons. Students’ motivation level, their affective states, and actions are based more on what they believe than what the actual situation is (Bandura, 1995).

1.3. Conceptual Framework

This study was a correlational research one, that aimed to examine the relationships among students’ motivation for learning English as a foreign language, perception of teachers’ effectiveness, and self-efficacy for learning English as a foreign language. Figure 1 presents the conceptual framework of this research study.

![Conceptual Framework of This Study](image)

Figure 1: Conceptual Framework of This Study

2. Literature Review
In this section, some previous studies related to the research variables addressed in this study are reviewed and summarized.

In 2004, Bernaus et al. conducted a study to determine the relationship between motivation and attitudes toward learning languages in multicultural classrooms. The study took place in multi-cultural language classes in a public secondary school in Barcelona, Spain. Participants were 114 students, aged 12 to 16. The study aimed to determine if there was a significant correlation among three variables (attitude, motivation, and anxiety) toward learning Catalan, Spain, and English in multicultural classrooms. Moreover, for each of the languages, the students also compassed self-rating of their language achievement. The results showed that high positive loadings were found between the attitude and motivation measures referring to Catalan culture and language (Bernaus et al., 2004).

Bernaus and Gardner (2008) conducted a study entitled “Teacher motivation strategies, student perceptions, students’ motivation, and English achievement.” The sample population of the study was 31 English teachers and 694 students from Catalan Autonomous Community, Spain. The results supported the validity of the socio-educational model (Bernaus & Gardner, 2008).

In 2008, Pajares and Usher published an article about self-efficacy, motivation, and achievement in school from the perspective of reciprocal determinism in the education context. In the article, Pajares and Usher (2008) also explained the relationship between reciprocal determinism using different examples. The study found that the way students think and behave is affected by the environment of the students, especially the teachers. Lastly, the authors also mentioned that teachers can also shape the classroom environment, providing an environment conducive to learning and learning opportunities.

3. Research Methods and Materials

In this section, details on the study’s population, sample and research instruments are provided.

3.1. Population and Sample

The population was 25 Grade 10 students and 60 Grade 11 students at Mingalar Education Center Private High School, Sanchaung Township, Yangon, Myanmar. In this research, the target English class was taught by a native Burmese-speaking teacher. The participants were 24 Grade 10 students and 58 Grade 11 students, and their ages ranged from 14 to 16 years. The target students have been studying English for 9 to 11 years.

3.2. Research Instrument

For this study, the Students’ Motivation, Perception of Teacher Effectiveness, and Self-Efficacy for Learning English as a Foreign Language Questionnaire was used to collect the research data. This survey questionnaire consisted of three parts, comprised of 72 items from instruments developed in previous studies to measure and analyze the variables of this research.

3.2.1. Part I

Part I of the questionnaire consists of the items which measured the students’ motivation in learning ESL adapted from three subscales of Gardner’s (2004) International Attitude/Motivational Test Battery (Gardner, 2010). The AMTB is aimed to analyze and measure students’ motivation in learning ESL and is comprised of 12 subscales (104 items). In the current study, three subscales from the AMTB were used to measure the students’ motivation to learn English as a foreign language (see the items in Appendix 1). They were motivational intensity (10 items), desire to learn English (10 items), and attitudes toward learning English (10 items). A 6-point Likert scale was utilized. The students have to select one out of six choices (1 = strongly disagree, 2 = moderately disagree, 3 = slightly disagree, 5 = slightly agree, 6 = moderately agree, 7 = strongly agree).

3.2.2. Part II

Part II of the questionnaire consists of items to measure the students’ perceptions of their teachers’ effectiveness adapted from two subscales of Gardner’s (2004) International Attitude/Motivational Test Battery (Gardner, 2010). They were English teacher evaluation (10 items) and English class evaluation (10 items). On the other hand, in this research, the researchers only used the English teacher evaluation subscale. In order to collect the responses from the participants, a 6-point Likert scale was utilized. The students have to select one out of six choices (1 = strongly disagree, 2 = moderately disagree, 3 = slightly disagree, 5 = slightly agree, 6 = moderately agree, 7 = strongly agree).
3.2.3. Part III

Part III of the questionnaire consists of the items to measure self-efficacy for learning EFL items adapted from Questionnaire for English Self-Efficacy (QESE, Wang, et al., 2014). The Questionnaire for English Self-Efficacy (QESE, Wang, et al., 2014) was composed of 32 positively worded items, which are used to measure and analyze the students’ self-efficacy for learning EFL in four sub-variables consisting of the four language macro-skills: self-efficacy for listening (8 items), self-efficacy for speaking (8 items), self-efficacy for reading (8 items), and self-efficacy for writing (8 items). In order to investigate the students’ level of self-efficacy for learning EFL, in this study, a 7-point Likert-type scale was utilized. The students have to select one out of seven choices (1 = I am totally unable to do this, 2 = I am unable to do this, 3 = I am possibly unable to do this, 4= I am possibly able to do this, 5= I am basically and in principle able to do this, 6 = I am able to do this, 7 = I am able to do this well).

4. Results

From the analysis of the collected data, the following findings were obtained.

4.1. Findings From Research Objective 1

Grades 10 and 11 students’ motivation in learning EFL can be interpreted as very high since the mean scores were over M = 6.09, SD = .73. For motivational intensity, the mean was M = 6.05, SD = .75 which can be interpreted as very high. As for the desire to learn English, the mean was M = 6.15, SD = .71 which can also interpret as very high. As for attitude toward learning English, the mean was M = 6.07, SD = .72 which can also be interpreted as very high.

Table 1: Mean Scores, Standard Deviations and Interpretations of the Grades 10 and 11 Students’ Motivation for Learning English as a Foreign Language

<table>
<thead>
<tr>
<th>Variable</th>
<th>Grades 10 and 11</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
</tr>
<tr>
<td>Motivation for learning English as a foreign language</td>
<td>6.09</td>
</tr>
<tr>
<td>Motivational intensity</td>
<td>6.05</td>
</tr>
<tr>
<td>Desire to learn English</td>
<td>6.15</td>
</tr>
<tr>
<td>Attitudes toward learning English</td>
<td>6.07</td>
</tr>
</tbody>
</table>

4.2. Findings From Research Objective 2

The overall mean score for Grades 10 and 11 students’ perception of their teacher effectiveness was M = 5.98, SD = .75, and according to interpretation, the mean score can be interpreted as moderately high, since the mean score was between 5.01-6.00.

Table 2: Mean Scores, Standard Deviations and Interpretations of the Grades 10 and 11 Students’ Perception of Teachers’ Effectiveness for Learning English as a Foreign Language

<table>
<thead>
<tr>
<th>Variable</th>
<th>Grades 10 and 11</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
</tr>
<tr>
<td>English teacher evaluation</td>
<td>5.98</td>
</tr>
</tbody>
</table>

4.3. Findings From Research Objective 3

The overall mean score for Grades 10 and 11 students’ self-efficacy for learning English as a foreign language was M = 5.72, SD = .93 moderately high since the mean scores are over 5.51. The mean scores for the four subscales of Grades 10 and 11 students’ self-efficacy for learning English as a foreign language were the following: the mean score for self-efficacy for listening was M = 5.72, SD = .88, which can be interpreted as moderately high; the mean score for self-efficacy for speaking was M = 5.75, SD = .85, which can be interpreted as moderately high; the mean score for self-efficacy for reading was M = 5.74, SD = .87, which can also be interpreted as moderately high; and the mean score for self-efficacy for writing was M = 5.69, SD = .86 which can also be interpreted as moderately high.

Table 3: Mean Scores, Standard Deviations and Interpretations of the Grades 10 and 11 Students’ Self-Efficacy for Learning English as a Foreign Language

<table>
<thead>
<tr>
<th>Variable</th>
<th>Grades 10 and 11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-efficacy for learning English as a foreign language</td>
<td>5.72</td>
</tr>
<tr>
<td>Self-efficacy for listening</td>
<td>5.72</td>
</tr>
<tr>
<td>Self-efficacy for speaking</td>
<td>5.75</td>
</tr>
<tr>
<td>Self-efficacy for reading</td>
<td>5.74</td>
</tr>
<tr>
<td>Self-efficacy for writing</td>
<td>5.69</td>
</tr>
</tbody>
</table>

4.4. Findings From Research Objective 4

In order to measure research objective 4, the researcher used correlational analysis (using multiple correlation coefficients). As the first step, the researcher calculates bivariate correlations between the students’
motivation for learning English as a foreign language and students’ perception with their teachers’ effectiveness for learning English as a foreign language (independent variables of this study) and the students’ self-efficacy for learning English as a foreign language (dependent variable of this study) concerning to Grades 10 and 11 students from Mingalar Education Center Private High School, Sanchaung, Yangon, Myanmar.

Table 4: Bivariate Correlations Between the Variables Addressed in the Current Study

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Motivation for learning English as a foreign language</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Perception of teachers' effectiveness for learning English as a foreign language</td>
<td>.40** (&lt; .001)</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>3. Self-efficacy for learning English as a foreign language</td>
<td>.41** (&lt; .001)</td>
<td>.31** (&lt; .001)</td>
<td>-</td>
</tr>
</tbody>
</table>

Note. ** indicates a statistically significant relationship (statistical significance level at p = .05, two-tailed) while p-values appear within parentheses below the correlation coefficients.

There was significant moderately strong relationship of Grades 10 and 11 students’ motivational for learning EFL with their self-efficacy for learning EFL (r = .41, p < .001).

Similarly, significant moderately strong and positive relationship was found between Grades 10 and 11 students’ perception toward their teachers’ effectiveness with their self-efficacy for learning EFL (r = .40, p < .001).

A significantly moderately strong and positive relationship was found between Grades 10 and 11 students’ perception toward their teachers’ effectiveness with their motivational for learning EFL (r = .30, p < .001).

When dealing with multiple independent variables and single dependent variables, correlation analysis using multiple correlations is useful. Further calculation of the multiple correlation coefficient was needed, since both independent variables from this study were significantly correlated with the dependent variable. Table 5 displays the multiple correlation analysis (using multiple correlational coefficients) in this study.

Table 5: Multiple Correlation Coefficient Analysis Between the Variables of the Current Study

<table>
<thead>
<tr>
<th>R</th>
<th>R²</th>
<th>dfs</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>.44</td>
<td>.19</td>
<td>2, 79</td>
<td>9.46</td>
<td>&lt; .001</td>
</tr>
</tbody>
</table>

Regarding to this research objective, the following findings were obtained: there was a significant, positive, and moderately strong relationship between students’ motivation for learning English as a foreign language and perception of teachers’ effectiveness with self-efficacy for learning English as a foreign language (R = .44, p < .001) at .05 significance level. In the table, it is also showed that the independent variables (motivation for learning English as a foreign language and their perception toward teachers’ effectiveness for learning English as a foreign language) explained 19% of the variance of dependent variable; self-efficacy for learning English as a foreign language, R² = .19, F(2,79) = 9.46, p < .001. The other 81% of the variance of self-efficacy for learning English as a foreign language is explained by other factors not considered in this study.

5. Discussion

In this section, the findings obtained from this study are discussed, placing them in context with previous studies. The discussion is organized by variables.

5.1. Motivation for Learning English as a Foreign Language

The finding of the current research study identified that the Grades 10 and 11 students’ level of motivation for learning English as a foreign language was found to be very high at Mingalar Education Center Private High School, Sanchaung, Yangon, Myanmar. On the other hand, the finding of a research study by Nant and Eamoraphan (2020) revealed that the students showed very high motivation in learning English as a foreign language. Moreover, that many previous research studies revealed that the students were highly motivated for learning English as a foreign language (Siphora & Lynch, 2019, Gardner 2010). In addition, in 1972, Gardner and Lambert also indicated that motivation for learning English as a foreign language plays an essential role in success in the language learning situation (Gardner, 2010).

The results from the current research study were expected based on previous studies reported on the available literature (Gardner, 2001; Siphora & Lynch, 2019). In common with the current research study, these studies presented those students who consider motivation as one of
the main factors in learning the language. Thus, the individual who demonstrates a high level of motivation also demonstrates a high level of self-efficacy level in learning a language and their academic score. Similarly, students who demonstrate a low level of motivation, equally demonstrate a low level of self-efficacy level in learning language and their academic score. Gardner (2000) has stated that the individual’s perception toward their teacher can affect their behavior and motivation in the language learning classroom.

5.2. Perception of Teachers’ Effectiveness in Learning English as a Foreign Language

Grades 10 and 11 students’ results showed that a moderately strong and positive perception toward their teachers’ effectiveness and a significant positive strong relationship between motivation for learning English as a foreign language, students’ perception toward their teachers’ effectiveness for learning English as a foreign language. The results were expected since the students showed a positive and moderately high level of their teachers’ effectiveness for learning English as a foreign language.

The correlation was expected based on previous studies and constructed on available literature (Bernaus et al., 2004; Lin & González, 2019; Nam & González, 2017). In common with the current research study, these studies presented those students who consider the perception of teachers’ effectiveness in learning English as a foreign language. There are many types of factors that influence students in their study which are beyond the control of the teacher (Gardner, 2010). The educational context offers the teacher, role models, learning situations, and strategies that can foster language learning (Gardner, 2005).

Models provide important elements for developing the self-efficacy of the individual (Bandura, 1986). Teachers are one of the essential foundations in language learning and most of the students set the teachers as their role models in their language learning situation. An individual who is willing to go to class and enjoy the class with their teachers and follow the teachers’ instructions. According to Pintrich and Schunk (1996), the interaction between the teacher and the students can critically influence the students’ motivation. In 1961, Bandura and his co-authors conducted a study that involved social modeling, and that experiment was known as the BoBo doll and is one of the most famous experiments of Bandura and social learning theory.

5.3. Self-Efficacy for Learning English as a Foreign Language

This research study examines the relationship between motivation for learning English as a foreign language, perception toward their teachers’ effectiveness, and self-efficacy in learning English as a foreign language of this study sample and determines the level of variables. There was a significant positive strong correlation among the variables was found in the study and the level of self-efficacy in learning EFL is also moderately high. Self-efficacy can also be a key center of attention in second/foreign language learning situations.

Bandura (1994) mentioned that a strong sense of personal efficacy increases the wellbeing of that individual and also increases that individual’s achievement. According to Bandura (1977), self-efficacy makes a difference in how an individual thinks, feels, and acts. An individual’s motivation in learning a language and academic achievements is influenced by the self-efficacy of the students in language learning (Schunk, 1991).

The current research study had reflected a well-known agreement among the researchers which pointed out that an individuals’ self-efficacy is associated with the student's motivation in learning languages and their academic achievements (Alexander & González, 2020; Bandura, 1994; Huang & Lynch, 2017; Kalambo & Lynch, 2021; Zhang & Lynch, 2017). Thus, the higher self-efficacy the students have, the more effort, persistence, and resilience they will apply in order to achieve their target goals. Similarly, the lower self-efficacy the students have, the less effort, persistence, and resilience they will apply in order to achieve their target goals.

5.4. Students’ Motivation and their Perceptions toward their Teachers’ Effectiveness for learning English as a Foreign Language

This research study examines the relationship between students’ motivation for learning English as a foreign language and their perception toward their teachers’ effectiveness in teaching English as a foreign language of this study sample and there was a moderately high, strong, and positive correlation is found in the study. The correlation was expected based on previous studies and constructed on available literature (Bernaus et al., 2004; Lin & González, 2019). In common with the current research
study, these studies presented the students with positive and high levels toward their teachers’ effectiveness and positive attitude toward their language learning situation also displayed a high level of motivation in learning the language. The individual observes the things from their environment and the examples that are provided by their environment such as media, television, internet, the teachers, peers, parents, and so on. According to Bandura (2008), the observational learning of the individual is influenced by four sub-functions. Bandura (1994) has stated that the types of activities and the environments that an individual chooses can influence that individual’s self-efficacy beliefs.

This study finding was in line with previous research studies that have proved that students’ perception toward their teachers’ effectiveness is one of the essential factors in a language learning situation and it can generate the level of students’ motivation (Bernaus et al., 2004; Lin & González, 2019). Teachers play either a passive or active role in the language learning situation of the students. Teachers are one of the essential foundations in language learning and most of the students set the teachers as their role models in their language learning situation. Models provide important elements for developing the self-efficacy of the individual (Bandura, 1986). Most of the students endorsed their teachers as their role models and trying to behave like their teachers in their lifetime.

5.5. Students’ Motivation, their Perceptions toward their Teachers’ Effectiveness and their Self-Efficacy for Learning English as a Foreign Language

This research study examines the relationship between students’ motivation for learning English as a foreign language and their perception toward their teachers’ effectiveness in teaching with self-efficacy in learning English as a foreign language of this study sample and there was a moderately high, strong, and positive correlation is found in the study. The combined independent variables also explained 19% of the variance of self-efficacy in learning English as a foreign language. The correlation was expected based on previous studies and constructed on available literature (Bandura, 1961; Bernaus & Gardner, 2008; Kalambo & Lynch, 2021; Pajares & Usher, 2008). In common with the current research study, these studies presented the students with positive and high levels toward their teachers’ effectiveness and positive attitude toward their language learning situation also displayed a high level of motivation in learning the language. In addition, if the students have a high level of motivation in language learning, their self-efficacy in language learning also goes high.

This study finding was in line with previous research studies that have proved that students’ perception toward their teachers’ effectiveness is one of the essential factors in a language learning situation and it can generate the level of students’ motivation and their self-efficacy (Bandura, 1961; Bernaus & Gardner, 2008; Kalambo & Lynch, 2021; Pajares & Usher, 2008).

6. Recommendations

Based on the study findings, the following recommendations are provided for students, teachers, school administrators and future researchers.

6.1. Recommendations for Teachers

The findings of the research have indicated that self-efficacy in learning English as a foreign language can be increased by increasing students’ motivation in learning English as a foreign language and students’ perception toward their teachers’ effectiveness. Teachers should also motivate the students in learning in order to increase students’ self-efficacy in learning English as a foreign language. The researcher believes that the factor of the language teacher and the characteristic of that teacher has a significant relation on students’ motivation and on their self-efficacy in learning the language.

The finding of this current research study showed that the students were very highly motivated in learning English as a foreign language. The researcher believes that most of the students admire their teachers as role models and the characteristics of the teacher have a big impact on the students’ motivation and self-efficacy in language learning. Moreover, even though students believe that learning English to be a very essential part of their life and acknowledged favorable attitudes toward learning English as a foreign language. The researcher strongly recommended the teachers should add more combinations of innovation to the curriculum modification and add differentiated instructional strategies.
The teachers also should create interesting and entertaining lessons plans and develop the lessons which can lead to increased students’ attention and implementing the different pedagogies, strategies, and methods. The teachers should also pay attention to the students and always cautiously observing in their students’ qualities. Moreover, the teachers also should encourage the students to learn English as a foreign language and improve their language skills in order to meet the students’ target goals. In consequence, the students might likely to show their interest in the lesson or class and activity corporate in their lesson and as an outcome, the students can learn their English language better.

6.2. Recommendations for Students

The findings of this research study showed that the students with high levels of motivation and have positive perceptions toward their teachers’ effectiveness will also have high levels of self-efficacy in learning EFL. The finding of the study would lead the students to realize, recognize and understand that during the school years, their aspects toward their teacher and motivation in learning English as a foreign language. Moreover, the more the students are motivated to learn the language, their self-efficacy in learning the language also goes up.

Hopefully, from this research study, the students would realize some thoughts concerning that their self-efficacy can be affected by their motivation and their perception toward their teachers’ effectiveness. In addition, the students could also obtain some positive improvements from this research study. As a result, the students could also be able to make some improvements and make a better chance to be successful in learning EFL and also to understand their weaknesses and strength in learning EFL.

Through more interesting and correlational learning, students should develop a more positive attitude, perception toward their teachers’ effectiveness, and positive self-confidence in their capabilities in order to learn English as a foreign language.

6.3. Recommendations for Administrators and Ministry of Education (Myanmar)

This research has indicated that students who believe self-efficacy in learning English as a foreign language can be increased by increasing students’ motivation in learning English as a foreign language and students’ perception toward their teachers’ effectiveness in learning English as a foreign language. Therefore, the school administrators and the Ministry of Education (Myanmar) should also encourage the EFL teachers to be motivated and also to motivate their students. The school administrators and Ministry of Education (Myanmar) should support teachers and encourage the EFL teachers to by providing and offering better materials for the lessons and a learning environment that helps students develop self-confidence in learning English as a foreign language.

The school administrators and the Ministry of Education (Myanmar) can also provide the professional developments or train the teachers to use effectively in order to use the resources, provided the resources to use in the lessons such as interactive textbooks or workbooks, televisions, or projectors, so that the students can develop their skills and self-confidence in learning English as a foreign language as they interact with those resources.

6.4. Recommendations for Future Researchers

The current research study was a quantitative correlational research design which was developed to find the relationship between Grades 10 and 11 students’ motivation for learning English as a foreign language and perception of teachers’ effectiveness with self-efficacy for learning English as a foreign language at Mingalar Education Center Private High School, Sanchaung, Yangon, Myanmar. The data of this study were collected only focusing on the Grades 10 and 11 levels from a private high school in Myanmar. Due to the access limitations, the researcher would recommend the future researcher to collect data in the different contexts with wide-reaching scale to have more reliable and valid results. The researcher would also like to recommend the future researcher to expand the research area into different school or different type of school such as public school, government school or international school, gender. In addition, the future researchers also should consider the other variables and factors (e.g., teaching strategies; goals and outcomes expectations; models of motivated learning; students’ perception toward their environment; expectations of their outcomes; cognition; metacognition; gender and ethnicity) that could influence the motivation for learning and perception of teachers’ effectiveness with self-efficacy for learning English as a foreign language.
Moreover, this research had limitations that small sample (N =82) so that would recommend the future researchers to use a larger sample size to have more reliable and valid results. This is necessary for future researchers to conduct future research with different education divisions in order to get the results from different perspectives.

References


Students Transition from Primary to Secondary School at an International School in Bangkok, Thailand

Sunantha Luthra¹
Richard Lynch²

Abstract

Purpose: The purpose of the study aims at investigating the existence of significance difference in students' attitudes towards school, academic self-efficacy, and perceived social adjustment of Year 7, Year 8, and Year 9 students at an International School in Bangkok, Thailand. This research was a quantitative comparative design utilizing three questionnaires to collect data: the School Attitude Questionnaire by Seker (2011), the Self-Efficacy Questionnaire for Children by Muris (2001), and the Student Adjustment to College Questionnaire by Baker and Siryk (1984). The three questionnaires were combined and called the Students' Overall Adaptability to School Questionnaire. The researcher collected data from 222 students from Year 7 (71 students), Year 8 (78 students), and Year 9 (73 students). The data were analyzed using descriptive statistics and a One-Way Analysis of variance for statistical hypothesis testing. The study indicated that the students had positive attitudes towards school. The academic self-efficacy was moderate, followed by students' perceived social adjustment, which was slightly acceptable. There was a significant difference between the perceived social adjustment of Year 7, Year 8, and Year 9 students. Still, there was no significant difference between students' attitudes towards school and academic self-efficacy of the Year 7, Year 8, and Year 9 students.

Keywords: Students' Attitudes Towards School, Academic Self-Efficacy, Perceived Social Adjustment to School, Comparative Study, Year 7, Year 8 and Year 9 Students, An International School in Bangkok Thailand.

JEL Classification Code (up to 3-5): C12, I20, I25, I29, Y1

1. Introduction

The most challenging time in a student's life is during middle school. It is like a roller-coaster for students and all involved, such as educators and parents, but parents fear it. In this stage, these young adolescents start experiencing physical changes, the need for recognition and social connections, intense emotions, and being rebellious towards authority. At this stage in student life, it is essential to recognize that the transition from primary school to middle school is crucial to their attitudes towards school and how they adjust in the classroom and school (Martinez, 2020). The transition for Thai students to an international school is significantly difficult. The issues they face most are the language barrier and the difference in the cultural norms. One of the most critical objectives in an academic setting is for students to become academically successful. Therefore, most researchers have focused on factors related to students' high cognitive performance in school.

As per Patrick et al. (2002), students' attitudes towards school impact three aspects: the cognitive, affective, and environmental, concerning social relationships and individual goals. In addition, Patrick et al. (2002) believe that the school environment plays an essential role in students’ attitudes and outlooks (cited in Moe et al., 2009). As students move up to high school, they are expected to be active and prompt in their academic work and be responsible for their learning process. The student's crucial goal is to perform well academically, which can be affected by many factors, such as self-confidence to achieve good grades.

Adjustment means adaptation, wherein the individuals who try to adjust themselves to the changed circumstances in their environment can be happy and content. Hence, social adjustment is adjusting with others in society and living up to the standards and values (Moe et al., 2009). Thai culture evolves around Buddhism and the respect for seniority regardless of age, status, or wealth. Hofstede (1991) also confirmed that Thai society is collectivistic and high in power distance (cited in Minkov & Hofstede, 2011). According to Mulder (1996), the researcher observed that Thai people's conservative ways limit their possibility of creative thinking. However, more research is a need in this aspect (cited in Rojanapanich, 2010).
Research Objectives

The researcher developed the following six research objectives for this study.

1. To determine the levels of students' attitudes towards the school of Year 7, Year 8, and Year 9 students at an International School in Bangkok, Thailand.
2. To determine the levels of students'academic self-efficacy of Year 7, Year 8, and Year 9 students at an International School in Bangkok, Thailand.
3. To determine the levels of perceived social adjustment of Year 7, Year 8, and Year 9 students at an International School in Bangkok, Thailand.
4. To determine whether there is a significant difference in the students' attitudes towards the school of Year 7, Year 8, and Year 9 students at an International School in Bangkok, Thailand.
5. To determine whether there is a significant difference in the students' academic self-efficacy of Year 7, Year 8, and Year 9 students at an International School in Bangkok, Thailand.
6. To determine whether there is a significant difference in the students' perceived social adjustment of Year 7, Year 8, and Year 9 students at an International School in Bangkok, Thailand.

Conceptual Framework

This study compares Year 7, Year 8, and Year 9 students' attitudes towards school, academic self-efficacy, and perceived social adjustment at an International School in Bangkok, Thailand. The researcher distributed the questionnaires to Year 7, Year 8, and Year 9 students of an International School in Bangkok to measure this (see: Figure 1).

Figure 1: Conceptual Framework of this study.

Literature Review

Students' Attitudes Towards School

According to Moe et al. (2009), attitudes towards school are connected to the school and psychological environment, which means students adjust to the new school, peers, teachers, new settings, culture, and more. In addition, the students' cognitive approach also depends on this social environment, such as their interpretation of peers and the school, academic values, and subjective perceptions. Thus, attitudes towards school are associated within a classroom setting and the overall school setting.

Social Cognitive Learning Theory

According to Bandura (1977), the social cognitive theory emphasizes that learning is connected to cognitive, environmental, and behavior factors. Based on this social cognitive theory, it sees learners as a taking-charge and self-reflecting. This means that these learners have the self-belief to get their desired outcome (Simon, 2001).

According to Bandura (2006), people are not born with this efficacy, but it is built upon and is linked to its performance and functions. Therefore, students' skills and expertise are connected to their academic work, called academic self-
efficacy. According to Sharma and Nasa (2014), academic self-efficacy is an individual’s belief that one can accomplish academic tasks at a desired level of performance.

**Perceived Social Adjustment**

One's attempt to cope with a society's norms, beliefs, and needs for acceptance is called social adjustment (Lamba, 2018). This psychological process deals with standards and values. Technically, adjustment means getting along with the society members. According to Jain (2011), psychologists use the term adjustment of varying social and interpersonal relations conditions in society. Therefore, the response to demands and pressures of the social life on the individual is called an adjustment.

**Methodology/Procedure**

This research design is a quantitative comparative study of students' attitudes towards school, academic self-efficacy, and perceived social adjustment at an International School in Bangkok, Thailand. A close-ended questionnaire called the Students' Overall Adaptability at School questionnaire (SOAS) measured the students' attitudes towards school, academic self-efficacy and perceived social adjustment at an International School in Bangkok, Thailand.

**Population and Sample**

This study's total population was from Year 7, Year 8, and Year 9 students are 208, 213, and 200. In this study, the researcher collected the sample through the school. First, the school sent out an email to parents asking for their permission for their child to answer the questionnaire. Once the parents agreed, the researcher sent a second email to the students directly. Unfortunately, not all parents gave consent, and not all students answered the questionnaire as it was all done online through google form during the end of the school term. The researcher decided to use google form to send the questionnaire due to the pandemic as students and their parents were in lockdown. Therefore, the researcher got only 71 students from Year 7, 78 students from Year 8, and 73 students from Year 9, totaling 222 students from the high school campus to answer the questionnaires during the 2020-2021 academic year.

**Research Instruments**

The researcher combined three instruments called the Students' Overall Adaptability in School questionnaire (SOAS) to accomplish this study's objectives. The four sections are demographic information, school attitude subscale from school attitude questionnaire (Seker, 2011), academic self-efficacy subscale from self-efficacy questionnaire for (young adolescents) children (SEQ-C), (Muris, 2001), and perceived social adjustment subscale from student adjustment to college questionnaire (SACQ) by (Baker & Siryk, 1989).

In the first section, the researcher obtained the demographic information on the age, gender, year group, class section, and how many years the students have been at an International School in Bangkok, Thailand. In the second section, the researcher collected data from sample students to identify their school attitudes. This section had 22 items covering six attributes of students' attitudes towards school: teaching, school image, loneliness at school, testing and feedback, reluctance, and belongingness (Seker, 2011). Table 2 shows six attributes and the items in this section. The attitude subscale uses a five-point Likert scale (1=strongly disagree, 2=disagree, 3=unsure, 4= agree, 5=strongly agree) and the negatively worded scale (5=strongly disagree, 4=disagree, 3=unsure, 2= agree, 1=strongly agree) for the six attributes for students' attitudes towards school. Table 1 summarizes the school attitudes subscale’s interpretation of the Students’ Overall Adaptability in School questionnaire (SOAS).

**Table 1**

*Summary of the Interpretation of the School Attitude Subscale of the Students’ Overall Adaptability in School Questionnaire (SOAS).*

<table>
<thead>
<tr>
<th>Frequency level</th>
<th>Scale</th>
<th>Scale (Negative score)</th>
<th>Score</th>
<th>Interpretation level</th>
</tr>
</thead>
<tbody>
<tr>
<td>I strongly agree</td>
<td>5</td>
<td>1</td>
<td>4.51-5.00</td>
<td>Highly positive</td>
</tr>
<tr>
<td>I agree</td>
<td>4</td>
<td>2</td>
<td>3.51-4.50</td>
<td>Positive</td>
</tr>
<tr>
<td>I partially agree</td>
<td>3</td>
<td>3</td>
<td>2.51-3.50</td>
<td>Moderate</td>
</tr>
<tr>
<td>I disagree</td>
<td>2</td>
<td>4</td>
<td>1.51-2.50</td>
<td>Negative</td>
</tr>
<tr>
<td>I strongly disagree</td>
<td>1</td>
<td>5</td>
<td>1.00-1.50</td>
<td>Highly negative</td>
</tr>
</tbody>
</table>
Table 2 shows the reliability of the school attitude subscale.

Table 2
Reliability of the School Attitude Subscale Questionnaire of the Student’s Overall Adaptability to School (SOAS).

<table>
<thead>
<tr>
<th>Values</th>
<th>Items</th>
<th>Cronbach's alpha value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching</td>
<td>1, 2, 3</td>
<td>.48</td>
</tr>
<tr>
<td>School image</td>
<td>4,5,6,7</td>
<td>.60</td>
</tr>
<tr>
<td>Loneliness</td>
<td>8, 9,10</td>
<td>.60</td>
</tr>
<tr>
<td>Testing</td>
<td>11, 12, 13, 14</td>
<td>.51</td>
</tr>
<tr>
<td>Reluctance</td>
<td>15, 16, 17, 18, 19, 20</td>
<td>.66</td>
</tr>
<tr>
<td>Belongingness</td>
<td>21, 22</td>
<td>.33</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>.89</td>
</tr>
</tbody>
</table>

For the third section, the Self-Efficacy Questionnaire for Children (SEQ-C) (Muris, 2001) has three domains of self-efficacy with a total of 24 items. There are social self-efficacy (8 items), academic self-efficacy (8 items), and emotional self-efficacy (8 items). The researcher used only the Academic Self-Efficacy Subscale from the Self-Efficacy Questionnaire for Children (SEQ-C). This study questionnaire uses a 5-point Likert scale (1 = not at all - 5 = very well). Table 3 shows the interpretation of the academic self-efficacy subscale questionnaire.

Table 3
Summary of the Interpretation of the Academic Self-Efficacy Subscale of the Students’ Overall Adaptability in School Questionnaire (SOAS).

<table>
<thead>
<tr>
<th>Values</th>
<th>Items</th>
<th>Cronbach's alpha value</th>
</tr>
</thead>
<tbody>
<tr>
<td>academic self-efficacy</td>
<td>1, 4, 7, 10, 13, 16, 19, 22</td>
<td>.88</td>
</tr>
</tbody>
</table>

Table 4 shows the reliability of the self-efficacy questionnaire for children.

Table 4
Reliability of the Academic Self Efficacy Subscale of the Students’ Overall Adaptability in School Questionnaire (SOAS)

<table>
<thead>
<tr>
<th>Values</th>
<th>Items</th>
<th>Cronbach's alpha value</th>
</tr>
</thead>
<tbody>
<tr>
<td>academic self-efficacy</td>
<td>1, 4, 7, 10, 13, 16, 19, 22</td>
<td>.88</td>
</tr>
</tbody>
</table>

In the fourth section, the questionnaire (SACQ) by Baker & Siryk (1989) has four features of the college adjustment: academic, social, personal-emotional, and institutional attachment. For this study, the researcher examined the 17 items of the social adjustment subscale. The researcher used a 9-point Likert-type scale to measure how well each statement applies to the respondent, ranging from 1 (Does not apply to me at all) to 9 (Applies very closely to me) and for the negatively worded 9 (Does not apply to me at all) to 1 (Applies very closely to me).

Table 5 shows the interpretation of the fourth section of the questionnaire.
Table 5
Summary of the Interpretation of Perceived Social Adjustment Subscale of the Students' Overall Adaptability in School Questionnaire (SOAS).

<table>
<thead>
<tr>
<th>Frequency Level</th>
<th>Scale</th>
<th>Scale (Negative)</th>
<th>Score</th>
<th>Interpretation level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applies very closely to me</td>
<td>9</td>
<td>1</td>
<td>8.50-9.00</td>
<td>Perfectly acceptable</td>
</tr>
<tr>
<td>8</td>
<td>2</td>
<td>7.51-8.50</td>
<td>Acceptable</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>3</td>
<td>6.51-7.50</td>
<td>Usually acceptable</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>5.51-6.50</td>
<td>Slightly acceptable</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>4.51-5.50</td>
<td>Neutral</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>6</td>
<td>3.51-4.50</td>
<td>Slightly unacceptable</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>7</td>
<td>2.51-3.50</td>
<td>Usually unacceptable</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>8</td>
<td>1.51-2.50</td>
<td>Unacceptable</td>
<td></td>
</tr>
<tr>
<td>Does not apply to me at all</td>
<td>1</td>
<td>9</td>
<td>1.00-1.50</td>
<td>Totally unacceptable</td>
</tr>
</tbody>
</table>

Table 6 shows the reliability of the social adjustment subscale.

Table 6
Reliability of the Perceived Social Adjustment Subscale of the Students' Overall Adaptability in School Questionnaire (SOAS)

<table>
<thead>
<tr>
<th>Values</th>
<th>Items</th>
<th>Cohen's alpha (SOAS)</th>
<th>Comorabba's alpha value</th>
</tr>
</thead>
<tbody>
<tr>
<td>social adjustment</td>
<td>1,4,8,9,12,14, 18,26,30,33, 37,42,46,48, 51,53,56, 65,65</td>
<td>.83 to .91</td>
<td>.90</td>
</tr>
</tbody>
</table>

Findings
In this section, the research findings are presented according to the research objectives.

Research Objective 1
Table 7 shows the students' attitudes towards school's means and standard deviations of Year 7, Year 8, and Year 9 students of an International School in Bangkok, Thailand.

Table 7
Means, Standard Deviations, And Interpretations of Students' Attitude towards the school of Year 7, Year 8, and Year 9 students at an International School in Bangkok, Thailand (n=222)

<table>
<thead>
<tr>
<th>Items No. and Statement Group</th>
<th>Year</th>
<th>SD</th>
<th>Total M</th>
<th>Total SD</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall (1-22)</td>
<td>3.58</td>
<td>1.09</td>
<td>Positive</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In conclusion, Year 9 seemed to have had a more positive attitude towards school than Year 7 and Year 8 students. However, Year 8 students seemed to have struggled a little more than Year 7 students in some areas.

Research Objective 2
Table 8 shows the students' academic self-efficacy's means and standard deviations of Year 7, Year 8, and Year 9 students of an International School in Bangkok, Thailand.

Table 8
Means, Standard Deviations, And Interpretations of Students' Academic Self-Efficacy of Year 7, Year 8, and Year 9 students at an International School in Bangkok, Thailand (n=222)

<table>
<thead>
<tr>
<th>Items No. and Statement Group</th>
<th>Year</th>
<th>SD</th>
<th>Total M</th>
<th>Total SD</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>3.46</td>
<td>1.00</td>
<td>Moderate</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In conclusion, Year 7 students' academic self-efficacy was somewhat low compared to Year 8 and Year 9 students. Year 8 students looked somewhere in-between and showed some having low academic self-efficacy towards school. On the other hand, Year 9 students looked well-
adjusted and had a more positive academic self-efficacy towards school.

**Research Objective 3**

Table 9 shows the students' perceived social adjustment’s means and standard deviations of Year 7, Year 8, and Year 9 students of an International School in Bangkok, Thailand.

**Table 9**

Means, Standard Deviations, And Interpretations of Students' Perceived Social Adjustment of Year 7, Year 8, and Year 9 students at an International School in Bangkok, Thailand (n=222)

<table>
<thead>
<tr>
<th>Items No.</th>
<th>Year</th>
<th>M</th>
<th>SD</th>
<th>Total M</th>
<th>Total SD</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td></td>
<td>6.01</td>
<td>2.01</td>
<td>Slightly acceptable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(31-47)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In conclusion, Year 8 and Year 9 students perceived social adjustment was more towards the positive side. However, Year 7 students had issues feeling a part of the school environment.

**Research Objective 4**

Table 10 shows the One-way analysis of variance (ANOVA) test results on students’ attitudes towards the school of Year 7, Year 8, and Year 9 of an International School in Bangkok, Thailand.

**Table 10**

Results of the One-Way ANOVA Test on Students' Attitude Towards School of Year 7, Year 8, and Year 9 Of an International School in Bangkok, Thailand

<table>
<thead>
<tr>
<th>Year</th>
<th>Group</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>Between Groups</th>
<th>Within Groups</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 7</td>
<td>71</td>
<td>3.40</td>
<td>.77</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 8</td>
<td>78</td>
<td>3.46</td>
<td>.83</td>
<td>2</td>
<td>219</td>
<td></td>
<td>.85</td>
<td>.43</td>
</tr>
<tr>
<td>Year 9</td>
<td>73</td>
<td>3.48</td>
<td>.59</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Significant difference at the .05 level

**Research Objective 5**

Table 11 shows the results of the One-way ANOVA test on students' academic self-efficacy of Year 7, Year 8, and Year 9 of an International School in Bangkok, Thailand.

**Table 11**

Results of the One-Way ANOVA Test on Students' Academic Self-Efficacy of Year 7, Year 8, and Year 9 Of an International School in Bangkok, Thailand.

<table>
<thead>
<tr>
<th>Year</th>
<th>Group</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>Between Groups</th>
<th>Within Groups</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 7</td>
<td>71</td>
<td>5.80</td>
<td>1.40</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 8</td>
<td>78</td>
<td>5.92</td>
<td>1.29</td>
<td>2</td>
<td>219</td>
<td></td>
<td>.96</td>
<td>.05</td>
</tr>
<tr>
<td>Year 9</td>
<td>73</td>
<td>6.36</td>
<td>1.11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Significant difference at the .05 level

The results of the ANOVA test from Table 12 indicated that there was a significant difference (p=.05) in students’ perceived social adjustment towards school for Year 7, Year 8, and Year 9 students of an International School in Bangkok, Thailand. Therefore, 'Scheffe’s post hoc multiple comparison test was performed to determine which groups were significantly different. Table 13 displays the results of Scheffe’s post hoc test.

**Table 12**

Results of the One-Way ANOVA Test on Students' Perceived Social Adjustment of Year 7, Year 8, and Year 9 Of an International School in Bangkok, Thailand.

<table>
<thead>
<tr>
<th>Year</th>
<th>Group</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>Between Groups</th>
<th>Within Groups</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 7</td>
<td>71</td>
<td>3.36</td>
<td>.74</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 8</td>
<td>78</td>
<td>3.49</td>
<td>.49</td>
<td>2</td>
<td>219</td>
<td></td>
<td>1.02</td>
<td>.36</td>
</tr>
<tr>
<td>Year 9</td>
<td>73</td>
<td>3.63</td>
<td>.61</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Significant difference at the .05 level

The results from Scheffe’s post hoc multiple comparison test (Table 13) revealed that, concerning the perceived social adjustment, the results failed to show a significant difference of Year 7 and Year 8 (p =.87), Year 8
and Year 9 (p = .19) and Year 9 and Year 7 (p=.07) students of an International School in Bangkok, Thailand.

Discussion

The current study's findings showed that the students' attitudes towards school, academic self-efficacy, and perceived social adjustment in Year 7, Year 8, and Year 9 have different impacts. Year 9 students had a more positive attitude, academic self-efficacy, and perceived social adjustment towards school than Year 7 and Year 8 students. Although Year 8 students had lots of issues in all three areas as compared to Year 7 students. Based on that, this section reviews the significant differences among the three-year group (Year 7, Year 8, and Year 9 students) with three variables (attitudes towards school, academic self-efficacy, and perceived social adjustment) of the study are also explored in order to present probable reasons.

Students' Attitudes Towards School

Based on the findings from the SOAS questionnaire – School Attitude Questionnaire and the inferential statistics applied to compare students' attitudes towards school for Year 7, Year 8, and Year 9 at an International School in Bangkok, Thailand, it showed that Year 7, Year 8 and Year 9 students had positive attitudes school. However, it also indicated that their attitudes were decreasing or somewhat not positive. Also, there was no significant difference in students' attitudes towards school for Year 7, Year 8, and year 9 of an International School in Bangkok, Thailand. Like Moe et al. (2009) stated, attitudes towards school are connected to the school and psychological environment, which means students have to adjust to the new school, peers, teachers, new settings, culture, and more. This result shows that when students can share their learning problems, they want to feel supported and have exciting lessons, and when teaching is 'good,' students feel lucky to be students of this school and feel privileged. When school services are adequate, it gives the school a 'good image.' What the school needs to work on is loneliness and attention to students. Although students do feel somewhat lonely in class, they do not have healthy conversations with their teachers. Although the teachers try to divide their attention to all students, they still feel lonely and neglected.

On the other hand, students are allowed to ask questions and criticize ideas. Their mistakes are corrected without offending them, the achievement is enhanced, examination questions are straightforward and understandable, and appropriate" testing and feedback" are provided. Also, when positive contributions come from the school environment, families support and require school activities, positive attitudes around students encourage them to adopt positive attitudes, and students are encouraged to participate in school activities. As a result, students in Year 7, Year 8, and Year 9 feel they want to go to school and feel a sense of belonging. Conner (2009) and Roorda et al. (2011) have shown that having a positive learning environment result in a better relationship between the students, teachers, and school administration and students' positive attitudes towards school. Similarly, Hallinan (2008) points out that teachers' influence and presence on students play a vital role in their attitudes towards school, as this study has shown.

Academic Self-Efficacy

Based on the findings from the SOAS questionnaire – Self-Efficacy Questionnaire for Children (SEQ-C) and the inferential statistics applied to compare students' academic self-efficacy for Year 7, Year 8, and Year 9 at an International School in Bangkok, Thailand, Year 7, Year 8 and Year 9 students had moderate academic self-efficacy towards school. Furthermore, based on the analysis, there was no significant difference in students' academic self-efficacy for Year 7, Year 8, and Year 9 of an International School in Bangkok, Thailand.

The analysis revealed that some students suffered from low to moderate levels of academic self-efficacy with areas of academic activities such as asking questions and responding to questions in the classroom, concentrating in the classroom, asking for help from teachers, doing classwork and homework, engaging in academic discussion with friends, doing tasks in class successfully and more.

According to Nasir and Iqbal (2019), academic self-efficacy results from cognitive skills development and perceived self-efficacy. Academic self-efficacy can be developed by improving cognitive skills that apply learned skills and use them in different situations. According to Bandura (1994) and Zumeri (2005), a student's achievement in completing a task is interconnected with their belief in their ability to complete that task. Prior studies by Honicke and Broadbent (2016), Köseoğlu (2015), and Zajacova et al. (2005) found that students with high self-efficacy are associated with higher levels of academic performance and experience less stress, fewer health problems, and a better adjustment to the school environment.
Perceived Social Adjustment

Based on the findings from the SOAS questionnaire – Student Adjustment to College Questionnaire (SACQ) and the inferential statistics applied to compare students' perceived social adjustment for Year 7, Year 8, and Year 9 at an International School in Bangkok, Thailand, it showed that Year 7, Year 8 and Year 9 students had an overall slightly acceptable level of perceived social adjustment towards school. Furthermore, based on the analysis, there was a significant difference in students' attitudes towards school for Year 7, Year 8, and Year 9 of an International School in Bangkok, Thailand.

According to Baker and Siryk (1989), social and interpersonal activities help create a positive relationship between students and help students socially adjust with peers in the classroom and at school. Using the SACQ questionnaire, the current study also showed that when students were happy with the extra curriculum activities or had an opportunity to participate in activities, they felt part of the school. However, the current study also showed that students become withdrawn from classroom activities and have low self-confidence and loneliness when there is not much opportunity or chance. Overall, results highlight the importance of stability, teacher-student relationship within the school, and communication within the classroom needs to be more open. In addition, the current study showed students had difficulty feeling at ease, did not have enough social skills to get along in school, felt lonely, and could not mix well with the opposite sex. Year 7 and Year 8 students seemed to be battling more than Year 9 students.

When students transition from Year 6 to Year 7 or transition from a new school, they must adapt to this new school environment with so many new challenges (Jindal-Snape & Foggie, 2008). As seen in the current study, these changes negatively influenced the student's psychological well-being. However, a positive teacher-student and student-student relationship could ease the transition and create a more open dialogue with students (Longobardi, 2016).

Recommendations

Recommendations for Students

This research has indicated that students adapt to different situations and know whom they can approach. Students have to support and help each other through the transition and be more vocal with teachers. Based on this study, students had an overall positive attitude towards school but faced loneliness and awkwardness. Older students can be used as mentors, buddies, and peer supporters to advise and encourage the younger student. Having this support helps new students know other students and navigate the school. Presenting a welcome pack or online welcome pack about the school, such as a map, room numbers of staff and teachers, will be helpful.

Recommendations for Teachers

Based on the research findings of the current study, teachers should have a file of all the students' reports, doctor recommendations, and other records to suggest strategies to smooth the transition of new students, particularly special-needs students. The overall Year 7, Year 8, and Year 9 students' attitudes towards school were positive. However, it is essential to keep all students' attitudes positive and improve their attitudes toward school by having more communication channels in the classrooms, during sports time, and during lunch. The school should perk up their student's academic self-efficacy to help them achieve their goals. In addition, teachers need to be more welcoming and supportive to students struggling, and this confidence carries on when they are doing homework and projects. Although, the overall academic self-efficacy and perceived social adjustment were somewhat moderate, which shows teachers have more work to do. Therefore, the researcher would recommend that teachers arrange for a positive and supportive learning environment to promote positive attitudes towards school.

Recommendations for School Administrators

School administrators should better monitor and help support students within the school. They should create a system to help the new and current students adjust and adapt to the school. In addition, school administrators should also provide more professional development for teachers to better understand how to help students adjust, have activities, and create bonds. Based on the findings of this study, students are not adjusting well and feel lonely and disconnected. Therefore, school administrators should have seminars for teachers and parents to help them understand how to support the students.

Recommendations for School Counselors

The school counselors play a vital role in the school as they help resolve students' personal and interpersonal issues. A significant recent change to the
school counselor's role is the new forms of bullying, especially cyberbullying. Younger students are using technology for communication and socializing. By doing so, they are putting themselves at risk for bullying. Therefore, school counselors must constantly be aware of new social issues arising among students. In addition, counselors should provide more seminars to teachers and parents to help support the children and look for signs of distress.

**Recommendations for Parents**

This study found that parents' support and influence are essential factors. Parental support was a significant factor for students, and parents can ease the pressure for students entering the school. Parents should have a more open dialogue with the students and teachers to understand what is expected. Teenage students do not share much, but parents and teachers should communicate more to support them.

**Recommendations for Future Researchers**

The researcher recommends that future researchers have a larger sample size and a more comprehensive geographical range to conduct an extensive study on the variables of interest that affect new students or students transitioning from small to big schools. Another suggestion would be to use qualitative research to get more in-depth information on the variables, e.g., interviews with students, parents, teachers, school counselors, and school administrators. This would provide greater richness, depth to understanding and addressing the issues. There is still a need for more research as many variables can affect students from primary to high school, e.g., self-esteem.

**References**


Nasir, M., & Iqbal, S. (2019, April 30). Academic Self Efficacy as a Predictor of Academic Achievement of Students in Pre-Service Teacher Training Programs. The Free Library


Analyzing The Effect of Alternative Banking Channels on the Employees Productivity of the Commercial Banks: Evidence from the State Bank of India

Vinod Kumar Adwani¹, Geetanjali Shrivastava² and Neeta Vaydande³

Abstract

Alternative Banking Channel is a branchless access channel to banking institutions at a lower cost, convenience, high subscription rate, faster transaction speed, and expanded income sources. The purpose of this study is to look on the other side also i.e. the productivity of the employees. For the study, State Bank of India has been selected (largest Public Sector Bank of India). Only secondary sources such as annual reports, published publications, conference papers, books, and banking websites were used to obtain the data. With the help of regression model, an attempt has been made to analyze the impact of alternative banking channels on the productivity of SBI's employees. According to this research, the rate of use of ABC products such as Online Banking, ATM Card, POS, Internet Banking, Mobile-Cash, Electronic Fund Transfer, and Real-Time Gross Settlement is increasing which has not only boosted the profitability of SBI but also increased the Business productivity of employees.

Key Words: Alternative Banking Channels (ABC), Automated Teller Machines (ATM), Business Per Employee (BPE), State Bank of India (SBI), point of sale (POS).

1. Introduction

Technology is now the life blood of each and every undertaking of services sector. As a vital component of the sector, commercial banks are also the major user of technology for the delivery of various services to their customers. In this way the technology-based banking products became an indispensable part of banking sector. Since last two decades both public and private sector banks have shown a robust growth in the use of not only the technology-based banking products, but they are also focussing on alternative banking channels. These channels are used for providing the financial services or products without relying upon the bank branches. Branchless banking is a cost saving method.

Now the banks are using these channels for almost all the banking services including core activity of deposits and credit. The impact of intensive use of alternative banking channels is visible on each space of banking sector.

In an effort to reach the unbanked people a revolution in the range of branchless banking solutions has been witnessed. The installation and operation of these channels requires more efficient and tech-savvy human resources in the banking sector, so the role of the employees is now more challenging and dynamic. With the existence of alternative banking channels, still bank halls continue to be congested which shows customers continue seeking services in bank branches. Due to the perpetual presence of the branch banking system, the employees are always playing a vital character in the banking sector. The role of human resources of banking sector is also distressing with the demanding practice of new alternative channels. There are many factors affecting the performance of a commercial bank, e.g., quality of management, product-portfolio, customer’s satisfaction, level of competition, liquidity position etc. But it’s mainly depending upon the productivity of their human resources. In modern age it’s also affected by the span of alternative banking channels. The productivity of the banking employees is closely linked with these channels, as various channels are now used as the substitute of the services provided by banking employees. For the growth and survival of each and every commercial bank, the coordination of the efficient employees and the effective alternative banking channels is critical. In this term private sector banks are well ahead of the public sector banks. We can observe this through the greater efficiency of employees of the private sector banks and the wide use of the alternative banking channels by them. Now with the increasing competition and the presence of more demanding customers, public sector banks like SBI are also focusing on the alternative banking channels.
The aim of this research is to understand the relationship between alternative banking channels and employee productivity. In more detail, to determine how ATM, internet banking, and mobile banking impact the productivity (in the terms of business, revenue and profit) of bank employees. The study will contribute knowledge by discovering the impact of alternative banking channels on the productivity of the employees of leading public sector bank of India i.e., State Bank of India.

1.1 Alternative Banking Channels (ABC):

Indian Banking sector is one which has perceived incredible adaptations in its day-to-day business dealings due to the advanced technology. E-Banking or alternate delivery channels or Alternate Banking Channels (ABC) are the results of advanced technology which leads to the branchless banking concept. It is becoming a dynamic element in delivery of banking services to the customers. These channels are used for delivering the financial services or products without relying upon the bank branches. Branchless Banking is the order of today & tomorrow. It is a cost saving method. While this strategy may complement an existing bank branch network for giving customers a broader range of channels through which they can access the financial services. These channels can replace the Brick & mortar branch structure of Indian banking sector.

“E-banking includes the provision of retail and small value banking products and services through the electronic channels as well as a large value in electronic payments and other wholesale banking services delivered electronically.”

Basel Committee on Banking Supervision (1998)

Most significant feature of the alternate channels is availability on 24 X 7 with a focus on delivering the higher quality of service across the multiple channels like phone banking, internet banking, Mobile banking, Business Correspondents (BCs), call centers, Automated Teller Machine (ATM), Cash Deposit Machine (CDM), Point of Sale (POS) terminal, credit cards, debit cards, EFT, RTGS, MICR clearing and Passbook Kiosk. Reserve Bank of India (RBI) instructed all the banks to focus on the alternative banking channels in order to retain loyalty among the customers.

Advantages of the alternate banking channels:

- Paperless and eco-friendly Banking
- Reduction in establishment and operating cost for banks.

Reduction in transportation and execution cost for customers

- Movable and placeless
- 24X7 availability.
- Suitable for all age groups
- Faster, secure, and convenient delivery of services.

Now customers can execute most of the financial and non-financial transactions through alternate channels such as withdrawal of cash, deposits of cash, pass--book printing, account statement request, cheque book request, opening a fixed deposit account, purchase of securities, apply for new debit card or credit card, payment of utility bills, renewal of fixed deposit, submission of Form 15G/15H, transfer of funds etc.

1.2 Employees Productivity:

What is productivity? Let’s start with the answer to this question. As we know the process of production is contributed by four major inputs that are land, labour, capital and entrepreneurship. Productivity is the simple relationship between the inputs (or we can say the resources used in the process of the production of goods or services) and the resulted output (or we can say production or yield). In the term of the formula:

\[ \text{Productivity} = \frac{\text{Output}}{\text{Input}} \]

With the measurement of the productivity, we can easily determine the performance and efficiency of one particular type of input or more than one input. Banking is the mental labour-based industry, as it is completely depending upon its employees working. Some parameters are specially developed for the analysis of the productivity of employees of the banking sector, such as Business Per Employee (BPE), Revenues Per Employee (RPE), Profit Per Employee (PPE) etc. With the analysis and interpretation of these parameters we can easily compare and assess their performance in a systematic manner.

1.3 State Bank of India (SBI):

SBI is oldest and largest commercial bank of India. The origin of SBI dates back to 2nd June1806, when Bank of Kolkata was established in Kolkata. Later on, the bank of Bombay was established on15thApril 1840 and the Bank of Madras on 1st July1843. These banks amalgamated as the Imperial Bank of India (IBI) on 27th January1921. The Government of independent India decided to take over the imperial Bank of India and State Bank of India (SBI) was constituted on 1st July,1955.
Table 1: A Brief Profile Of State Bank Of India (As On 31st March 2021)

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Name</td>
<td>State Bank of India</td>
</tr>
<tr>
<td>2</td>
<td>Industry</td>
<td>Commercial Bank</td>
</tr>
<tr>
<td>3</td>
<td>Sector</td>
<td>Public Sector (State Owned)</td>
</tr>
<tr>
<td>4</td>
<td>Establishment Year</td>
<td>1st July 1955</td>
</tr>
<tr>
<td>5</td>
<td>Registered Office</td>
<td>Mumbai, Maharashtra (India)</td>
</tr>
<tr>
<td>6</td>
<td>Promoter</td>
<td>Government of India</td>
</tr>
<tr>
<td>7</td>
<td>Promoter’s Holding (In %)</td>
<td>57%</td>
</tr>
<tr>
<td>8</td>
<td>Total No. of Branches</td>
<td>22,219</td>
</tr>
<tr>
<td>9</td>
<td>Total No. of Business correspondent Outlets</td>
<td>71,968</td>
</tr>
<tr>
<td>10</td>
<td>Total No. of ATMs</td>
<td>62,617</td>
</tr>
<tr>
<td>11</td>
<td>Total No. of Employees</td>
<td>0.25 Million</td>
</tr>
<tr>
<td>12</td>
<td>Total No. of Customers</td>
<td>459.2 Million</td>
</tr>
<tr>
<td>13</td>
<td>Paid Up Share Capital</td>
<td>INR 8924.6 Million</td>
</tr>
<tr>
<td>14</td>
<td>Total Assets</td>
<td>INR 45,34,430 Million</td>
</tr>
<tr>
<td>15</td>
<td>Total Deposits</td>
<td>INR 36,81,277 Million</td>
</tr>
<tr>
<td>16</td>
<td>Total Advances</td>
<td>INR 24,49,497 Million</td>
</tr>
</tbody>
</table>

2. Literature Review:

Internet banking increases the bank profitability as measured by return on equity. Additionally, online banking enhances a bank’s customer base by attracting new customers and improving the bank’s service quality. The results of previous research suggest that online banking has a substantial impact on bank performance. Policymakers, regulators, legislators, bankers, and other financial services providers are paying more attention to internet banking (Ngubia, 2017). Widespread of information technology shows the favourable relationship between IT investments, manufacturing process reorganisations, and labour force human capital (Bugamelli and Pagano, 2001). Productivity and growth of the banks adopting the best practices in the industry is likely to be correlated with technical change. The positive correlation between electronic banking and deposit money bank liquidity (Abubakar et al., 2015). Financial institutions serve as middlemen between banking services and clients, lowering the cost of acquiring financial services (Barney, 2011). The capacity of agency banking machines to transact quicker spreads the expenses to a merchant across a larger number of transactions, lowering costs (Kent, 2013). POS transactions are safer since the business owners' machines are linked to their bank accounts, allowing payments to be credited in a paperless and real-time way. They further said that the POS devices' ability to print receipts with the bank’s name on them quickly authenticates the transactions and can be checked at any moment in the future (Davis F.D., 2016). The use of ABC has increased the branch productivity, per employee productivity of public sector banks and SBI at constant price (Singh, 1990). But employees have had certain difficulties as a result of the usage of (ATM, POS, and latest ABCs), as it necessitates constant learning to cope with technology. It has also resulted in job overload, as employees are required to deal with a variety of tasks that change on a regular basis (Bik et al., 2016). Digital technology adoption will almost certainly take time to adapt workplace organisation and personnel capabilities (Boskin et al., 1997). Banking needs to upgrade the technology to improve operating efficiency and better customer service (Janki, 2002). SBI Group Banks must organize training and development programmes to have more efficiency and better productivity (Shashi, 2015).

3. Objectives:

It is necessary to determine objectives before starting any research study. There are four main objectives of this study:

- To analyse the services provided by SBI through Alternative Banking Channels.
- To measure the productivity of the employees of SBI.
- To analyse the impact of alternative banking channels on employee’s productivity of SBI.

4. Limitations

- This research study is based on the alternative banking channels and employees’ productivity of SBI for last 10 financial years (2011-2021). The financial performance of the banks is shown just for the last ten years, ending 2021. Hence, any uneven trend before or beyond the set period will be the limitations of the study.
- This analysis is based on only monetary information, analysis of the non-monetary factors are ignored.
- As per the requirement of the study some data have been grouped and sub grouped.

5. Hypothesis

H1: There is no significant impact of ATM on the productivity of SBI’s employees (considering Business per Employees).
H2: There is no significant impact of POS on the productivity of SBI’s employees (considering Business per Employees).

6. Research Methodology

6.1 Research Period and Sample Size:
This research study is based on the alternative banking channels and its impact on employee’s productivity of SBI during the period of last ten financial years from 1st April 2011 to 31st March 2021.

6.2 Data Sources:
This quantitative and analytical research study is mainly based on secondary or published data. The main source of data is the Annual Reports of SBI for last ten financial years, along with reports and publications of Reserve Bank of India.

6.3 Analytical Method and Tools:
For the Analysis or interpretation of data and testing the hypothesis it is essential to use statistical and accounting methods or research tools. The study used an ordinary least square regression (OLS) model with dependant variable being ATM and POS. So, following formulae, and tools are used in this study:

\[(a) \text{ Business Per Employee (BPE) } = \frac{\text{Total Business}}{\text{Total No. of Employees}}\]

\[(b) \text{ Revenue Per Employee (RPE) } = \frac{\text{Total Business: Total Deposits + Total Advances}}{\text{Total No. of Employees}}\]

\[(c) \text{ Profit Per Employee (PPE) } = \frac{\text{Net Profit Before Tax}}{\text{Total No. of Employees}}\]

7. SBI: Alternative Banking Channels:
In the terms of number of branches, ATMs, Business Correspondents (BCs) and number of employees, the SBI is largest commercial bank in India. It holds 23.29% market share in total deposits and 19.77% market share in total advances of Indian banking industry. It also holds 162.3 million financial inclusion accounts and facilitate total transaction value of INR 2,52,4700Million through these accounts in the financial year 2020-21. SBI is a pioneer of International Banking among all the Indian Public sector banks. At the end of the financial year 2020-21, 229 offices of SBI are functional across all Time Zones.

In the last two decades, due to an increasingly competitive and dynamic banking industry, SBI has adopted customer-driven ideas to address the swift and changing requirements of their customers. The SBI is using alternative banking channels not only to improve their own internal processes but also to increase facilities and services to their customers. The process of bank digitalization was started since 1985 in SBI. However, some private sector banks have started the same prior to the public sector banks in India. Now State Bank of India, is a market leader in providing almost of alternative banking services.

SBI has been continuously focussing on improving digital platforms to cater to the increasing ambitions of our customers. The mobile app of SBI, ‘YONO’ is now operational with total registered user base of 37.1 Million. Now this app has more than 10 million logins per day. With the largest network in the country, on an average, over 11.2 Million transactions per day are routed through ATMs. During the financial year 2019-20, out of the total transaction 91% are through alternative banking channels, while in 2020-21 this is increased to 93%. These alternative banking channels includes BCs outlets, ATMs/CDMs, internet banking, mobile banking, POS terminal and kiosk.
the country SBI use to appoint Business Correspondents (BCs). In the financial year 2019-20, 61,102 BCs outlets were working, but in financial year 2020-21 it’s increased to 71,968. It reflects a remarkable growth of 17.78%. These BCs outlets facilitate 587.8 Million transactions under financial inclusion account.

Table 01: alternative banking channels applied by SBI (from F.Y. 2011-12 to 2020-21)

<table>
<thead>
<tr>
<th>F.Y.</th>
<th>TYPES OF ABC</th>
<th>CREDIT CARDS</th>
<th>DEBIT CARDS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ATMs/CDMs</td>
<td>POS</td>
<td>(In Millions)</td>
</tr>
<tr>
<td>2012</td>
<td>22141</td>
<td>0</td>
<td>2.225</td>
</tr>
<tr>
<td>2013</td>
<td>27175</td>
<td>65514</td>
<td>2.573</td>
</tr>
<tr>
<td>2014</td>
<td>43515</td>
<td>135853</td>
<td>2.858</td>
</tr>
<tr>
<td>2015</td>
<td>45502</td>
<td>200878</td>
<td>3.158</td>
</tr>
<tr>
<td>2016</td>
<td>49724</td>
<td>302119</td>
<td>3.620</td>
</tr>
<tr>
<td>2017</td>
<td>50188</td>
<td>509113</td>
<td>4.569</td>
</tr>
<tr>
<td>2018</td>
<td>59541</td>
<td>609789</td>
<td>6.258</td>
</tr>
<tr>
<td>2019</td>
<td>58415</td>
<td>575358</td>
<td>8.271</td>
</tr>
<tr>
<td>2020</td>
<td>58555</td>
<td>672862</td>
<td>10.548</td>
</tr>
<tr>
<td>2021</td>
<td>62617</td>
<td>747205</td>
<td>11.821</td>
</tr>
<tr>
<td>CAGR</td>
<td>10.96%</td>
<td>31.05%</td>
<td>18.18%</td>
</tr>
<tr>
<td>% GROWTH</td>
<td></td>
<td>1040.53%</td>
<td>431.27%</td>
</tr>
</tbody>
</table>

Source: Annual Reports of SBI & own computations.

Analysis:
With the reference to the above table, it is evident that in this period of ten years, SBI has an outstanding growth (CAGR of 31.05%) in the installation of POS terminal. These terminals are for providing quick and safe mode to the traders for cashless collection from their customers. The installation of new POS terminal is also increased due to the demonetization (2016) and the Covid-19 pandemic (2020). This type of growth is also visible in the case of the installation of new ATMs and CDMs. On an average per year 4,500 new ATMs/CDMs and 74,720 new POS terminals were installed by the SBI.

In order to provide credit facility and to promote cash less payments, during this period SBI has successfully issued about ten million new credit cards to their customers. On an average per year 1.066 Million new credit cards were issued by the SBI. With the help of these millions of new cards, the monthly transaction increased by almost ten times. In order to provide 24X7 cash withdrawal facility and to promote cash less payments, during this period SBI has successfully issued about 130 Million new debit cards to their customers. On an average per year 14.4 Million new debit cards were issued by the SBI. With the help of these new cards, there is a significant increase in monthly transaction.

8. SBI: Employees Productivity:
SBI is not only the backbone of our banking industry, but it is also playing a leading role in the process of social and economic welfare of the millions of the people. With the strength of 0.245 Million employees, bank is working with an objective of providing fast and secure financial services to the mass population of the country.
Table 02: Employees Productivity of SBI (from F.Y.2011-12 to 2020-21)

<table>
<thead>
<tr>
<th>FINANCIAL YEAR</th>
<th>NO. OF EMPLOYEES</th>
<th>BPE (In INR Million)</th>
<th>RPE (In INR Millions)</th>
<th>PPE (In INR Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>2,15,481</td>
<td>88.696</td>
<td>5.609</td>
<td>0.858</td>
</tr>
<tr>
<td>2013</td>
<td>2,28,296</td>
<td>98.484</td>
<td>5.944</td>
<td>0.874</td>
</tr>
<tr>
<td>2014</td>
<td>2,22,809</td>
<td>116.882</td>
<td>6.952</td>
<td>0.732</td>
</tr>
<tr>
<td>2015</td>
<td>2,13,238</td>
<td>134.911</td>
<td>8.206</td>
<td>0.907</td>
</tr>
<tr>
<td>2016</td>
<td>2,07,739</td>
<td>153.771</td>
<td>9.235</td>
<td>0.663</td>
</tr>
<tr>
<td>2017</td>
<td>2,09,567</td>
<td>172.538</td>
<td>10.067</td>
<td>0.709</td>
</tr>
<tr>
<td>2018</td>
<td>2,64,041</td>
<td>175.777</td>
<td>10.040</td>
<td>-0.588</td>
</tr>
<tr>
<td>2019</td>
<td>2,57,252</td>
<td>198.143</td>
<td>10.809</td>
<td>0.062</td>
</tr>
<tr>
<td>2020</td>
<td>2,49,448</td>
<td>223.169</td>
<td>11.879</td>
<td>0.994</td>
</tr>
<tr>
<td>2021</td>
<td>2,45,652</td>
<td>249.572</td>
<td>12.564</td>
<td>1.121</td>
</tr>
<tr>
<td>CAGR</td>
<td>1.32%</td>
<td>10.9%</td>
<td>8.4%</td>
<td>2.71%</td>
</tr>
<tr>
<td>% GROWTH</td>
<td>14%</td>
<td>181.38%</td>
<td>123.99%</td>
<td>30.6%</td>
</tr>
</tbody>
</table>

Source: Annual Reports of SBI & own computations

Analysis:

With the reference to the above table, it is marked that in this period of ten years, there is a noteworthy growth in the productivity of employees of SBI. In the terms of Business Per Employee (BPE), a strong growth (CAGR of 10.9%) is clearly visible in SBI. BPE of SBI is increase to almost three times in this decade. On an average per year BPE is increased by INR 17.875 Million, representing a healthy growth in the deposits and advances of the bank. This type of growth is also visible in the case of Revenue Per Employee (RPE). It is also showing a remarkable CAGR 8.4% and RPE is just double in this period. On an average per year RPE is increased by INR 0.773 Million, representing a positive growth in the interest and other incomes of the bank.

On other hand, the Profit Per Employee (PPE) is not up to the mark, it continuously fluctuating during this decade. In the financial year 2017-18 there was a loss and in the next year a nominal amount of PPE was also visible. The increasing Non-Performing Assets (NPAs) of the bank is the main reason of this variation. However, during the research period, the there is a nominal increase in the number of employees of the bank. It means with the nominal increase in the workforce, SBI is able to generate more business and more revenue in this decade.

The study used an ordinary least square regression (OLS) model with the dependent variable being Business per Employee (BPE) and the independent variables being ATM and POS.

Regression Model:

\[ BPE_t = \alpha_0 + \beta_1ATMt + \beta_2POSt + \epsilon_t \]
Table No 3 Results of Ordinary Linear Regression (OLS)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>79.74686</td>
<td>29.14541</td>
<td>2.736172</td>
<td>0.0291</td>
</tr>
<tr>
<td>ATM</td>
<td>0.000319</td>
<td>0.000934</td>
<td>0.341630</td>
<td>0.7427</td>
</tr>
<tr>
<td>POS</td>
<td>0.000173</td>
<td>4.71E-05</td>
<td>3.681290</td>
<td>0.0078</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.940408</td>
<td>Mean dependent var</td>
<td>161.1943</td>
<td></td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.923382</td>
<td>S.D. dependent var</td>
<td>52.97390</td>
<td></td>
</tr>
<tr>
<td>S.E. of regression</td>
<td>14.66314</td>
<td>Akaike info criterion</td>
<td>8.451875</td>
<td></td>
</tr>
<tr>
<td>Sum squared resid</td>
<td>1505.053</td>
<td>Schwarz criterion</td>
<td>8.542651</td>
<td></td>
</tr>
<tr>
<td>Log likelihood</td>
<td>-39.25938</td>
<td>Hannan-Quinn criter.</td>
<td>8.352295</td>
<td></td>
</tr>
<tr>
<td>F-statistic</td>
<td>55.23306</td>
<td>Durbin-Watson stat</td>
<td>1.116708</td>
<td></td>
</tr>
<tr>
<td>Prob(F-statistic)</td>
<td>0.000052</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

With the help of regression model, an attempt has been made to analyse the impact of alternative banking channels on the productivity of SBI’s employees. On the left side of the equation BPE is the dependent variable and on the right side there are multiple variables, $\alpha$ (alpha) is the intercept, $\beta$ (beta) is the slope coefficient, the change, ATM is one of the dependent variables, POS is the other dependent variable and $e$ represents error term, subscript $t$ represents that the data is time series data. Results of the regression analysis highlighted that $P < 0.05$ (0.0078) in case of POS indicating that there is significant impact of POS on BPE on the other hand $P > 0.05$ (0.7427) in case of ATM indicating insignificant impact of ATM on BPE following the rule of thumb which states that if the $p$-value is greater than 5%, the relationship is said to be insignificant if it is lesser than 5%, it is significant.

On interpreting the results of the coefficient, it can be concluded that if ATM increases by one unit, BPE will increase by 0.000319 INR and if POS increases by one unit, BPE will increase by 0.000173 INR. The values of R-square or R-square adjusted are almost the same and tell us how much independent variables are predicting (impacting) dependent variables. In this case, the value of r square is 94.04%, so 94.04% of independent variables are predicting BPE. F statistics tell us the overall combined effect, the overall fitness of the model. Since the probability estimates of F-statistics is less than 5% ($P 0.05$ (0.000052), it means the model is fit.

9. Findings And Conclusion

SBI is not only the backbone of our banking industry, but it is also playing a leading role in the process of social and economic welfare of the millions of the people. With the strength of 0.245 Million employees, bank is working with an objective of providing fast and secure financial services to the mass population of the country. There was the time when once SBI was ranked low in employee’s productivity but with the increased competitive and dynamic banking environment, SBI has adopted customer-driven ideas to address the swift and changing requirements of their customers. The SBI is using alternative banking channels not only to improve their own internal processes but also to increase facilities and services to their customers. The mobile app of SBI, ‘YONO’ is now operational with total registered user base of 37.1 Million with more than 10 million logins per day. With the largest network in the country, on an average, over 11.2 Million transactions per day are routed through ATMs. In the current scenario out of the total transactions 93% are operating through ABC only. These alternative banking channels includes BCs outlets, ATMs/CDMs, internet banking, mobile banking, POS terminal and kiosk. SBI has an outstanding growth in the installation of POS terminal. The installation of new POS terminal is also increased due to the demonetization (2016) and the Covid-19 pandemic (2020). This type of growth is also visible in the case of the installation of new ATMs and CDMS. In order to provide credit facility and to promote cash less payments, during this...
period SBI has successfully issued about ten million new credit cards to their customers. With the help of these millions of new cards, the monthly transaction increased by almost ten times. In order to provide 24X7 cash withdrawal facility and to promote cash less payments, during this period SBI has successfully issued about 130 Million new debit cards to their customers. On an average per year 14.4 Million new debit cards were issued by the SBI. With the help of these new cards, there is a significant increase in monthly transaction. It can be concluded that all the ABCs has increased the productivity of employees, Business Per Employee (BPE), Revenue Per Employee (RPE) Profit Per Employee (PPE) with a sustained rate.

References
(Annual Report of SBI, 2011-12 to 2020-21)
Reserve Bank of India (2017)


The impact of Political Events and Covid-19 pandemic on Return Volatilities of 3 Sectors in the Stock Exchange of Thailand during 2019 to 2021

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Abstract
The objective of this paper is to study the impact of political events and Covid-19 pandemic on return volatilities of the sectorial stock market in Thailand. The researcher specifically used ARMA model for main equation and one EGARCH model for the volatility equation. This model is applied to the daily returns relevant to three selected sector indexes of stock exchange of Thailand from 25 March 2019 to 24 March 2021. To test the impact of political events and Covid-19 on banking, consumer product, and service sectors indexes stock market return volatility. The results show that both political events and Covid-19 pandemic have significant impact on return volatility of the selected sector indexes. However, the return volatilities of Service sector are not impact by Covid-19 pandemic. In part of political events, student’s protest has impact continuously 3 days. And other political events have significant impact on second and third day after the situation. Meanwhile, all of situations have negative impact, except student’s protest. Furthermore, results confirm that main three political events and Covid-19 pandemic have stronger impact on return volatility of selected sector index stock market in Thailand.

Keywords: Political events, Covid-19 pandemic, Stock market return volatility, EGARCH, Granger Causality analysis.

1. Introduction
1.1. Introduction of the study
Political events are a situation of uncertainty and unrest in the political system. Thailand has a long history of political protests since 2004, but now a new protest starting again in early 2020. Which the main cause of the protesting in Thailand is anti-government of Prime Minister Prayut Chan-o-cha by university students are leaders for call-out for major democratic reforms¹. Demonstrations started in university campuses at the beginning of the year 2020 in response to a court decision to dissolve the Future Forward party. This political party was popular among young generation people and support the return of Thailand to democracy following a 2014 military coup. The protests have become an unprecedented event over recent month. In Thailand today, it was the most damaging situations to economic growth.

General elections are one of political events. It is the major role in political development of Thailand. The voters are the keys for changing in the outcome and in the composition of the government, which is the result in policy change through elections. The demonstrations by all groups of people both for and against the government could be affected economy. Many perspectives on many different things of voters also play an important role in causing political risk in Thailand. The weakness of political system is caused decline in the economic performance and less development of the countries. Moreover, instable political conditions and different political events could affect the stock market in Thailand and also affect investors’ decision to invest in the stock market (Pástor & Veronesi, 2013).

It could bring the investors in part of raising capital of firm and generating earnings. Therefore, this study investigates on how much stock market will fluctuate due to different political events which can also affect the economy in both positive or negative way (Suleman, 2012).

The ongoing global, COVID-19 pandemic has created new economic and social disruption around the world including Thailand. The pandemic was initially identified in Wuhan, China in December 2019. The most impact from the Covid-19 is business and financial attitudes, which this situation made several business shutdowns and in part of financial market also has negative impact². As a result, investors and traders are more concerned about market situation. Moreover, the COVID-19 pandemic has continued to be a source of volatility in financial markets, for example, stock markets, exchange rate markets, and credit markets. Therefore, this crisis might
affect the relationship between Covid-19 pandemic and return volatilities on stock market.

This study aims to analyses the political events including students’ protest, violent protest, Thai general election and Covid-19 pandemic. For stock market return volatility is Bank sector, Consumer Product sector and Services sector. This study is used daily time series data for the period March 2019 to March 2021. Moreover, this study using GARCH models in order to determine the influence of these factors among the selected sectors on stock market.

1.1 Research Objectives

The objective of this paper is to test the impact of the political events and Covid-19 pandemic and three selected index sectors including Bank sector, Customer product sector, and Service sector. The study used daily data between March 2019 to March 2021 and employed the Generalized Autoregressive Conditional Heteroscedasticity (GARCH) to forecast the return volatility of stock market of Thailand. The full detail of research objective is as follow:

To test whether student’s protest, violent protest, Thai general election, and Covid-19 pandemic have significant impact the return volatilities of Bank, Consumer Product, and Service sector index of the Stock Exchange of Thailand.

1.2 Scope of the research

This financial research used the three political events including, students’ protest, violent protest, and Thai general election and Covid-19 pandemic which may have the impact on three selected sector indexes of the Stock Market of Thailand including, Banking, Consumer product, and Services. The daily data was collected from the Stock Exchange of Thailand from 25 March 2019 to 24 March 2021 only on operating days of each stock. The researcher used ARMA and EGARCH-typed models for testing the relationship.

2. Review of Related Literature

Ahmed (2017) studied the impact of political instability on daily data of the EGX market index with eight sectorial stock market indexes during the period 2011 to 2014. Ahmed used a VAR-EGARCH mode with selected events to determine the result. The result showed that the political instability is affected the risk returns of the major market sectors.

Chau et al. (2014) studied the case of the “Arab Spring” on stock market volatility in six MENA countries. This research determined the influence by using different GARCH models on stock market volatility in six MENA countries. In this study, they found that the volatility of Islamic indices increases during the period of political turmoil while there was little or no impact on the volatility of conventional indices.

Laverde et al. (2009) tested the impact of crime, political events to market returns volatility in Colombia. They adopted daily data during July 2001 to October 2006 to confirm a link between variables. Their results show that the uncertainty in politics and crime are important determinants of market returns volatility. Market returns are also partly influenced by crime while political uncertainty has negative impact on market returns of Colombia. Therefore, political stability could affect the growth in long run period.

Aggarwal et al., (1999) studied the volatilities in developing stock markets and tested internal and external events to check the impact events to the volatility. The different political events become the main source of volatility in stock market in different countries. The result also shows that domestic reforms generate more impact than international events such as Mexican exchange rate crises, high inflation at Latin America, etc. The stock markets become volatile for ten years period with only single international event.

Döpke & Pierdzioch, (2006) conducted the research to watch how stock market depends on political events. They used VAR-based and popularity functions to test the relationship between variables. The results suggest that there is a weak relationship between political events and stock market. It also concludes that exchange of government between political parties does not make the stock market more volatile. Moreover, in the voting period, they did not find the effect on the German Stock Exchange. Political events have strong impact on stock returns.

Hussain and Qasim (2007) studied the effect of social unrest on the economic situation by using the stock market as indicator of economic development. They used the data during 1960 to 2002. Results of this study shows that stock market was at normal condition around 1980s but gained energy after the liberalization during 1990s. The result supports that the stock returns was fluctuated with different political events.

Qureshi et al. (2010) investigated the effect of political instability on growth of country by using stock
market returns as the indicator for economy. This research adopted the political instability index. This study also used data from 1971 to 2012 and found out that the average economic growth rate in the past is good at 5% approximately. The result shows that, the volatility in stock returns and economic development was high during the period of high political instability.

Ramelli and Wagner (2020) tested the relationship among cross-sectional reactions to COVID-19 in the U.S. stock market by using the Russell 3000 index. The result shows the strong evidence for the role of international trade and value chains on company value, especially with China. That is, investors perceived companies in the U.S. more favorably when the COVID-19 situation in China was better.

Davis et al. (2020) investigated the impact of the market to the news about COVID-19 pandemic by using the risk factors of U.S. companies. The result shows that the bad news generate significant negative abnormal return for firms with high exposures to COVID-19 pandemic such as firms in travel and lodging sectors.

Baker et al. (2020) studied the impact of the U.S. stock market on daily stock movements. This paper found that an unprecedented pandemic of COVID-19 on daily stock movements being more severe compared to the Spanish Flu of 1918–1919 and the influenza pandemic of 1957–1958.

Roberts (1990) studied the impact of the US presidential election outcome in 1980, and the victory of Ronald Reagan on the change in stock prices of military related companies. The result showed that there was a positive effect on stock prices.

Niederhoffer et al. (1970) analyzed the reaction of stock market to the results of the presidential election over a long period of time. It shows that the stock market reaction on the first day and first week after the election can be different depending on who is the winner candidate. The results show that, the market increases after the victory of the Republican candidate and decreases after victory of the Democratic candidate.

3. Conceptual Framework
3.1 Research Conceptual Framework
As the Figure 1 shows, based on the several previous studies. There are five variables in the conceptual framework. Which separate to two independent variables are political events and Covid-19 pandemic. There are three dependent variables which include Bank sector, Consumer product sector, Service sector in the Stock Exchange of Thailand between year 2019 and 2021.

![Figure 1: Conceptual Framework of the study](image)

3.2 Research Models
According to the factors which were investigated previously, the researcher designed the model for this research to test whether the impact by using the selected factors which are include students’ protest, violent protest, Thai general election, and Covid-19 pandemic on bank sectors, consumer product sectors, and service sectors stock market return volatility. Dummy variables representing the events of political events and Number of Covid-19 pandemic infection people were inserted in the conditional variance equation of the best EGARCH-typed model for each stock sector index as follow:

$$\sigma_t^2 = [\text{selected EGARCH typed model}] + \beta_1 \text{Pol1}_t - k + \beta_2 \text{Pol2}_t - k + \beta_3 \text{Pol3}_t - k + \beta_4 \text{Covid}_t - k$$

where $\sigma_t^2$ = volatility of the selected sectorial stock market index return
Pol1 = dummy variable of Political Event 1 (day of student protest = 1, day of no protest = 0)
Pol2 = dummy variable of Political Event 2 (day of violent protest = 1, day of no protest = 0)
Pol3 = dummy variable of Political Event 3 (day of general election = 1, day of no general election = 0)
Covid = Number of Covid Infected people in Thailand on a specific date
t = day t
k = number of lag day (1,2, or 3)

3.3 Research Hypotheses
This study has 12 hypotheses to present the relationships between the political events and Covid-19 pandemic impact on the three selected stock market indexes sector in Thailand on return volatilities during 25 March 2019 to 24 March 2021. The null hypotheses for testing are listed as following.

H1o: Students’ protest doesn’t significant impact the return volatility of Bank sector index.
H2o: Violent protest doesn’t significant impact the return volatility of Bank sector index.
H3o: Thai general election doesn’t significant impact the return volatility of Bank sector index.
H4o: Covid-19 pandemic doesn’t significant impact the return volatility of Bank sector index.
H5o: Students’ protest doesn’t significant impact the return volatility of Consumer product sector index.
H6o: Violent protest doesn’t significant impact the return volatility of Consumer product sector index.
H7o: Thai general election doesn’t significant impact the return volatility of Consumer product sector index.
H8o: Covid-19 pandemic doesn’t significant impact the return volatility of Consumer product sector index.
H9o: Students’ protest doesn’t significant impact the return volatility of Service sector index.
H10o: Violent protest doesn’t significant impact the return volatility of Service sector index.
H11o: Thai general election doesn’t significant impact the return volatility of Service sector index.
H12o: Covid-19 pandemic doesn’t significant impact the return volatility of Service sector index.

4. Data Analysis and Results

4.1 Data Collection

In order to do the research, the wide range of the data was collected to test the hypothesis. There are all together five variables tested in this research. All data are gathered in term of daily data. The three selected sectors were collected from the Stock Exchange of Thailand (SET) through https://www.setsmart.com. Daily observations used in this study are from the period of March 2019 to March 2021. For the main factors of Political events were collected from https://www.wikipedia.org and the number of infected people from Covid-19 pandemic, the researcher used the data during 13 January 2020 to 24 March 2021 which collected the data from https://covid19.thaipbs.or.th/timeline/.

4.2 Unit Root Test

As seen in Table 1, the unit root test based on the Augmented Dickey-Fuller (ADF) was applied. All of the sector indexes were transformed into the log returns and are stationary. It means that all variables can be used to estimate the ARMA and EGARCH model in the next step.

<table>
<thead>
<tr>
<th>Variable</th>
<th>ADF t-statistic</th>
<th>p-value</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>BANK</td>
<td>-7.449102</td>
<td>0</td>
<td>Stationary</td>
</tr>
<tr>
<td>CONSUMP</td>
<td>-22.15289</td>
<td>0</td>
<td>Stationary</td>
</tr>
<tr>
<td>SERVICE</td>
<td>-24.31475</td>
<td>0</td>
<td>Stationary</td>
</tr>
</tbody>
</table>

4.3 Statistical Treatment of Data

First step of the research, the Augmented Dickey-Fuller (ADF) test was being used in order to detect the stationary of data. After finished tested about the unit root test, all sectoral stock market indexes can be used with ARMA and EGARCH models to estimate variances in this step. The autoregressive moving average (ARMA) linear models, is widely used in many fields of time series forecasting. There is strong evidence that suggests that EGARCH model is strong in volatility forecasting than other historical models (Liu and Morley, 2009). Therefore, the event variables will be tested with the most fitted EGARCH model. The best ARMA and EGARCH model of each sector stock index are listed in table 2.

<table>
<thead>
<tr>
<th>Sectoral stock market</th>
<th>Best ARMA Model</th>
<th>Best EGARCH Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>BANK</td>
<td>MA(3)</td>
<td>EGARCH(1,1)</td>
</tr>
<tr>
<td>CONSUMP</td>
<td>ARMA(3,3)</td>
<td>EGARCH(3,3)</td>
</tr>
<tr>
<td>SERVICE</td>
<td>MAMA(3,5)</td>
<td>EGARCH(3,3)</td>
</tr>
</tbody>
</table>
5. Research Results

Table 2: The best ARMA and EGARCH model for Sectoral Stock Market Index

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Sector</th>
<th>Event</th>
<th>1-day lag</th>
<th>2-day lag</th>
<th>3-day lag</th>
<th>Reject Ho</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Bank</td>
<td>Students’ protest</td>
<td>-0.08467</td>
<td>-0.066485</td>
<td>-0.121717</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(0.0000) **</td>
<td>(0.0000) *</td>
<td>(0.0000) **</td>
<td></td>
</tr>
<tr>
<td>H2</td>
<td>Bank</td>
<td>Violent protest</td>
<td>0.627123</td>
<td>0.443591</td>
<td>0.9165</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(0.0000) **</td>
<td>(0.0013) **</td>
<td>(0.0000) **</td>
<td></td>
</tr>
<tr>
<td>H3</td>
<td>Bank</td>
<td>Thai general election</td>
<td>0.05374</td>
<td>0.027398</td>
<td>0.116697</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(0.0064) **</td>
<td>(-0.2156)</td>
<td>(0.0003) **</td>
<td></td>
</tr>
<tr>
<td>H4</td>
<td>Bank</td>
<td>Covid-19 pandemic</td>
<td>-0.000104</td>
<td>-0.000121</td>
<td>0.116697</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(0.0011) **</td>
<td>(0.0017) **</td>
<td>(0.0003) **</td>
<td></td>
</tr>
<tr>
<td>H5</td>
<td>Consumer Product</td>
<td>Students’ protest</td>
<td>0.533492</td>
<td>0.316909</td>
<td>0.204692</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(0.0000) **</td>
<td>(0.0134) **</td>
<td>(0.0050) **</td>
<td></td>
</tr>
<tr>
<td>H6</td>
<td>Consumer Product</td>
<td>Violent protest</td>
<td>-0.335281</td>
<td>0.593927</td>
<td>0.861260</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(-0.0914)</td>
<td>(0.0146) *</td>
<td>(0.0002) **</td>
<td></td>
</tr>
<tr>
<td>H7</td>
<td>Consumer Product</td>
<td>Thai general election</td>
<td>-0.192839</td>
<td>0.950047</td>
<td>-0.32919</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(-0.1722)</td>
<td>(0.0000) **</td>
<td>(0.0179) *</td>
<td></td>
</tr>
<tr>
<td>H8</td>
<td>Consumer Product</td>
<td>Covid-19 pandemic</td>
<td>-0.000239</td>
<td>-0.000488</td>
<td>0.195219</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(-0.332)</td>
<td>(-0.7267)</td>
<td>(0.0194) *</td>
<td></td>
</tr>
<tr>
<td>H9</td>
<td>Service</td>
<td>Students’ protest</td>
<td>-0.83285</td>
<td>0.520081</td>
<td>-0.041215</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(-0.2878)</td>
<td>(0.0000) **</td>
<td>(-0.8196)</td>
<td></td>
</tr>
<tr>
<td>H10</td>
<td>Service</td>
<td>Violent protest</td>
<td>-0.568225</td>
<td>-0.76899</td>
<td>-0.336007</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(0.0205) *</td>
<td>(0.0001) **</td>
<td>(-0.0554)</td>
<td></td>
</tr>
<tr>
<td>H11</td>
<td>Service</td>
<td>Thai general election</td>
<td>-0.460311</td>
<td>-0.396905</td>
<td>-0.4634</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(0.0001) **</td>
<td>(-0.0554)</td>
<td>(-0.4634)</td>
<td></td>
</tr>
<tr>
<td>H12</td>
<td>Service</td>
<td>Covid-19 pandemic</td>
<td>-3.65E-05</td>
<td>0.000114</td>
<td>-0.00015</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(-0.7959)</td>
<td>(-0.7872)</td>
<td>(-0.4634)</td>
<td></td>
</tr>
</tbody>
</table>

Note: * *, ** mean significance at 5% and significance at 1% respectively.

Table 3: The hypothesis testing results

Table 3 shows that the null hypothesis 1 to 11 are rejected because the p-value of at least one lag test is less than 0.05. Therefore, there are significant impacts of the events to the volatilities of the selected sectorial stock indexes, except the last hypothesis. There is no significant impact of Covid-19 to the volatility of service sector stock index.

6. Discussions, Conclusion and Recommendation

6.1 Discussion and Conclusion

The study indicates that bank indexes sectors was significant impact by three political events and Covid-19 pandemic for almost every lag, except political event from Thai general election on second day lag (or previous 2 days). It can be explained that on Bank sectors stock market in Thailand, the investors are sensitive to every situation. In addition, violent protest and Thai general election have positive impact on return volatility. It refers that the stock was more volatized, so the investors face higher risk and can
possibly get more chances to get higher (or lower) return from investment.

While in consumer product indexes sector has been volatized by both political events and Covid-19 pandemic. Interestingly, for student’s protest has impact for all 3 days. Other political events have significant impact on second and third day after the situation. It is possible that the political events play an important role in consumer product sector stock market in Thailand, and these situations will attract more attention of investors. However, only student’s protest which have more volatize because it is positive impact. For the Covid-19 and election on 3-day lag, there are negative impacts. So, it may refer to less trades in those sectors of investors. The Covid also seems to have the weak impact to this consumer product sector, because the sales and profits of companies in this sector may not receive much impact from the pandemic.

Surprisingly, the study shows that the volatility of the service sector index was not impacted by Covid-19 pandemic. Meanwhile, service sector index volatility receives the significant impacts from political events, such as Thai general election in 1-day lag, and also violent protest in 1-day and 2-day lag. It is possible that in part of investment in service sector indexes, the investors concerned on political events more than Covid-19 pandemic situation. In addition, all of situations have negative impact on return volatility. It is possible that service sector was less volatized. So, the investors paused trading to wait and see further situations.

6.2 Recommendation

For this study, there are several recommendations. Firstly, this research benefits to investors in term of knowledge in order to gain better decision making and reduced investment risk. In addition, the investors who invest in 3 selected sectors can use the result of this study to forecast that return volatility when political events and Covid-19 pandemic occur in the future. Specially, violent protest, student protest, and Thai general election could generate higher risk and fluctuation on return volatilities of bank and consumer product sector in some lag periods, and that means the investors will have the possibility to gain higher profit.

6.3 Future studies

There are several directions for future research. Firstly, the researchers could add more related event variables or factors and use different types of event data. For example, the changes of regulatory, taxes, interest rates, and natural disasters. Secondly, this study had focus only economic condition in Thailand only which result from this research is unable to interpret the result of other countries, so the further studies are suggested to extend investments to other countries and compare the difference such as ASEAN, Japan, and Korea. Moreover, the researcher will study furthermore on other indexes sectors such as industry sectors, tourism sectors, and agriculture sectors. Lastly, the future research can choose the different time period and use wider time lag period for testing.

References:
Pakistan.” Political Economy Research Institute, University of Massachusetts working paper series 291 (2012).


A Comparative Study of Grades 10 and 11 Students’ Motivation for Learning English as a Foreign Language under Gamification and Teacher-Centered Activities at a Private School in Bangkok

Natnapa Polsan

Abstract

The purpose of the study was to compare motivation for learning English as a foreign language under gamification and teacher-centered activity of Grade 10 and Grade 11 students at a private school in Bangkok, Thailand. The study was included seven objectives and was conducted during September 2020 to August 2021. 24 of Grade 10 and 32 of Grade 11 students of the second semester in the academic year 2020 at a private school were sample of the study. Both grade level students were divided into two groups: experimental group and control group. A pre-post quasi-experimental study was conducted for eight weeks. The data were analyzed by means, dependent samples t-test, and independent samples t-test. According to the findings, there was no significant difference between Grade 10 and Grade 11 students’ motivation for learning English as a foreign language under gamification activity and teacher-centered activity at a significant level of .05. From the eight weeks of the experiment with two different activities, the students who participated in experimental group which participate in class that used gamification activity were not significantly different compared to the students who participated in control group which participate in class that used teacher-centered activity.

Keywords: Gamification activity, Teacher-centered activity, Grade 10, Grade 11, Motivation for learning English as a foreign language

JEL Classification Code: I20

1. Introduction

English is one of the most widely spoken foreign language in the world (Teixeira, 2021). Thai students must learn English as a foreign language from the first year of the study (MOE, 2008). In comparison to other countries, their English ratings are extremely low (ETS TOEIC, 2020). However, gamification trend has gained popularity as learning advanced technology, resulting in a new method of teaching in the classroom (Wang, 2015) Gamification can be used at every subject, every level, students of every age could enjoy gamified lessons (Maloney, 2019).

The researcher was an English as a foreign language teacher at the private school. Many of the students confronted with the problem of English as a foreign language learning in the school. They showed anxieties and demotivation in learning. On the other hand, some studies suggested problems in English as a foreign language learning in Thailand. One of the problems in English language learning in Thailand mentioned in those studies was the lack of motivation (Chunsuvimol et al., 2021; Darasawang, 2007; Imsa-ard, 2020; Noom-ura, 2013; Simpson, 2011). As the researcher found there are studies mentioned gamification can be used in English language learning to help in students’ autonomy development quickly with less stress as well as increase students’ motivation and engagement (Dicheva, 2017; Maloney, 2019).

As a result, the researcher sought to see if gamification may help students become more motivated in their English as a foreign language class. This study looked into the Grade 10 and Grade 11 students at a private school on their motivation for learning English as a foreign language under the gamification activity and teacher-centered activity.

2. Research Objectives

There were seven research objectives:

1. To determine the level of Grade 10 students’ motivation for learning English as a foreign language under gamification activity at a private school in Bangkok, Thailand

2. To determine the level of Grade 10 students’ motivation for learning English as a foreign language under teacher-centered activity at a private school in Bangkok, Thailand

3. To determine if there a significant different between Grade 10 students’ motivation for learning English as a foreign language under gamification activity and teacher-centered activity at a private school in Bangkok, Thailand
4. To determine the level of Grade 11 students’ motivation for learning English as a foreign language under gamification activity at a private school in Bangkok, Thailand

5. To determine the level of Grade 11 students’ motivation for learning English as a foreign language under teacher-centered activity at a private school in Bangkok, Thailand

6. To determine if there a significant difference between Grade 11 students’ motivation for learning English as a foreign language under gamification activity and teacher-centered activity at a private school in Bangkok, Thailand

7. To determine if there a significant difference between Grade 10 and 11 students’ motivation for learning English as a foreign language under gamification activity and teacher-centered activity at a private school in Bangkok, Thailand

3. Research Hypotheses

There were three research hypotheses developed for this study:

1. There is a significant different between Grade 10 students’ motivation for learning English as a foreign language under gamification activity and teacher-centered activity at a significant level of .05.

2. There is a significant different between Grade 11 students’ motivation for learning English as a foreign language under gamification activity and teacher-centered activity at a significant level of .05.

3. There is a significant different between Grade 10 and grade 11 students’ motivation for learning English as a foreign language under gamification activity and teacher-centered activity at a significant level of .05.

4. Theoretical Framework

4.1. The ARCS Model of Motivation

The ARCS model of motivational design was founded by John Keller in 1983 as he wanted to find how might people can design learning experience to develop sustain motivation on students (Keller, 2010). There are four key elements in the learning process which can encourage and sustain learners’ motivation. It comprised of Attention, Relevance, Confidence, and Satisfaction (Keller, 1999).

4.2. Self-determination Theory

Self-determination theory was the theory developed by Richard M. Ryan and Edward L. Deci in 1985 (Cherry, 2021). In the theory, Ryan and Deci postulated three psychological needs of human motivation. They are autonomy, competence, and social relatedness. Autonomy refers to the ability to feel independent and be able to have own choice in a way that meets one's needs. Competence is considered as the desire to get achievements in those actions. Lastly, relatedness, which is the need to be connected in a sense of interaction with others (Bovermann & Bastiaens, 2020). Self-determination theory was used as a framework for examining students’ motivation in learning context.

4.3. Behaviorist Learning Theory

Behaviorists profess a belief in the theory of behaviorism as behavior comprised of the reactions and movements that respond to rewards and punishments in a certain situation that can be observed from outside (Akdemir et al., 2016). The teacher is the person who takes full control of the lessons and class (Serin, 2018). The effectiveness of learning depends on the teacher as they direct the classroom and give feedback to students.

5. Conceptual Framework

The conceptual framework of this study was to find motivation for learning English as a foreign language of Grade 10 and Grade 11 in a private school in Bangkok, Thailand. Both Grade 10 and 11 were the source of data in this study. The variables in this study were gamification activity [experimental group] and teacher-centered activity [control group]. The dependent variables were Grade 10 students' motivation for learning English as a foreign language under Gamification [experimental group], Grade 10 students' motivation for learning English as a foreign language under teacher-centered activity [control group], Grade 11 students' motivation for learning English as a foreign language under Gamification [experimental group], Grade 11 students' motivation for learning English as a foreign language under teacher-centered activity [control group], Grade 10 and 11 students' motivation for learning English as a foreign language under Gamification [experimental group] and, Grade 10 and 11 students' motivation for learning English as a foreign language under teacher-centered activity [control group] (See Figure 1).
6. Literature Review

6.1. Gamification

Gamification was defined as the usage of game design techniques or game elements to apply to the non-game context. Any tasks or assignments can be gamified (Werbach and Hunter, 2012). It can be seen that in recent years, the popularity of games is increasing (Figuerola-Flores, 2016). Therefore, the gamification activity was used by applying game mechanics to the lessons in order to increase the participation of a student during the lesson and provide motivation to each person. The game elements can be awards, badges, prizes, and leaderboards.

6.2. Teacher-centered Activity

A teacher-centered activity was one of the activities that followed behaviorists learning theory which mainly about human behavior that can be observed and focused (Mcleod, 2019). Behaviorist was one of the techniques that used by teachers (Koch, 2009). However, there was critique on behaviorist that rewards and punishments cannot improve students’ internal mechanisms (Hardesty, 2018).

6.3. Self-determination Theory

The self-determination theory was the theory developed by Richard M. Ryan and Edward L. Deci. According to Ryan and Deci (2000), they clarified that the types of motivation depending on the difference in reasons or aims which cause an action. The difference between intrinsic motivation and extrinsic motivation was intrinsic motivation affects humans in any outcome as the thing was interesting or enjoyable while extrinsic motivation affected humans in any outcome as doing activities could prevent them from the undesirable consequences.

6.4. The ARCS Model of Motivation

The ARCS model of motivational design was founded by John Keller in 1983 as he wanted to find how might people design a learning experience to develop sustain motivation in students (Keller, 2010). The challenge made Keller developed the ARCS model motivation (Keller, 2000). The model was used as a guideline for educators to create a strategy to build learner’s motivation and make it sustain. The attribute of the ARCS Model of Motivation was divided into two major parts. The first part was the part that the model was divided from the synthesis of motivational characteristics. The characteristic into four parts. They were attention, relevance, confidence, and satisfaction. The second part of the model was the learning design which was the part of creating a lesson that builds up learners’ motivation. Therefore, the ARCS Model of Motivation was both a motivational and instructional model (Molaee & Dortaj, 2015).

7. Methodology/Procedure

7.1. Population and Sample

The population in this study was 24 of Grade 10 and 32 of Grade 11 students at the private school. The number of samples were divided according to the two programs. The programs were English-Chinese program and Science-Mathematics program. There was one section in each program. For example, Grade 10/1 was English-Chinese program, Grade 10/2 was Science-Mathematics program, Grade 11/1 was English-Chinese program, and Grade 11/2 was Science-Mathematics program.

Before the experiment, the researcher gave the Course interest survey pretest to students in order to ensure that they have the same motivation level. The sample was chosen according to the sections then was divided into two groups; experimental group students which were examined students’ motivation in gamification activity and control group students which were examined students’ motivation in teacher-centered activity. Table 1 showed information about each group of the sample.
Table 1: Information of the Sample in this Study

<table>
<thead>
<tr>
<th>Scale</th>
<th>Sample</th>
<th>Experimental Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 10 students</td>
<td>24</td>
<td>17</td>
<td>7</td>
</tr>
<tr>
<td>Grade 11 students</td>
<td>32</td>
<td>24</td>
<td>8</td>
</tr>
</tbody>
</table>

7.2. Research Instrument

Course Interest Survey developed by Keller was used as a research instrument in this study (Keller, 2010). It was a survey that developed according to ARCS model of motivation. It consisted of 34 items. Students were asked to pick one of the five-point Likert-type scales. Keller (2010) stated that the score of the survey was scaled from 1 to 5. The minimum score of the survey is 34, the maximum is 170, and the midpoint of the survey is 102. However, the maximum, midpoint and minimum of each subscale are different as per number of items in each subscale. Therefore, the score can be determined by finding the average of each subscale. Also, there are 9 items marked reverse are negative which needed to be reversed score before added into the score determination.

7.3. Validity and Reliability

Course Interest Survey (CIS) has been validated by (Keller, 2010) which was the creator of the instrument. He used the course interest survey with 200 university students to estimate the internal consistency of course grades and grade point averages. This resulted as the correlations with course grades are significant. Therefore, this supports the validity of the course interest survey as a situation-specific measure of motivation. For the reliability, it was reported in overall Cronbach’s alpha coefficient of .95 (Keller, 2000; Keller & Subhiyah, 1993). The survey was translated from English to Thai version. Back translation method was also used to ensure that the translation meet validity.

8. Data Analysis and Treatment

The research process was summarized in Table 2.

The researcher taught English as a foreign language using the gamification activity and teacher-centered activity for eight weeks. The classes were available for three periods per week and each period last for 50 minutes. The lessons were planned according to the book provided by the school. The experimental group was the class that learning activities was gamified by Classcraft and Kahoot! The control group was the class that studied in traditional learning activity.
9. Findings
The findings of this study based on seven objectives.

9.1. Research Objective One: to determine the level of Grade 10 students’ motivation for learning English as a foreign language under gamification activity at a private school in Bangkok, Thailand.

A motivational experiment survey pretest was given to the students before starting the gamification activity and then it was given after the instruction as a posttest. Table 3 presented means and standard deviations of Grade 10 students’ motivation pretest and posttest for learning English as a foreign language under gamification activity.

Table 3: Mean and Standard Deviation Grade 10 Students Motivation for Learning English as a Foreign Language under Gamification Activity (n=17)

<table>
<thead>
<tr>
<th>Gamification Activity</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>3.87</td>
<td>0.33</td>
<td>High</td>
</tr>
<tr>
<td>Post-test</td>
<td>3.96</td>
<td>0.35</td>
<td>High</td>
</tr>
</tbody>
</table>

Finding shown the pretest was (M=3.87) and posttest was (M=3.96). The results indicated that the students who participated in gamification activity has high motivation for learning English as a foreign language.

9.2. Research Objective Two: to determine the level of Grade 10 students’ motivation for learning English as a foreign language under Teacher-centered activity at a private school in Bangkok, Thailand.

A motivational survey pretest was given to the students before starting the teacher-centered activity and the motivational survey posttest was given after the instruction to determine students’ pre and post motivational level. Table 4 presented means and standard deviations of Grade 10 students’ motivation pretest and posttest for learning English as a foreign language under teacher-centered activity.

Table 4: Mean and Standard Deviation Grade 10 Students Motivation for Learning English as a Foreign Language under Teacher-centered Activity (n=7)

<table>
<thead>
<tr>
<th>Teacher-centered Activity</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>3.83</td>
<td>0.52</td>
<td>High</td>
</tr>
<tr>
<td>Post-test</td>
<td>4.21</td>
<td>0.35</td>
<td>High</td>
</tr>
</tbody>
</table>

9.3. Research Objective Three: to determine if there a significant different between Grade 10 students’ motivation for learning English as a foreign language under gamification activity and teacher-centered activity at a private school in Bangkok, Thailand.

The dependent sample t-test was used to determine if there a significant different between Grade 10 students’ motivation for learning English as a foreign language under gamification activity and teacher-centered activity at a private school in Bangkok, Thailand which was also the hypotheses of the study. Data from both groups were analyzed the data variances. Dependent sample t-test result on pre-test and post-test was shown in Table 5.

Table 5: Dependent Sample t-test of Grade 10 students’ Motivation for Learning English as a Foreign Language under Gamification Activity and Teacher-centered Activity the Pre-test and Post-test

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Group</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>Experimental</td>
<td>17</td>
<td>3.87</td>
<td>0.33</td>
<td>.196</td>
<td>22</td>
<td>0.845</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>7</td>
<td>3.83</td>
<td>0.33</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-test</td>
<td>Experimental</td>
<td>17</td>
<td>3.96</td>
<td>0.35</td>
<td>1.620</td>
<td>22</td>
<td>0.119</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>7</td>
<td>4.21</td>
<td>0.35</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 5 comprised of the analysis where the experimental group which was the gamification activity pre-test and post-test.

For pre-test (n=17, M=3.96, SD=.35) and the teacher-centered activity pre-test (n=7, M=4.21, SD=.35) were compared. The analysis recorded that t (.196.) and p=.845.

For post-test (n=7, M=3.96, SD=.35) and the teacher-centered activity pre-test (n=7, M=4.21, SD=.35) were compared. The analysis recorded that t (-1.620) and p=.119.

As a result, the objective was not linked to the research to the hypotheses and there is no significant different between Grade 10 students’ motivation for
learning English as a foreign language under gamification activity and teacher-centered activity at a significant level of .05.

9.4. Research Objective Four: to determine the level of Grade 11 students’ motivation for learning English as a foreign language under gamification activity at a private school in Bangkok, Thailand.

A motivational experiment survey pretest was given to the students before starting the gamification activity and then the motivational experiment survey was given after the instruction as a posttest. Table 6 presented means and standard deviations of Grade 11 students’ motivation pretest and posttest for learning English as a foreign language under gamification activity.

Table 6: Mean and Standard Deviation Grade 11 Students Motivation for Learning English as a Foreign Language under Gamification Activity (n=24)

<table>
<thead>
<tr>
<th>Gamification Activity</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>3.59</td>
<td>0.25</td>
<td>High</td>
</tr>
<tr>
<td>Post-test</td>
<td>3.67</td>
<td>0.36</td>
<td>High</td>
</tr>
</tbody>
</table>

According to Table 6, finding showed the pretest was (M=3.59) and posttest was (M=3.67). The results indicated that the Grade 11 students who participated in gamification activity has higher motivation for learning English as a foreign language.

9.5. Research Objective Five: to determine the level of Grade 11 students’ motivation for learning English as a foreign language under teacher-centered activity at a private school in Bangkok, Thailand.

The motivational survey pretest was given to the students before starting the teacher-centered activity and the motivational survey posttest was given after the instruction to determine students’ pre and post motivational level. Table 7 presented means and standard deviation of Grade 11 students’ motivation pretest and posttest for learning English as a foreign language under teacher-centered activity.

Table 7: Mean and Standard Deviation Grade 11 Students Motivation for Learning English as a Foreign Language under Teacher-centered Activity (n=8)

<table>
<thead>
<tr>
<th>Teacher-centered Activity</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>3.54</td>
<td>0.33</td>
<td>High</td>
</tr>
<tr>
<td>Post-test</td>
<td>3.64</td>
<td>0.29</td>
<td>High</td>
</tr>
</tbody>
</table>

According to the Table 7, finding showed the pretest was (M=3.83) and posttest was (M=4.21). The results indicated that the Grade 11 students who participated in teacher-centered activity has high motivation for learning English as a foreign language.

9.6. Research Objective Six: to determine if there a significant different between Grade 11 students’ motivation for learning English as a foreign language under gamification activity and teacher-centered activity at a private school in Bangkok, Thailand.

The dependent sample t-test was used to determine this objective which was also the hypotheses of the study. The data from both groups were analyzed the data variances. The dependent sample t-test analysis resulted on pre-test and post-test was shown in Table 8.

Table 8: Dependent Sample t-test of Grade 11 students’ Motivation for Learning English as a Foreign Language under Gamification Activity and Teacher-centered Activity the Pre-test and Post-test

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Group</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>Exper</td>
<td>24</td>
<td>3.59</td>
<td>0.25</td>
<td>0.42</td>
<td>30</td>
<td>0.674</td>
</tr>
<tr>
<td></td>
<td>mental</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>8</td>
<td>3.54</td>
<td>0.33</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-test</td>
<td>Exper</td>
<td>24</td>
<td>3.67</td>
<td>0.36</td>
<td>1.389</td>
<td>30</td>
<td>0.699</td>
</tr>
<tr>
<td></td>
<td>mental</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>8</td>
<td>3.64</td>
<td>0.29</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 8 comprised of the analysis where the experimental group which was the gamification activity pre-test and post-test.

For pre-test, (n=24, M=3.59, SD= .25) and the teacher-centered activity pre-test (n=8, M=3.54, SD= .33) were compared. The analysis recorded that t (.423.) and p=.674.
For post-test, (n=24, M=3.67, SD=.36) and the teacher-centered activity pre-test (n=8, M=3.64, SD=.29) were compared. The analysis recorded that t (.389.) and p=.699.

As a result, the objective was not linked to the research to the hypotheses and there is no significant different between Grade 11 students’ motivation for learning English as a foreign language under gamification activity and teacher-centered activity at a significant level of .05.

9.7. Research Objective Seven: to determine if there a significant different between Grade 10 and 11 students’ motivation for learning English as a foreign language under gamification activity and teacher-centered activity at a private school in Bangkok, Thailand.

The dependent sample t-test was used to determine this objective. This objective was also the hypotheses of the study. The data from students who participated in class that researcher taught with gamification activity was experimental group and the other class that researcher taught with teacher-centered activity were the control group. Both groups were analyzed the data variances before using the dependent sample t-test. The dependent sample t-test analysis result was shown on Table 9

Table 9: Independent Sample t-test of Grade 10 and Grade 11 students’ Motivation for Learning English as a Foreign Language under Gamification Activity and Teacher-centered Activity

<table>
<thead>
<tr>
<th>Group</th>
<th>No. of students</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experi</td>
<td>G.10</td>
<td>17</td>
<td>41</td>
<td>3.80</td>
<td>0.37</td>
<td>-0.894</td>
<td>54</td>
</tr>
<tr>
<td>mental</td>
<td>G.11</td>
<td>24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>G.10</td>
<td>7</td>
<td>15</td>
<td>3.91</td>
<td>0.43</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G.11</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As a result, the objective was not linked to the research to the hypotheses and there was no significant different between Grade 10 and Grade 11 students’ motivation for learning English as a foreign language under gamification activity and teacher-centered activity at a significant level of .05.

10. Discussion

The result of this study determined that there is no significant difference of Grade 10 and Grade 11 students' motivation for learning English as a foreign language under gamification activity and teacher-centered activity. Students’ motivation was measured with the course interest survey as a pretest and posttest. From the eight weeks of the experiment with two different activities, the students who participated in experimental group were not significantly different compared to the students who participated in control group which participate in class that used teacher-centered activity.

The result is similar to the study of Raeijmaekers et al. (2019) investigated the effect of gamification activity. It was implemented in a usability test on intrinsic motivation. The finding showed the participant did not have higher intrinsic motivation compared with the participant group in no gamification condition. Also, the result is similar to Mekler et al. (2013), they examine on the effect of gamification on intrinsic motivation and students’ performance which resulted as gamification is effective in increasing students’ performance. However, in term of motivation, gamification is remained unaffected to intrinsic motivation, which leads to the suggestion that the educators should be aware in designing gamified learning lessons.

In the teaching period, some of the students in experimental group said they were not smart enough to get to the top of the leaderboard. On the contrary, the control group students said they felt less stressed without the leaderboards. Therefore, it seems like this is the reasons that gamification activity showed no significantly different in motivation compared to the teacher-centered activity. Since confidence is one of the subcategories of the model that can create motivation (Keller, 1983). Furthermore, according to the self-determination theory, if a person has difficulty with a particular task or receives negative feedback, their feelings of competence can decline (Lopez-Garrido, 2021). On the contrary, in the control group students, the students seem to be less stressed with lessons. This can be concluded that students were lack of confidence. Which leads to the no significant difference in the hypotheses.
In conclusion, applying both gamification and teacher-centered activities in lessons can lead the students to get highly motivated. But there is no significant different between the two activities. However, the result maybe different in term of different population and sample as well as the time ranges in experiment.

11. Recommendations

Based on the study results, recommendations are provided for students, school administrators, teachers of the targeted private school, Bangkok, Thailand, and for the future researchers interested in conducting a similar study.

11.1. For Students

This study can be an informative guide for them in case, they may have a chance to study English as a foreign language under gamification activity.

11.2. For Teachers

English as a foreign language teacher can use the information in this study to help them in preparing the gamification activity in their English as a foreign class. As well as to make them aware of designing gamification activities in English as a foreign language lesson. Since the English as a foreign language lesson under gamification and teacher-centered activities are not significantly different. Therefore, this study can help the teacher in preparing gamified activities in class.

11.3. For Administrator

This study can help the administrator to review the information on different activities used in English as a foreign language lesson as well as students' motivation during the lesson that using different activities. The school administrators should provide training for English as a foreign language teacher to let them understand the effect of activities that can be effective should be used to let students not restricted to teacher-centered activity all the time.

11.4. For Researchers

It is suggested for future researchers to adopt qualitative research to investigate different aspects of using gamification activities and teacher-centered activities in English as a foreign language class. Moreover, it is recommended to find out the motivation for learning English as a foreign language under gamification and teacher-centered activities in different population and sample in order to investigate if the activities have an effective result. Which can lead to the awareness of using gamified activities in English as a foreign class in the future.

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Education, 82, 217–227. doi: 10.1016/j.compedu.2014.11.004
A Comparative Study of Grade 7 Students’ Chinese Listening Achievement With Bilingual Teaching Method and Monolingual Teaching Method in Learning Chinese as a Foreign Language Class at an International School Bangkok, Thailand

Dan Cui

Abstract

The purpose of this study was to determine if there were significant differences between Grade 7 students’ Chinese listening achievement with bilingual teaching method (BTM) and monolingual teaching method (MTM) in learning CFL class at an international school in Bangkok, Thailand, in the academic year 2021-2022. This study was conducted on a population sample of 59 Grade 7 students who were divided into two groups. The experimental group was taught with BTM, while the control group was taught with MTM, taught with the same lesson plans within a six-week experimental period. The research instrument was designed through pretest and posttest of the listening section of YCT (Level 2) test. YCT was an national standardized test of Chinese language proficiency. The data was collected from pretest and posttest scores and compared through both descriptive (i.e., mean and standard deviation) and inferential (i.e. dependent and independent samples t-test) statistics methods. The results showed that there was a significant difference between Grade 7 students’ Chinese listening gain achievement with BTM and MTM. Compared to MTM, students could learn better when they learned with BTM. According to these findings, the researcher put forward some recommendations for TCFL teachers, students, administrators, and future researchers in this field.

Keywords: Chinese listening achievement, Bilingual teaching method, Monolingual teaching method, Grade 7 students, Chinese as a foreign language

JEL Classification Code: E44, F31, F37, G15

1. Introduction

With the rapid rise of China’s economy, China’s strong comprehensive national strength and broad development prospects have promoted the rise of “Chinese language fever” all over the world, which causes the demand for overseas Chinese language learning is also increasing day by day (Zheng et al., 2014).

In learning a language, “listening, speaking, reading and writing” are the four most important skills known as “four skills” to master a language. Among the “four skills”, “listening skill” is in the first place, which is in the primary position. However, listening comprehension teaching is the weakest part of teaching Chinese as a foreign language (Zhang, 2014).

According to Purkarthofer and Mossakowski (2011) as well as Slavin and Cheung (2005), there are studies conclude that English learners are more satisfied with the teaching method under bilingual and interactive conditions. However, many people still believe that immersion in a target language classroom using only the target language is the best way to learn a second language, even though this may cause learners to lose their first languages. And even though bilingual education advocates have demonstrated bilingual education program to be highly effective for teaching English to ELLs, English-only policies still hold a dominant position (Han & Park, 2017).

Al Jadidi and Sangunietti (2010) reported the results of a study conducted in Oman between 2004 and 2007 on bilingual (English and Arabic) and monolingual (English only) teaching styles of EFL teaching. Through a series of classroom observations and interviews with teachers and students, characteristic pedagogical approaches of bilingual and monolingual teachers were identified. The strengths and disadvantages of typical bilingual and monolingual pedagogies are discussed. Students were critical of both teaching styles and divided on whether they preferred monolingual or bilingual teachers at tertiary level (Al Jadidi & Sangunietti, 2010).

Similar to EFL teaching, the ideal process in general of teaching CFL is to use the target language as much as possible to teach the target language. That is, trying to avoid the interference of the second language, which is to use Chinese as a monolingual teaching method to teach
Chinese. The target school also advocates the use of Chinese as a monolingual teaching method for teaching CFL. However, in practice from the target school, TCFL teachers have perceived that some students have difficulty with listening comprehension when the teacher uses Chinese as a monolingual language for teaching. Especially the students whose basic Chinese skills are very weak often feel restless and stressed in the class and cannot keep up with the TCFL teachers. In such a situation, some TCFL teachers need to increase the use and frequency of the second language to communicate better with the students. Some TCFL teachers use English or Thai as a second language to teach Chinese in TCFL class. With this bilingual teaching method, TCFL teachers have noticed that students feel less anxiety and stress in learning Chinese.

Regardless of whether a bilingual or monolingual teaching method is used, each teaching method has different effects on students’ learning of Chinese as a foreign language. Given the debate about which teaching method has the better effect and influence on students’ learning success in learning Chinese as a foreign language, TCFL teachers are eager to find out which teaching method is more effective and suitable for them to teach Chinese to students. In particular, what are the different effects on students’ listening achievement in learning Chinese and which teaching method is more effective are also the concerns of TCFL teachers and students?

Therefore, the researcher decided to investigate which teaching method is more effective and suitable for students to achieve higher performance in listening comprehension of Chinese when learning CFL, whether the bilingual teaching method or the monolingual teaching method. That is to determine if there were significant differences between Grade 7 students’ Chinese listening achievement with bilingual teaching method (BTM) and monolingual teaching method (MTM) in learning CFL class at an international school in Bangkok, Thailand.

1.1. Research Objectives

The following were the Research Objectives for this study.
1. To determine the Grade 7 students’ Chinese listening achievement with bilingual teaching method in learning Chinese as a foreign language class at an international school in Bangkok, Thailand.
2. To determine the Grade 7 students’ Chinese listening achievement with monolingual teaching method in learning Chinese as a foreign language class at an international school in Bangkok, Thailand.
3. To determine if there is a significant difference between Grade 7 students’ Chinese listening gain achievement (difference of pretest and posttest) with bilingual teaching method in learning Chinese as a foreign language class at an international school in Bangkok, Thailand.
4. To determine if there is a significant difference between Grade 7 students’ Chinese listening gain achievement (difference of pretest and posttest) with monolingual teaching method in learning Chinese as a foreign language class at an international school in Bangkok, Thailand.
5. To determine if there is a significant difference between Grade 7 students’ Chinese listening gain achievement (mean difference of pretest and posttest) with bilingual teaching method and monolingual teaching method in learning Chinese as a foreign language class at an international school in Bangkok, Thailand.

1.2. Hypotheses

Three Research Hypotheses were defined in this study.
1. There is a significant difference between Grade 7 students’ Chinese listening gain achievement (difference of pretest and posttest) with bilingual teaching method in learning Chinese as a foreign language class at an international school in Bangkok, Thailand, at a significance level of .05.
2. There is a significant difference between Grade 7 students’ Chinese listening gain achievement (difference of pretest and posttest) with monolingual teaching method in learning Chinese as a foreign language class at an international school in Bangkok, Thailand, at a significance level of .05.
3. There is a significant difference between Grade 7 students’ Chinese listening gain achievement (mean difference of pretest and posttest) with bilingual teaching method and monolingual teaching method in learning Chinese as a foreign language class at an international school in Bangkok, Thailand, at a significance level of .05.

1.3. Theoretical Framework

Two main theories used to guide and support this research were bilingualism and monolingualism, both are base on the Theory of Mind.

1.3.1. Theory of Mind

Children’s ability to attribute causal mental states in order to explain and predict behavior is called the theory of mind (ToM) (Premack & Woodruff, 1978). And the
bilingualism and monolingualism on it is discussed in literature review.

1.3.2. Bilingualism
The bilingual teaching method comes from bilingualism. As it is seen simply, bilingualism is the ability to perform in two languages. In particular, there are two major theories of cognitive development in the bilingual individual, which are the “Common Underlying Proficiency” Theory and the “Threshold” Theory (Baker, 1996).

1.3.3. Monolingualism
According to Romaine, monolingualism is precisely a monolingual perspective which is a modern linguistic theory that takes as its starting point in dealing with basic analytical problems such as the construction of grammars and the nature of competence (Wright, 1996). The keyword “monolingual”, which means able to use one language well, (of a group or place) using one language as the main language, and written, created, or done using only one language.

1.4. Conceptual Framework
Two classes of Grades 7 students were chosen from the target school, as the source of data, in order to determine and compare Grade 7 students’ Chinese listening gain achievement with bilingual teaching method and monolingual teaching method. Two different teaching methods: bilingual teaching method and monolingual teaching method were considered as independent variables; and students’ Chinese listening achievement towards these two teaching methods were considered as dependent variables of this study (see Figure 1).

![Conceptual framework of this research.](image)

2. Literature Review
2.1. Learning Chinese as a Foreign Language in Thailand
At the end of 2010, there were 1,393 primary and secondary schools offering Chinese courses in Thailand, including 1,020 public schools and 373 private schools. The opening of Chinese courses in primary and secondary schools in Thailand’s mainstream society makes the growing Chinese language teaching more lively (Zheng et al., 2014).

2.2. Learning Chinese as a foreign language in international schools in Thailand

Compared to students in local Thai schools, students in international Thai schools absorb information faster and achieve better results in learning Chinese. The reason is the bilingual or even multilingual living and learning environment of Thai students in international schools. Those who speak at least two languages have been taught different languages from an early age and have developed their own approach to language learning - even if they do not know they are capable of it. As a result, they are more sensitive to the nuances of different languages and are more likely to recognize, accept, and use them (Cui, K., 2014)

2.3. Chinese Listening Achievement
Chinese listening achievement depends on Chinese listening skills. That is to say, to improve Chinese listening achievement, is to improve Chinese listening skills. Among the “four skills”, “listening skill” is in the first place, which is in the primary position. In daily communication and language learning, we can only give the appropriate answer if we understand the other side’s meaning first. Therefore, listening skill occupies a key position in TCFL (Zhang, 2014).

2.3. Bilingual Teaching Method

2.3.1. Bilingualism on the Theory of Mind

The bilingualism mentioned by Devine and Hughes (2014) also extends to the aspect of mental functions, such as the Theory of Mind. It is a social cognitive ability and believed to be closely related to executive function. The potential benefits of bilingualism in executive functions have been prevalent in modern bilingualism research. It is supported by numerous studies (Bialystok, 1999; Bialystok et al., 2004; Costa et al., 2008). It has also been disseminated to the public through extensive media coverage (Bhattacharjee, 2012; Reville, 2014).

The ability of Theory of Mind is often assessed using false-belief tests such as the Unexpected Transference Test (Wimmer & Perner, 1983; Baron-Cohen et al., 1985) and the Unexpected Content Test (Hogrefe et al., 1986; Perner et al., 1987). It is the ability to attribute mental states to others and to predict and explain the behavior of others based on those attributed mental states.

As Schroeder (2018) mentioned, Theory of Mind is malleable and may be facilitated by a bilingual environment, suggested by cultural differences in the speed of ToM development. Such as a meta-analysis shows that children in mainland China, Canada, and the United States develop Theory of Mind faster than children in Hong Kong (Liu et al., 2008). And children in Australia and Canada develop Theory of Mind faster than children in Austria and Japan (Wellman et al., 2001). These differences are considered to be related to specific environmental factors, such as a child's language environment.

A study by Kovacs (2009) showed that the bilingual children of Romanian-Hungarian at the same ages of 2 and 3-year-old were more than twice as likely to pass the Unexpected-Transfer Test as the monolingual Romanian children comparable in intelligence. From this line of thought and the evidence of previous research, it appears that bilingualism accelerates the development of Theory of Mind.

2.3.2. Bilingualism

According to Longman Dictionary from Applied Linguistics, the word “bilingual” is defined by Yuan (2017) as follows: It is a person who is able to understand and use two languages. In daily use, a balanced bilingualism usually refers to someone who can speak, read and understand two languages well.

2.3.3. The Strategies of Bilingual Teaching Method

Including these teaching strategies:

1. Code-switching in the teaching process (Giauque & Ely, 1990): they advocate the use of code-switching in primary foreign language teaching and present procedures for teaching with code-switching that can be used as teaching references.

   The sandwich technique (Butzkamm & Caldwell, 2009): said the second language and then repeat the first language, then again in the second language. L2 →L1→ L2.

2. The concurrent translation method. In some bilingual classes, the teacher uses the target language first and then proceeds to clarify the meaning of the first language to emphasize the content of the message and improve comprehension (Burenhult, & Flyman-Mattson,1999).


2.3.4. The Modes of Bilingual Teaching Method

English famous Langman Publishing House published “Langman Applied Linguistics Dictionary” to define the “bilingual teaching” teaching mode, the bilingual teaching model has the following:

1. Immersive teaching mode -- Schools use a second language that is not the mother tongue of students.

2. Maintenance bilingual teaching model- When students come to school, they are taught in their native language and then gradually use the second language to teach some subjects. Some subjects continue to be taught in the mother tongue.

3. Transitional bilingual teaching model- When students come to school, they use all or part of their mother tongue and then gradually move to teach only in a second language (Wang, 2010).

2.4. Monolingual Teaching Method
2.4.1. Monolingualism on the Theory of Mind
As mentioned earlier, the Monolingual Teaching Method is based on monolingualism, while the Bilingual Teaching Method is based on bilingualism. Both belong to the Theory of Mind. What is the definition of the Theory of Mind? According to Premack and Woodruff (1978), Theory of Mind (ToM) is a theory of children’s ability to assign causal mental states to explain and predict behavior. In the past two decades, it has been an active area of research in developmental psychology. Research in this area examines young children’s understanding of themselves and others as mental beings (Milligan et al., 2007). Segal (1998) disputed about the Theory of Mind is not possible without language.

A study of Farhadian et al. (2010) examined whether bilingual and monolingual preschoolers developed Theory of Mind (ToM) differently. A number of 163 bilingual (Kurdish-Farsi) and monolingual (Farsi) preschool children were administered with three-false-belief tasks. ToM performance was significantly better in bilingual children than in monolingual children. When age and language proficiency were controlled, it was showed that bilingualism significantly contributed to the prediction of ToM development in preschool children, according to a hierarchical multiple regression analysis (Farhadian et al., 2010).

According to Milligan et al. (2007), Theory of Mind performance is associated with both linguistic and cognitive abilities, particularly executive functions. Theory of Mind tasks are often linguistic in nature. Children are required to understand the linguistic information contained in the task. This is successful performance of the Theory of Mind.

2.4.2. Monolingualism
According to the Oxford Dictionary monolingualism is defined as: 1. Knowing or being able to use only one language; monoglot. 2. Spoken or written in only one language. Meanwhile, general dictionaries and linguistic dictionaries define monolingual differently as follows: Monolingual(adj) “able to speak only one language” (Macquarie Dictionary) (adj) “said of a person/community with only one language, also monolingual” (Crystal, 1987).

2.4.3. The Strategies of Monolingual Teaching Method
Including this teaching strategies:

1. Direct teaching method: teaching only use the target language, without having to rely on the student's first language. Use of images, such as physical medium.

2. Prohibit translation: language classes should not have translation between the first language and the target language. 3. Divided into two parts: in the immersion and bilingual courses, it needs to do the strict separation of the two languages (Cummins, 2007).

2.4.4. The Monolingual Instructional Assumptions
1. Instruction should be exclusively in the target language, without recourse to the students’ L1. One consequence of this assumption is that the use of bilingual dictionaries is discouraged. (The “direct method” assumption) (Cummins, 2007).

2. Translation between L1 and L2 has no place in language or literacy teaching. (The “no translation” assumption) (Cummins, 2007).

3. In immersion and bilingual programs, the two languages should be strictly separated. (The “two solitudes” assumption) (Lambert & Tucker, 1972).

2.5. Previous Research on Related Studies
Jiang (2014) did a study on the monolingual teaching method in the bilingual course of law for experimental analysis of bilingual teaching in the law department of Guangdong Peizheng University. As mentioned in the study of Mohamed and Lobo (2020), implemented at RAK University of Medicine and Health Sciences in the United Arab Emirates, the monolingual teaching method and bilingual teaching method were investigated in ELT. A study by Han and Park (2017) investigated which of two teaching methods (bilingual vs. monolingual instruction) was more effective and satisfactory for students learning English language. Sui (2005) mentioned the “bilingual teaching method” in storytelling class in his research.

2.6. Background of the Target School
One of the international schools in Bangkok, Thailand was chosen as the target school for this study. This school offers curriculums in English, Thai and Chinese from Grade 1 to Grade 12. The school provides native Chinese teachers, which means that students receive a recognized standard of effective listening, speaking, reading, and writing skills in Chinese.
2.7. Target Grade 7 Students at an International School in Bangkok, Thailand

The population and sample of the target students in this study were 59, Grade 7 students, in the target school. Most of them were Thai, while a few were of Chinese, Korean, Japanese or mixed descent. Therefore, the students’ Chinese language proficiency varied widely. However, regardless of their Chinese proficiency as determined by the final Chinese test by last year, the level dimensions of each class of Grade 7 students were the same.

3. Methodology/Procedure

By collecting the results of the pretest and posttest of Chinese listening achievement, quantitative comparative intervention research was conducted. After that, descriptive statistics (mean and standard deviation) and a quantitative hypothesis testing (dependent samples t-test and independent samples t-test) were used to determine if there were significant differences between the Grade 7 students’ Chinese listening achievement with bilingual teaching method and monolingual teaching method in learning CFL class at an international school in Bangkok, Thailand.

3.1. Population and Sample

The population sample of this study included all 59 Grade 7 students in two classes who studied CFL at an international school in Bangkok, Thailand, during the academic school year 2021-2022 (see in Table 1).

<table>
<thead>
<tr>
<th>Grade 7</th>
<th>Group</th>
<th>Teaching Method</th>
<th>Population</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 2</td>
<td>Experimental</td>
<td>BC2</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Class 1</td>
<td>Control</td>
<td>MC1</td>
<td>20</td>
<td>20</td>
</tr>
</tbody>
</table>

3.2. Research Instrument

The research instrument of this study was the pretest and posttest. YCT (Level 2) Sample 1 was used for the pretest, and YCT (Level 2) Sample 2 was used for the posttest for this research. The data collecting was the scores of the listening sections of the YCT (Level 2), and the total score is 100 (see in Table 2).

Table 2: The Chinese Listening Achievement Scoring Rubric and interpretation of the Pretest and Posttest

<table>
<thead>
<tr>
<th>Percentage scale</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>91-100</td>
<td>Excellent</td>
</tr>
<tr>
<td>81-90</td>
<td>Very good</td>
</tr>
<tr>
<td>71-80</td>
<td>Fairly good</td>
</tr>
<tr>
<td>61-70</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>≤ 60</td>
<td>Recommendation for CFL support</td>
</tr>
</tbody>
</table>

3.3. Validity and Reliability of the Research Instrument

Regarding the research instrument of this study, the pretest was the YCT (Level 2) Sample 1 and the posttest was the YCT (Level 2) Sample 2. Therefore, we continue to further describe the validity and reliability of the YCT (Level 2) for this research.

Based on the new concept of validity, Ou (2013) adopted the selection of the new YCT (Level 2) test, from the perspective of test users in Rhode Island in America two middle schools from the Chinese evidence of the test of internal and external aspects: content and structure. Including test reliability and test set, it was the criterion compared between (teacher) and candidate’s attitude. The results showed that: (1) In terms of reliability, the reliability coefficient of the whole test, listening and reading subtest and most question types were ideal. (2) In terms of content and structure, the test generally covers language functions and vocabulary in the content area. There was a moderately significant correlation between the listening and reading comprehension scores, indicating that different skills were tested. In terms of the surface validity of the test, the test content was mostly consistent with the content of the large framework (Ou, 2013).

Zhang (2016) mentioned that based on the measured data of the YCT (Level 2) test in 2007, the paper investigated the validity and reliability of the test. The results showed that the difficulty level of the test items was relatively easy and the quality and reliability of the questions were relatively ideal. His study on the “Validity of the New YCT Level 2 Test -- Taking the Sample Paper of the YCT Level 2 Test” as an example collected the test sections and external evidence of two American high schools with the new validity view, concluded that the YCT Level 2 Test could effectively measure learners’ Chinese
proficiency and made some suggestions for the YCT test (Zhang, 2016).

3.4. Research Procedures

For this study, the pretest was conducted before the experiment. Grade 7 students were divided into two groups. The experimental group was taught with the bilingual teaching method in Grade 7 Class 2 (BC2). The control group was taught with the monolingual teaching method in Grade 7 Class 1 (MC1). In six-week experimental period of this study, the same content of lesson plans was taught in both groups. At the end of the experimental period, both groups were conducted with a posttest to obtain Chinese listening achievement data.

4. Research Findings and Conclusions

The findings of the study are presented according to the research objectives.

4.1. Research Finding from Research Objective 1

Table 3: Mean Score and Standard Deviation of Grade 7 Students’ Chinese Listening Achievement of BC2 in Posttest

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>df</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>20</td>
<td>59.93</td>
<td>12.99</td>
<td>20</td>
<td>-4.831</td>
<td>.000</td>
</tr>
<tr>
<td>Posttest</td>
<td>20</td>
<td>68.97</td>
<td>0.87</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Not only there was a significant difference between Grade 7 students’ Chinese listening gain achievement (difference of pretest and posttest) with bilingual teaching method was found, but also got marked Chinese listening gain achievement through comparative observation of the results.

4.2. Research Finding from Research Objective 2

Table 4: Mean Score and Standard Deviation of Grade 7 Students’ Chinese Listening Achievement of MC1 in Posttest

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>df</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>20</td>
<td>57.93</td>
<td>12.99</td>
<td>20</td>
<td>-6.931</td>
<td>.000</td>
</tr>
<tr>
<td>Posttest</td>
<td>20</td>
<td>68.97</td>
<td>0.87</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Despite there was a significant difference between Grade 7 students’ Chinese listening gain achievement (difference of pretest and posttest) with monolingual teaching method was found, it got improved scores with a certain amount in Chinese listening gain achievement through comparative observation of the results.

4.3. Research Finding from Research Objective 3

Table 5: Results of the dependent Samples t-Test Comparing Grade 7 Students’ Chinese Listening Gain Achievement (Difference of Pretest and Posttest) in BC2

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>MD</th>
<th>SD</th>
<th>df</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>BC2</td>
<td>30</td>
<td>22</td>
<td>8.60</td>
<td>57</td>
<td>-5.194</td>
<td>.000</td>
</tr>
</tbody>
</table>

Note. Significance level was set at .05 (two-tailed). “MD” stands for “mean difference”.

Not only there was a significant difference between Grade 7 students’ Chinese listening gain achievement (mean difference of pretest and posttest) with bilingual teaching method and monolingual teaching method was found, but also BC2 had achieved more remarkable results than MC1 through comparative observation of the results.

4.4. Research Finding from Research Objective 4

Table 6: Results of the dependent Samples t-Test Comparing Grade 7 Students’ Chinese Listening Gain Achievement (Difference of Pretest and Posttest) in MC1

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>MD</th>
<th>SD</th>
<th>df</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>20</td>
<td>65.97</td>
<td>0.67</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.5. Research Finding from Research Objective 5

Table 7: Results of the Independent Samples t-Test Comparing Grade 7 Students’ Chinese Listening Gain Achievement (Mean Difference of Pretest and Posttest) in BC2 and MC1

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>MD</th>
<th>SD</th>
<th>df</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>BC2</td>
<td>30</td>
<td>22</td>
<td>8.60</td>
<td>57</td>
<td>-5.194</td>
<td>.000</td>
</tr>
<tr>
<td>MC1</td>
<td>20</td>
<td>11.04</td>
<td>9.67</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Significance level was set at .05 (two-tailed). “MD” stands for “mean difference”.

Not only there was a significant difference between Grade 7 students’ Chinese listening gain achievement (mean difference of pretest and posttest) with bilingual teaching method and monolingual teaching method was found, but also BC2 had achieved more remarkable results than MC1 through comparative observation of the results.

5. Discussion and Recommendations

5.1. Discussion

5.1.1. Bilingual Teaching Method in TCFL
The previous study of Sui (2005), it was used the bilingual teaching method for children’s vocabulary memory and learning in the storytelling classes, which could improve children’s English listening comprehension ability and attract children’s attention and stimulate their interest in language learning. Similar to that study, this study showed students’ Chinese listening achievement improved obviously with the bilingual teaching method. Regardless of whether the students have a good or poor Chinese language foundation, they can achieve better performance in Chinese listening comprehension with the bilingual teaching method in TCFL class. This is because they have no obvious stress in the language environment, which greatly reduces their anxiety about Chinese.

5.1.2. Monolingual Teaching Method in TCFL

From Jiang’s (2014) previous study, it was found that in the monolingual teaching method, students’ listening comprehension and speaking ability had improved, but there were still problems in acquiring subject knowledge. Similar to that study, the findings of this study showed that although the students got a satisfactory Chinese listening achievement, they still failed to master some knowledge in the implementation of TCFL with the target curricula. That was the reason explained why the mean scores of Chinese listening achievement that they got were not so high. In other words, they did not have an excellent understanding of Chinese knowledge in the TCFL class.

5.1.3. Bilingual Teaching Method versus Monolingual Teaching method in TCFL

A study by Han and Park (2017) investigated which of the two teaching methods (bilingual vs. monolingual instruction) was more effective and satisfactory for English language learning students. The results indicated that the bilingual teaching method was more effective. The participants under bilingual instruction significantly preferred the bilingual teaching method to the monolingual teaching method. The group with monolingual instruction perceived the exclusive use of the target language in second language instruction as negative.

As mentioned in the study of Mohamed and Lobo (2020), implemented at RAK University of Medicine and Health Sciences in the United Arab Emirates, the monolingual teaching method and bilingual teaching method were investigated in ELT. This study tried to find out which method was more effective and which method English learners preferred and got better results. Compared to the monolingual teaching method, the results explained that the bilingual teaching method was more successful and convenient in ELT (Mohamed & Lobo, 2020).

Similar to these studies, the findings of this study from Research Objective 5 revealed that, under the same certain conditions, students’ Chinese listening achievement with bilingual teaching method was better than those with the monolingual teaching method. This means that under the same certain conditions, compared to the monolingual teaching method, students could learn better with bilingual teaching method in Chinese listening achievement of learning CFL for a certain group of students.

In TCFL, both teaching methods have their advantages and disadvantages, which cannot be generalized or limited to one. Both teaching methods should be used flexibly under certain conditions and with certain groups of students.

The bilingual teaching method is suitable for students whose Chinese proficiency is relatively weak to learn CFL. Given the Chinese and English as the bilingual languages in TCFL class, the requirements for students with weak Chinese proficiency are low. Therefore, there is less pressure on the Chinese language in TCFL class. Students can freely switch between the target language and the second language in CFL class. In this way, their interaction with the TCFL teacher in class is more effective. As a result, their interest in learning Chinese is strengthened.

The monolingual teaching method is suitable for students who have a good knowledge of Chinese, and even better for students who already have excellent proficiency in Chinese. It means that students can understand well what the teacher says even without using a second language as a medium.

However, it should be noted that in the bilingual teaching method, TCFL teachers should not only make good lesson plans but also flexibly control the frequency of using the second language when the second language is used as the medium. To learn more Chinese, students’ dependence on the second language should be gradually reduced. So that, they can be guided to learn more Chinese.

5.2. Recommendations

From the above findings and discussions of this study, there are some recommendations for students, teachers, administrators, and future researchers.

5.2.1. Recommendations for Students

In order to find suitable and effective learning methods for themselves, students should be aware of their
Chinese proficiency. Based on the understanding of their Chinese language skills, choose suitable methods and books for their Chinese language skills. Not only during the class, but also after the class, students should practice more Chinese to improve their Chinese skills. At the same time, when learning Chinese, they should not always be trapped in their anxiety and pressure to learn Chinese, but actively find and choose a suitable and effective learning method. Whether it is a monolingual or bilingual teaching method, students should use it flexibly according to their Chinese proficiency and the effective suggestions of TCFL teachers.

5.2.2. Recommendations for Teachers

It is better to ask students to participate more in interaction and communication with the teacher in TCFL class. TCFL teachers should pay more attention to the “student learning centre” method in the class, so that students can play a more active and positive role instead of relying only on the teacher. In addition, to make a good teaching plan according to the Chinese language level of the students, it is necessary to know the Chinese language level of the target students well.

Moreover, TCFL teachers should be more professional not only in Chinese but also in the second language. In this way, TCFL teachers could reduce the negative transfer caused by using the target language and the second language in the teaching process as much as possible. In this way, it is possible to improve the accuracy of language transfer and reduce the error between language changes.

Finally, regarding linguistic and cultural differences, TCFL teachers should be able to know well the cultural background of the two languages. TCFL teachers should be able to use the different languages flexibly and switch freely between languages to facilitate good communication with students in class. In this way, students’ attention can be aroused and their interest in learning CFL can be increased.

5.2.3. Recommendations for Administrators

Administrators can flexibly arrange lessons and class’ levels according to students’ Chinese proficiency. After effective communication with students and TCFL teachers, they can choose textbooks that match students’ abilities, which would benefit both students and teachers.

5.2.4. Recommendations for Future Researchers

This research study revealed that there were significant differences between Grade 7 students’ Chinese listening gain achievement with bilingual teaching method and monolingual teaching method in learning CFL class. Besides that, this study further discussed the application of bilingual teaching method and monolingual teaching method in TCF. It was found that under the same conditions, students’ Chinese performance is better when they use the bilingual teaching method than when they use the monolingual teaching method. Obviously, this is true for a certain group of students under certain circumstances. When the scope of the research objects is expanded, the research methods are improved, and the research objects are more specific, the research results will be more accurate and profound. For example, expanding the age tests for students or differentiating the duration of studying CFL and so on.

At the same time, this study makes some valuable suggestions for the curriculum and instructions for TCFL class. It also gives some teaching strategies and hints for teachers and researchers who are engaged in TCFL. In this study, only the performance in Chinese listening skills with TCFL was investigated. A longer study would be included the other Chinese language skills in the four skills of TCFL, namely speaking, reading and writing, and the statistical data obtained would be more accurate. Therefore, future researchers could try to conduct the relevant studies in a broader range of TCFL learning and over a longer experimental period. In this way, the research in this area would be more thorough and make a greater contribution to future researchers.

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A Correlational-Comparative Study of Burmese High School Students’ Motivation and Academic Achievement in English as a Foreign Language Class

Bu Mu¹
Orlando González²

Abstract

Purpose: The purpose of this quantitative study was to determine whether there was a significant relationship between motivation for learning English as a foreign language (EFL) and English academic achievement, and a significant difference in motivation for learning EFL, in terms of motivational intensity, desire to learn English, and attitudes toward learning English, between Grades 10 and 11 students at Mungmyit Sinli IDPs High School, Kachin State, Myanmar. Research design, data and methodology: A total of 225 students participated in this study. Motivation-related data were gathered through administering a survey questionnaire adapted from Gardner’s (2010) Attitude/Motivation Test Battery, while the English students’ monthly test scores were considered to measure participants’ English academic achievement. Results: There was no significant relationship between Grade 10 students’ motivational intensity and desire to learn for learning EFL with their English academic achievement, while their attitudes toward learning English were found to have a significantly weak relationship with their English academic achievement. On the other hand, there was no significant relationship between any of the motivation-related variables and the English academic achievement of Grade 11 students. Besides, only a significant difference in motivational intensity between Grade 10 and Grade 11 students was found. Conclusions: The results indicate that being enrolled in either Grade 10 or 11 at the target school appears to have a statistical effect on the students’ motivation for learning EFL.

Keywords: English as a Foreign Language, Motivation for Learning, Academic Achievement, High School, Myanmar

JEL Classification Code: C12, I20, I21, N35

1. Introduction

The teaching and learning of English language play a fundamental role in Myanmar as a member of the Association of Southeast Asian Nations (ASEAN), whose lingua franca is English (Bolton, 2008). Therefore, the current demand for Myanmar people who are highly proficient in English language becomes inevitable, in order to be able to communicate not only with each people from the ASEAN region, but also with other people from all over the world (Ireland & Van Benthuysen, 2014).

The importance of English language has been obvious throughout the history of Myanmar, as it was used as the language of choice in the areas of law, administration, politics, and even education at all stages during the pre-independence era (Fen, 2005; Ireland & Van Benthuysen, 2014). In the era of post-independence, the use of English language in Myanmar has been limited to the diplomatic and educational arenas.

Since 2010, the interest in English learning in Myanmar has rapidly increased due to the political and educational reforms that have taken place in the country. Then, as a consequence of these reforms, which have attached a great importance to the role of the English language in the fields of education, politics, society and economics, the number of private language institutes have significantly increased in Myanmar (Siphora & Lynch, 2019). Accordingly, the Myanmar students have been motivated to learn English for academic and professional advancement (Thant & González, 2019).

The role of motivation is regarded as a significant factor leading to successful learning, particularly in relation to language learning (Winke, 2005). In that regard, Gardner (2010) mentioned that the second or foreign language learners who put more effort, and become more enthusiastic in acquiring a particular knowledge or skill, tend to do have a better academic achievement than those learners that are less effortful and enthusiastic. Similarly, the learners’ motivation for learning English as a foreign language (EFL) is an imperative issue in the success and failure of learning in Myanmar (Siphora & Lynch, 2019), especially for
students that qualify as internally displaced persons (IDPs), people who have been forced, due to different conflicts or hard circumstances, to flee or to leave from their homes or places of residence.

With all this in mind, and considering that motivation for learning English has been reported to significantly influence both high achievers and low achievers (Gardner, 2010; Li & Pan, 2009), the researchers designed and conducted a comparative-correlational study to the motivation for learning English as a foreign language and English academic achievement of Grades 10 and 11 students at Mungmyit Sinli IDPs High School, Kachin State, Myanmar.

2. Research Objectives

The following were the specific research objectives addressed in this study.

1. To determine the level of motivation for learning English as a foreign language (EFL), in terms of motivational intensity, desire to learn English and attitudes toward learning English, of Grades 10 and 11 students at Mungmyit Sinli IDPs High School, Kachin State, Myanmar.

   1.1. To determine the level of motivation for learning EFL, in terms of motivational intensity, desire to learn English and attitudes toward learning English, of Grade 10 students at Mungmyit Sinli IDPs High School, Kachin State, Myanmar.

   1.2. To determine the level of motivation for learning EFL, in terms of motivational intensity, desire to learn English and attitudes toward learning English, of Grade 11 students at Mungmyit Sinli IDPs High School, Kachin State, Myanmar.

2. To determine the level of English academic achievement in English as a foreign language (EFL) of Grades 10 and 11 students at Mungmyit Sinli IDPs High School, Kachin State, Myanmar.

   2.1. To determine the level of English academic achievement in EFL of Grade 10 students at Mungmyit Sinli IDPs High School, Kachin State, Myanmar.

   2.2. To determine the level of English academic achievement in EFL of Grade 11 students at Mungmyit Sinli IDPs High School, Kachin State, Myanmar.

3. To determine whether there is a significant relationship between motivation for learning English as a foreign language (EFL), in terms of motivational intensity, desire to learn English and attitudes toward learning English, and English academic achievement of Grades 10 and 11 students at Mungmyit Sinli IDPs High School, Kachin State, Myanmar.

4. To determine whether there is a significant difference in motivation for learning English as a foreign language (EFL), in terms of motivational intensity, desire to learn English and attitudes toward learning English, of Grades 10 and 11 students at Mungmyit Sinli IDPs High School, Kachin State, Myanmar.

3. Theoretical Framework

This study was conducted based on the socio-educational model of second language acquisition as supporting theory.

3.1 Socio-Educational Model of Second Language Acquisition

The socio-educational model of second language acquisition is a framework that describes the factors that mainly affect the language learning process. This model is primarily focused on motivation and the components that have influence on it. According to Gardner (2010), the students’ motivation for learning a second or foreign language is comprised of three variables, which are motivational intensity (i.e., the amount of individual effort put by a language learner into learning the language), desire to learn English (i.e., the enthusiasm or keenness of a language learner toward mastery and acquiring understanding of the English language), and attitudes toward learning English (i.e., the enduring preconceived notions, evaluations, and positive or negative feelings about learning English and its related activities that guide a language learner’s actions and reactions while learning the language). In order to measure motivation for learning EFL and its subscales, Gardner developed the Attitude/Motivation Test Battery (Gardner, 2010).

4. Conceptual Framework

Figure 1 depicts the conceptual framework of the study. The independent variable of this study was motivation for learning EFL in terms of motivational intensity, desire to learn English and attitudes toward learning English, while the dependent variable was the participants’ English academic achievement.
5. Literature Review

In this section, some previous studies related to the research variables addressed in this study are reviewed and summarized.

Binalet and Guerra (2014) conducted a study focusing on the relationship between motivation and language academic achievement among tertiary students. The total participants were 30 freshman students taking a Bachelor of Science in Criminology at the Ifugao State University, Philippines. According to the findings of the study, there was no statistically significant relationship of motivation and the students’ language academic achievement, which indicates that the level of the participants’ motivation did not have an explanatory and predictive power for their language academic achievement, and vice versa.

Siphora and Lynch (2019) conducted a study on 215 students at Nelson English Language Center in Yangon, Myanmar, focusing on the students’ motivation for learning EFL according to their preferences for indirect learning strategies. The findings indicated that these Burmese students were highly motivated to learn EFL, regardless of their preferences for a particular indirect learning strategy. Moreover, the levels of the participants’ motivational intensity and desire to learn English were also found to be high, with the level of the latter subscale being numerically higher than the level of the former. The participants were also found to have positive attitudes toward learning English.

Thant and González (2019) conducted a comparative-correlational study on the attitude toward and motivation for learning EFL of Grade 9 students from three different ethnic groups at No. 2 Basic Education High School, Eastern Shan State, Myanmar. A total of 199 participants were recruited for this study by convenience sampling. The investigation demonstrated that the students had a positive attitude toward and a high motivation for learning EFL, regardless of the ethnic group. Moreover, the level of the participants’ motivational intensity was found to be partially high, and the level of desire to learn English was found to be high, regardless of the participant’s ethnic group. The level of participants’ attitudes toward learning English ranged from partially positive (for students belonging to the Shan ethnic group) to positive (for students belonging to the Akha and Bamar ethnic groups).

Kitjaroonchai (2012) conducted a study on secondary schools’ students English learning motivation in the Education Service Area Office 4, Saraburi Province, Thailand. The study was administrated to 266 participants in different years of study, ranging from Grades 7 to 12. The data analysis revealed that the target students had high levels of both integrative and instrumental motivation, with the level of integrative motivation being partially lower than level of instrumental motivation. It was also found that students with a high academic achievement (i.e., those with a GPA ≥ 3.20) had a significantly slightly higher level of motivation for learning EFL than the other students.

6. Methodology/Procedure

In this section, details on the study’s population, sample and research instruments are provided.

6.1. Population and Sample

This research was conducted on a population sample comprised of all 96 students from Grade 10 and 129 students from Grade 11 students who were enrolled in the academic year of 2020-2021 at Mungmyit Sinli IDPs High School, Kachin State, Myanmar, for a total of 225 students.

6.2. Research Instruments

This study was conducted using the following research instruments: the Motivation for Learning English...
as a Foreign Language Questionnaire, and the English subject’s monthly test for English Language class.

**6.2.1. Motivation for Learning English as a Foreign Language Questionnaire (MLEFLQ)**

In order to measure the participants’ level of motivation for learning EFL, the researchers developed this instrument by adopting the 30 items corresponding to the motivation construct, and its three defining subscales, from the international version of the Attitude/Motivation Test Battery (AMTB; Gardner, 2010). The AMTB has been widely used as a standardized motivation test by many researchers conducting studies on EFL (e.g., Dörnyei, 2001; Marina, 2018; Siphora & Lynch, 2019; Thant & González, 2019). The AMTB was developed using the construct-oriented approach, a theory-driven method of measure development based on professional judgment and construct definitions from the research literature. A construct-oriented approach to measure development is particularly useful if the questionnaire being developed is intended to measure constructs from a specific theory, like in the case of the AMTB, in which Gardner wanted to develop a research instrument able to measure the different constructs defined by his socio-educational model of second language acquisition (Gardner, 2010). Then, the following steps were taken to ensure content validity: after conducting an extensive literature review and consulting with language teachers about variables that might be important in language learning, the variables relevant to the constructs in the socio-educational model of second language acquisition were identified and given explicit definitions, followed by the development of a representative collection of items for each variable of interest, making sure that the items and their wording were appropriate to the population and sample of interest (i.e., school students age 12 to 16). Finally, Gardner conducted two validation pilot studies on samples of 552 and 1521 language learners, respectively.

The 30 items chosen from the AMTB, 15 positively and 15 negatively worded, were distributed as follows: 10 items about motivational intensity (Items 1-10), 10 items about desire to learn English (Items 11-20), and 10 items about attitudes toward learning English (Items 21-30). A 6-point Likert scale (1 = strongly disagree, 2 = moderately disagree, 3 = slightly disagree, 4 = slightly agree, 5 = moderately agree, 6 = strongly agree) was used to rate the extent of agreement with the statements on each item (see Appendix 1). There is a psychometric justification for employing six response options or anchors per item. In psychometric assessment, an even number of choices or anchors (e.g., six) in a Likert rating scale is used when the researcher wants the respondents to express clear agreement or disagreement, instead of taking a neutral position, by leaving out the “midpoint” choice, which is widely regarded to be a neutral response (Devlin, 2020; Gardner, 2010).

The Cronbach’s alpha reliability test was carried out for the overall and subscales of the MLEFLQ, for internal consistency reliability analysis. As a result, a good internal consistency reliability was found for the total score, with a Cronbach’s alpha of .84, while the Cronbach’s alphas for all the three subscales ranged from .65 to .83 (see Table 1).

**Table 1: Reliability Coefficients of the MLEFLQ, Reported by Siphora and Lynch (2019) and the Current Study**

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Cronbach’s alpha values</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Siphora and Lynch (2019)</td>
</tr>
<tr>
<td>Motivational intensity</td>
<td>.66</td>
</tr>
<tr>
<td>Desire to learn English</td>
<td>.75</td>
</tr>
<tr>
<td>Attitudes toward learning English</td>
<td>.79</td>
</tr>
<tr>
<td>Overall</td>
<td>.85</td>
</tr>
</tbody>
</table>

**6.2.2. English Subject’s Monthly Test for English Language Class**

The English subject’s monthly tests were used to measure the participants’ English academic achievement. The tests, which were created by five English language teachers from the target school, were designed to assess the students’ reading skills (i.e., read the passage), writing skills (i.e., letter and essay), and the implementation of grammatical skills (i.e., fill in the blanks, complete the sentence with the correct grammar forms). Scores under 40 points were considered as failure, whereas a score of 80-100 points was regarded as excellent.

**7. Research Findings**

The research findings obtained from the data collection and analysis follows, presented by research objective. For the data analysis, negatively worded items were reverse coded in order to average them with the
positively worded ones, and then create a composite mean score of each of the motivation-related variables.

7.1. Findings From Research Objective 1

Regarding to Research Objective 1, the following findings were obtained.

- The overall level of Grade 10 students’ motivation for learning English as a foreign language was high, \( M = 4.62, SD = 1.05 \).
  - The overall level of Grade 11 students’ motivation for learning English as a foreign language was high, \( M = 4.80, SD = 1.12 \).

7.1.1. Findings From Research Objective 1.1.

Regarding to Research Objective 1.1, the following findings were obtained.

- The level of Grade 10 students’ motivational intensity for learning English as a foreign language was partially high, \( M = 3.79, SD = 1.15 \).
  - The level of Grade 10 students’ desire to learn English for learning English as a foreign language was high, \( M = 4.95, SD = 1.02 \).
  - The level of Grade 10 students’ attitudes toward learning English for learning English as a foreign language was positive, \( M = 5.14, SD = .96 \).

7.1.2. Findings From Research Objective 1.2.

Regarding to Research Objective 1.2, the following findings were obtained.

- The level of Grade 11 students’ motivational intensity for learning English as a foreign language was partially high, \( M = 4.28, SD = 1.21 \).
  - The level of Grade 11 students’ motivational intensity for learning English as a foreign language was high, \( M = 5.04, SD = 1.13 \).
  - The level of Grade 11 students’ motivational intensity for learning English as a foreign language was positive, \( M = 5.07, SD = 1.02 \).

7.2. Findings From Research Objective 2

Regarding to Research Objective 2, the following findings were obtained.

- The level of Grade 10 students’ English academic achievement was moderate, \( M = 59.07, SD = 11.17 \).
  - Grade 10 students’ English academic achievement ranged from a minimum score of 39 to a maximum score of 87 points.

7.2.2. Findings From Research Objective 2.2.

Regarding to Research Objective 2.2, the following findings were obtained.

- The level of Grade 11 students’ English academic achievement was moderate, \( M = 42.67, SD = 15.73 \).
  - Grade 11 students’ English academic achievement ranged from a minimum score of 15 to a maximum score of 85 points.

7.3. Findings From Research Objective 3

Regarding to Research Objective 3, the following findings were obtained from performing a correlational analysis using Pearson’s correlation coefficients. Table 2 depicts the results of bivariate correlations of motivational intensity, desire to learn English, attitudes toward learning English with English academic achievement of Grade 11 students at Mungmyit Sinli IDPs High School, Kachin State, Myanmar.

Table 2: Bivariate Correlations Between Motivational Intensity, Desire to Learn English, Attitudes Toward Learning English and English Academic Achievement of Grade 11 Students at Mungmyit Sinli IDPs High School, Kachin State, Myanmar

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Motivational intensity</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>2. Desire to learn English</td>
<td>.35* (&lt;.001)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>3. Attitudes toward learning English</td>
<td>.40* (&lt;.001)</td>
<td>.66* (&lt;.001)</td>
<td>—</td>
</tr>
<tr>
<td>4. English academic achievement</td>
<td>-.01 (.910)</td>
<td>.12 (.176)</td>
<td>.09 (.319)</td>
</tr>
</tbody>
</table>

Note: An asterisk * denotes a statistically significant relationship (statistical significance level set at \( \alpha = .05 \), two tailed). p-values appear within parentheses below the correlation coefficients.
• There was no significant relationship between the participants’ motivational intensity with their English academic achievement (for Grade 10 students, $r = .01, p = .913$; for Grade 11 students, $r = .01, p = .910$).
• There was no significant relationship between the participants’ desire to learn English with their English academic achievement (for Grade 10 students, $r = .13, p = .194$; for Grade 11 students, $r = .12, p = .176$).
• There was a significantly weak relationship of the Grade 10 students’ attitudes toward learning English with their English academic achievement, $r = .29, p = .004$.
• There was no significant relationship between the Grade 11 students’ attitudes toward learning English with their English academic achievement, $r = .09, p = .319$.

7.4. Findings From Research Objective 4

Regarding to Research Objective 4, the following findings were obtained, from performing a 2 (Grades 10 and 11 students) × 3 (motivational intensity, desire to learn English, and attitudes toward learning English) multivariate analysis of variance (MANOVA) on the collected data.

• There was a significant difference in motivational intensity for learning English as a foreign language between Grades 10 and Grade 11 students, $t(223) = -6.68, p < .001$.
• There was no significant difference in desire to learn English as a foreign language between Grades 10 and 11 students, $t(223) = -1.24, p = .218$.
• There was no significant difference in attitudes toward learning English between Grades 10 and 11 students, $t(223) = .79, p = .429$.

8. Discussion

In this section, a discussion of the research findings from the current study is provided, by relating such findings with the ones reported by previous research studies.

8.1. Motivation for Learning English as a Foreign Language

The Grade 10 and Grade 11 students’ motivation for learning English language was found to be high at Mungmyit Sinli IDPs High School. This finding is similar to the one reported by Kitjaroonchai (2012), who found a high level of motivation for learning EFL in secondary school students in the Education Service Area Office 4, Thailand. Additionally, the Grade 10 and Grade 11 students participating in the current study also had a partially high motivational intensity, which indicates that they put a partially high amount of individual effort to learn English. This result is in line with that of Thant and González (2019), who also reported a partially high level of motivational intensity to learn EFL in Burmese Grade 9 students from three different ethnic groups. According to the findings of the current study, the Grade 10 and Grade 11 students had a high desire to learn English as a foreign language. This result is aligned with Deci and Ryan (1985), who indicated that the learners’ intrinsic motivation influences their learning level and a positively related between them. Based on the findings, the students can be considered as they are willing to get involved in their EFL learning activities.

One of the findings revealed that the participants were highly motivated and had a partially high motivational intensity. This finding aligns with the one of Wang (2008), whose investigation found that students highly motivated to learn EFL had the tendency to spend more effort to learn English; that is, to have a higher level of motivational intensity.

Another of the findings in this study revealed that the participants were highly motivated and had positive attitudes toward learning English as a foreign language. The findings of this study are also in a line with that of Marina (2018), who conducted a study on 157 students from Grade 6 to 8 enrolled in a private school in Myanmar. Marina (2018) found that the students in her study had very positive attitudes toward learning English as a foreign language.

8.2. The Relationship of Students’ Motivation for Learning EFL and English Academic Achievement

According to the data analysis from the current study, there was no significant relationship between the participants’ motivational intensity with their English academic achievement. This indicates that motivational intensity has neither explanatory nor predictive power about the participants’ English academic achievement. In the same way, participants’ desire to learn English was found not to have a significant relationship with their English academic achievement. This result is in agreement with the one of Piller and Takahashi (2006), who also found that highly motivated Japanese women’s desire to learn EFL was not associated to their language achievement. On the other hand, one of the results from the current study showed that Grade 10 students’ attitudes toward learning English had a weak explanatory and predictive power for their English academic
achievement. This result is in line with that of Marina (2018), who found that there was a positively significant relationship between the motivation for learning English and the English academic achievement of Burmese Grades 6 to 8 students at St. John’s Private School, Pathein, Myanmar.

Moreover, the findings pointed out that Grade 11 students’ motivational intensity did not have an explanatory and predictive power for English academic achievement. This result is in line with the findings of Binalet and Guerra (2014), who conducted a study on 30 freshman students studying Bachelor of Science in Criminology at the Ifugao State University, Philippines, and found that students’ motivation had no significant correlation with their grammatical judgement test (GJT) scores.

8.3. The Comparison of Students’ Motivation for Learning English as a Foreign Language

In this study, the findings revealed that there was a significant difference in motivational intensity for learning EFL between Grades 10 and 11 students, favoring the latter group. This result could be due to the effort that Grade 11 students have to make to pass their university matriculation examination, in which the English language section is considered to be a very important part for passing such test. Therefore, it comes with no surprise that the Burmese Grade 11 students participating in this study tended to have a significantly highly motivational intensity than their Grade 10 counterparts, which implies that they spend a higher effort to learn EFL by persistently and consistently attempting to foster their skills in relation to English language acquisition (Gardner, 2010).

Based on the findings from this study, the Grade 11 students’ motivational intensity for learning EFL showed a slightly greater level than Grade 10 students’ one. This can be because the Grade 11 students might consider English and passing the matriculation examination to be a very important part of their study, more than Grade 10 students did. Therefore, the Grade 11 students participating in this study tend to be highly motivated to make an effort to learn English language, and that accordingly cultivates a persistent and consistent attempt to foster in language acquisition (Gardner, 2010).

On the other hand, there was no significant difference in either desire to learn English or attitudes toward learning English between the Grades 10 and 11 students in this study. Thus, it can be concluded that the desire to learn English and the attitudes toward learning English held by a student participating in this study were independent of the grade the student achieved in EFL class, and hence a student’s grade level appears to have no significant statistical effect on their desire to learn English and attitudes toward learning English.

9. Recommendations

Based on the findings of this study, the following recommendations are provided for teachers, students, school administrators and future researchers.

9.1. Recommendations for Teachers

The researchers believe that the characteristics of the language teacher factor has a significant connection on students’ motivational region and on their learning academic achievement to draw an overlook attention to motivational sector for learning EFL. Besides, they should apply rather active and differentiation teaching methods to maintain all the students getting involved in learning, than focusing on traditional teaching strategies (i.e., teacher-centered method) specifically in Myanmar. The researchers strongly recommend the innovation in the combination of curriculum modification and advancement, instructional strategies that are administrated by teachers how to improve the students’ motivation for learning EFL and raise their favorable attitudes toward learning EFL.

9.2. Recommendations for Students

The findings of this study revealed that the Grades 10 and 11 students of Mungmyit Sinli IDPs High School had a high level of motivation for learning EFL, and among the subscales of motivation, motivational intensity was partially high while desire to learn English and attitudes toward learning English were high. The findings of the study would lead the students to understand and recognize their individuals’ aspects toward motivation for learning EFL in their school years. Hopefully, they could obtain some sort of positively effective improvements from this study and they would be able to realize some possible rational thoughts why they fail or succeed in learning EFL. Consequently, they could be able to understand their strength and weakness and they could make a better change to be successful in learning EFL.

9.3. Recommendations for School Administrators
In order to be able to convey interesting and fun lessons, and effective various teaching strategies, the school administrators should provide constantly professional development programs to upgrade the instructional and teaching methods and to keep abreast of techniques, ideas, or equipment. Last but not least, they should support and provide with a wide range of the materials and resources that they demand to reach their teaching and learning objectives.

9.4. Recommendations for Future Researchers

The current research was a quantitative research designed to investigate the relationship and comparison between Grades 10 and 11 students’ motivation and their English academic achievement for learning EFL at Mungmyit Sinli IDPs High School, Kachin State, Myanmar. The data of this study was collected only focusing on the Grades 10 and 11 levels from one school in Myanmar, due to the access limitation. Future researchers are recommended to collect data from different contexts in a wide-reaching scale, in order to have more generalizable results. Moreover, future researchers should consider the other factors (e.g., teaching strategies, gender, extrinsic motivation, age, parental encouragement and language anxiety) that could influence the motivation for learning and the academic achievement in English as a foreign language class held by the students.

References


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The Relationship of Motivation for Learning and Perceptual Learning Style Preferences with Academic Achievement of Chinese Grade 8 Students in English Language Class

Miao Li

Abstract
This study's objective was to determine if there is a significant relationship of motivation for learning and perceptual learning style preferences in English language class with academic achievement of Grade 8 students at a Junior Middle School, Xuanwei, Yunnan, China. A sample of 231 Grade 8 students at a Junior Middle School during the academic year of 2021 attended. In order to measure students' motivation levels and perceptual learning style preferences, two questionnaires were used. In order to determine the students' academic achievement in English learning, the final test score of English class from August of this academic year 2021 was taken as the instrument. After the data was collected, the research objectives and hypothesis were examined by means, standard deviations, frequency, percentage and multiple correlation coefficient. The findings showed that Grade 8 students had slightly high motivation for learning, and their most preferred perceptual learning style was auditory, followed by mixed, kinesthetic, group, tactile, individual and visual learning style. They had a good level of English achievement. There was a positive and significant relationship between the motivation for learning and perceptual learning style preferences with academic achievement in English language class of Grade 8 students at the Junior Middle school.

Keywords: Motivation for Learning; Perceptual Learning style preferences; Academic Achievement; English Language Class; Grade 8 Students

JEL Classification Code: C12, I20

1. Introduction
Over the past 20 years, China has implemented the reform and opening-up policy, and its diplomatic scale has been continuously expanded, the demand for intercultural communication talents is growing rapidly (Xu, 2016). As an international language, the demand for English talents has also increased undoubtedly. According to the Compulsory English Curriculum Standard of China (2017), students' emotional attitude is very important. Emotional attitudes include factors such as interest, motivation and self-confidence that affect the learning process.

Teachers should stimulate students' motivation in English teaching, help students to develop in a positive and successful direction. As a result, to study the motivation of junior high school students is necessary and important. Besides motivation, individual differences of students also affect their learning ability.

Among the individual differences that affect students' learning ability, learning style difference is one of the important reasons. According to Reid’s description in learning styles in the ESL/EFL classroom, while perceptual learning style is the primary and vital part of the formation of learning style (Reid, 1995). Therefore, the study of learning style is an important part of individual difference research.

1.2. Research Objectives
The following research objectives are addressed.
1. To identify the level of motivation for learning in English language class of Grade 8 students at a Junior Middle school, Xuanwei, Yunnan, China

2. To identify the level of perceptual learning style preferences in English language class of Grade 8 students at a Junior Middle school, Xuanwei, Yunnan, China.

3. To identify the level of academic achievement in English language class of Grade 8 students at a Junior Middle school, Xuanwei, Yunnan, China.

4. To identify if there is a significant relationship of motivation for learning and perceptual learning style preferences with academic achievement in English language class of Grade 8 students at a Junior Middle school, Xuanwei, Yunnan, China.
1.3. Research Hypotheses
One hypothesis was tested in this study.
There is a significant relationship of motivation for learning and perceptual learning style with academic achievement in English language class of Grade 8 students at a Junior Middle school, Xuanwei, Yunnan, China.

1.4. Theoretical Framework

1.4.1. Motivation for Learning
Motivation for learning is an internal motive to drive student to learn, as a non-intellectual factor, promotes learning indirectly. Motivation for foreign language learning is the synthesis of the desire to learn a language and the effort to it and a good attitude towards learning a language. He pointed out that motivation for foreign language learning consists of four parts, namely, learning goal, effort, desire to achieve learning goals and learning attitude. In this model, motivation for learning is defined as the combination of an individual’s motivational intensity, desire to learn, and attitudes toward learning English.

1.4.2. Perceptual Learning Style Preference
Learning style preference theory was proposed by the Dunns and Price. They divided the learning style preference into four categories: visual, auditory, kinesthetic and tactile (Dunn & Price, 1975). In the mid-1980s, two other learning style preferences: group and individual was added by Reid and he produced the perceptual learning style preferences questionnaire to more accurately measure the learning types of students according to these six types of learning style preference.

1.5. Conceptual Framework
A sample population of Grade 8 students from a junior middle school in Xuanwei, Yunnan, China was chosen for this study. This study's objective was to investigate the relationship of motivation for learning and perceptual learning style with academic achievement in English language class of Grade 8 students at a Junior Middle school, Xuanwei, Yunnan, China. The process of data collection was completed after the students filled out the questionnaire. Below is the conceptual framework of this study.

2. Literature Review
Chalak and Kassaian (2010) administered a study on the area of motivation and attitude for learning English as foreign language with 108 Iranian undergraduate students who specialize in English translation. According to the findings in this study, 108 Iranian students learn English as a foreign language for both instrumental and integrative purposes, and with high positive attitudes toward the target language community.

Shell and Lynch (2016) investigated students’ motivation for learning English as a foreign language and their preferred instructional strategies with 123 students in Grade 9-12 from Pan-Asia International school. Shell found that motivation and instructional strategies are both important elements in Learning English as a Foreign language.

Huang and Lynch (2017) studied the relationship for learning Chinese and perception of parental encouragement for learning Chinese with academic achievement. 61 Grade 3 students, 66 Grade 4 students, and 48 Grade 5 students participated in this study. Huang found that the motivation of Grade 3 and Grade 5 students for learning Chinese was slightly high, while Grade 4 students' motivation for learning Chinese was moderately high.

San and Ye (2013) conducted a comparative study of learning styles in Myanmar. 70 student had participated in the Reid’s perceptual learning style preference questionnaire. The results showed that there are 27% students preferred the tactile learning style, 23% preferred the auditory learning style, 23% preferred the kinesthetic learning style, 17% preferred the individual learning style, and 10% preferred the group learning style.

A study in China by Dong and Yao (2016) investigated the relationship between the college student's
learning style preferences and the classroom participation with 272 students. They just adopt four subscales (visual, auditory, kinesthetic and tactile) form Reid’s perceptual learning style preference questionnaire. The result showed that there are a half of the college students preferred the visual learning style, and then in turn the kinesthetic and tactile, auditory.

3. Methodology/Procedure

3.1. Population and Sample

This study examined a population of the students who are studying English as a foreign language of Grade 8 students at a Junior Middle School, Xuanwei, Yunnan, China during the academic year of 2021. The Grade 8 has 4 classes, consisting of 231 people. And all the 231 students were used as the sample

3.2. Research Instrument

Firstly, the Motivation for Learning English as a Foreign Language Questionnaire (MLEFLQ) from Siphora and Lynch (2016) was used. It is an adaptation of Gardner's Attitude/Motivation Test Battery (AMTB). Secondly, Reid's Perceptual Learning Style Preference Questionnaire (PLSPQ) which developed in 1984 was used. Thirdly, a sample of 231 Grade 8 students from a Junior Middle School in Xuanwei, Yunnan, China during the academic year of 2021 was attended.

3.3. Validity and Reliability

Many researchers have used AMTB extensively in many different countries in order to assess the affective elements of second language acquisition. Gardner (1985) developed the origin concepts and items of the instrument and then extended it further with Lambert in 1972, but the full items with internal consistency reliability was developed by Gardner and Smythe (1975), presented in 1981. PLSPQ (Perceptual Learning Styles Preferences Questionnaire) was written and designed by Reid in 1984, and is extensively used to identify students' Perceptual Learning Style Preferences. Based on their reliability analysis of the PLSPQ, Tian and Lynch (2016) concluded that the Cronbach Alpha coefficient of the PLSPQ ranges between .62 and .81. Of the English language class's final test score, the test paper was issued by the Educational Bureau of Xuanwei city, all the Grade 8 students of this city were tested by the same paper.

4. Findings.

4.1. Findings for Research Objective 1

Based on the statistical analysis of data, the Grade 8 students at a Junior Middle School, Xuanwei, Yunnan, China had a slightly high degree of motivation for learning, due to the overall mean scores of this questionnaire was M = 4.33, which is interpreted as slightly high. Likewise, the mean score of motivation for learning was M = 4.21, desire to learn English was M = 4.29 and attitudes toward learning English was M = 4.50, all the mean scores of these 3 subscales were slightly high.

Table 1: Subscales, Means (M), Standard Deviations (SD) and Interpretation

<table>
<thead>
<tr>
<th>Subscales of Motivation for Learning</th>
<th>M</th>
<th>SD</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivational intensity</td>
<td>4.21</td>
<td>1.34</td>
<td>Slightly high</td>
</tr>
<tr>
<td>Desire to learn English</td>
<td>4.29</td>
<td>1.49</td>
<td>Slightly high</td>
</tr>
<tr>
<td>Attitudes toward learning English</td>
<td>4.50</td>
<td>1.36</td>
<td>Slightly high</td>
</tr>
<tr>
<td>Total</td>
<td>4.33</td>
<td>1.40</td>
<td>Slightly high</td>
</tr>
</tbody>
</table>

4.2. Findings for Research Objective 2

According to Table 2, the most preferred perceptual learning style of Grade 8 students at a Junior Middle School, Xuanwei, Yunnan, China was Auditory (32%), followed by Mix (20.3%), Kinesthetic (17.3%), Group (16.9%), Tactile (6.9%), individual (3.9%) and Visual (2.6%).

Table 2: Frequency and Percentage of the Preferred Perceptual Learning Style of Grade 8 Students

<table>
<thead>
<tr>
<th>Learning Styles</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visual</td>
<td>6</td>
<td>2.6</td>
</tr>
<tr>
<td>Auditory</td>
<td>74</td>
<td>32.0</td>
</tr>
<tr>
<td>Kinesthetic</td>
<td>40</td>
<td>17.3</td>
</tr>
<tr>
<td>Tactile</td>
<td>16</td>
<td>6.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Learning Styles</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
<td>39</td>
<td>16.9</td>
</tr>
<tr>
<td>Individual</td>
<td>9</td>
<td>3.9</td>
</tr>
<tr>
<td>Mixed</td>
<td>47</td>
<td>20.3</td>
</tr>
<tr>
<td>Total</td>
<td>231</td>
<td>100.0</td>
</tr>
</tbody>
</table>

4.3. Findings for Research Objective 3
The mean scores of 86.67 in academic achievement indicates that the Grade 8 students at a Junior Middle School, Xuanwei, Yunnan, China had a good academic achievement in English.

Table 3: Means (M) and Standard Deviations (SD) of the Academic Achievement of Grade 8 Students

<table>
<thead>
<tr>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achievement Level</td>
<td>231</td>
<td>86.67</td>
<td>24.79</td>
</tr>
</tbody>
</table>

4.4. Findings for Research Objective 4

The relationship of motivation for learning and perceptual learning style preferences with academic achievement in English Language class of Grade 8 students at a Junior Middle school, Xuanwei, Yunnan, China was significantly and moderately correlated (R = .44, p < .01) at .05 level. Additionally, it was also shows that the independent variables (motivation for learning and perceptual learning style preferences) explained 29% of the variance in the dependent variable (R2 = .29, F (2, 228) = 47.99, p < .01). Other factors account for 71% of the variance in academic achievement in English language class.

Table 4: Analysis of Multiple Correlation Coefficient Between Grade 8 Student's Motivation for Learning and Perceptual Learning Style Preferences with their Academic Achievement

<table>
<thead>
<tr>
<th>Variables</th>
<th>R</th>
<th>R²</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 8 students' motivation for learning and perceptual learning style preferences with their academic achievement</td>
<td>.54</td>
<td>.29</td>
<td>2, 228</td>
<td>47.99</td>
<td>.000</td>
</tr>
</tbody>
</table>

5. Discussion

5.1. Motivation for Learning

The result suggested that they had a slightly high degree of motivation for learning which in line with the survey result of Tian and Lynch’s research (2016). In the research of motivation for learning Chinese as a foreign language of Grades 5 - 8 students at an international school, they found that Grade 5 - 8 students' overall level of motivation for learning Chinese were moderate and very close to high. In the dimension of attitudes towards English, many students agree with that the English is a very important part of school program, but they didn't suppose English learning as a interesting thing. The researcher assumes that it because English language as a compulsory curriculum was highly valued in China's formal education, if the junior high school want to pass the entrance examination then enter the high school stage of study, they need to get a good score of English language subject. Students also well ware of the importance of English, but due to the teaching content was inclined to grammar which required a lot rote learning, so they could not find enough pleasure in English Learning. This finding was aligned with the research of Luo (2015) that nearly 70 percent of students think that pass the entrance examination then enter the high school stage of study is the main reason for their English study.

5.2. Relationship of students' motivation for learning and their academic achievement in English language class

The findings of this study indicated that the relationship between Grade 8 students’ motivation for learning and their academic achievement in English language class was strong, positive and significant. The result of this finding was aligned with many previous studies that motivation had a significant relationship with academic achievement (Zhu, 2014; Cai & Lynch, 2015; Hou & Lynch, 2015; Huang & Lynch, 2017). According to Bandura (1982), learners with high motivation were more capable to gain better learning achievement. From the survey result of questionnaire, the researcher found that the academic achievement of Grade 8 student was seriously differentiated, also, their motivation for learning English was differentiated. The students who had a stronger motivation for learning English, the better academic achievement they will achieve in the English final test, the better English academic achievement will encourage them have a stronger motivation and vice versa. Thus it can be seen that student's motivation for learning are interrelated with their academic achievement.

5.3. Perceptual Learning Style Preference

The results of this study demonstrated that the most preferred perceptual learning style of Grade 8 students was
auditory followed by mixed, kinesthetic, group and tactile, individual and visual. The reason was that the instruction model in the target school was teacher-centered, most of the time, the students need to listen what the teacher had taught and write it down, so the researcher assumes that this is the major cause of auditory style preference. This research findings was in line with Chen (2015) that auditory learning style was a major learning style of junior middle school students, and the formation of this type of learning style preference was influenced by the teaching method of teacher to a large extent. The results of this study also consistent with Zhan (2016) that auditory type is the preferred perceptual learning style of students, while individual type is the perceptual learning style that students are less inclined to use. Zhan also reasoned it by the teacher-centered English classroom teaching mode that students are accustomed to obtaining new knowledge by listening to teacher explanations, listening to group discussions, listening to recordings and other ways.

5.4. Relationship of students' perceptual learning style preferences and their academic achievement in English language class

The finding of this study showed that there had a positive and significant relationship between students' perceptual learning style preferences and their academic achievement in English language class. Reid (1984) proposes that the primary perceptual learning style refers to what kind of perception learners use to learn best, so it is not difficult to understand that everyone has a major tendency towards perceptual learning styles. In the process of learning need to use a variety of different skills, individuals by using one or two perceptual learning style is difficult to master many different skills, to better learning a foreign language, students have to develop visual, auditory, kinesthetic, tactile, group or individual and a variety of perceptual learning style. From the research results of Zhang (2017), she found that junior high school students' perceptual learning style preferences was correlated with their academic achievement, in which tactile, kinesthetic and individual learning styles are positively correlated to learning achievements while visual, auditory and group learning styles are negatively correlated to English learning achievements. In a study of the correlation between perceptual learning style and English reading scores in Chinese senior high school, Zhan (2016) found that there are three perceptual learning styles of auditory, individual and group were associated with total English reading scores.

5.5. Relationship of students' motivation for learning and their perceptual learning style preferences in English language class

The finding of this study suggested that students' motivation for learning was correlated with their perceptual learning style preferences in English language class which aligned with previous studies. In the correlation study of perceptual learning style and motivated second language behavior for junior high school students, Ren (2020) found that there is a positive and significant relationship existing in junior high school students' perceptual learning styles of visual, auditory, kinesthetic, individual learning style and motivated second language behavior. Lian (2014) found that there was a significant relationship between learning motivation and perceptual learning style. In classes consistent with their preferred perceptual learning style, students have strong learning motivation, but vice versa. In the current study, the researcher also found that the student who preferred auditory learning style will have a strong motivation for learning in the teacher-centered English language class.

6. Recommendations

6.1. For Students

The findings of the current research would lead them to know that as a non-intellectual but very crucial factor, motivation indirectly promotes learning. Students should explore their interest in English and stimulate their learning motivation. And by detecting their own learning style, students can adopt the corresponding learning strategies to effectively complete the learning tasks.

6.2. For Teachers

In order to help students cultivate their interest in English Learning and fully utilize their perceptual learning style preferences, the teachers should consider doing the following: Praise and encourage more to improve students' learning enthusiasm; help students find the fun of English, such as share the history or story of English-speaking countries; choose the appropriate teaching methods to present the English reading teaching content; design different teaching activities according to the characteristics of students' perceptual learning style; divide students in the
same class into homogeneous groups by their preferred perceptual learning styles

6.3. For School Leaders

According to the finding result of this study, the overall motivation of students is slightly high, but for many of them, they just learn English for pass exam rather than really enjoy it. The school leaders should carry out some English-related activities, such as the historical knowledge contest about English-speaking countries, play English movies, organize an English speech contest or an English song singing activity, so that help students to find the fun of learning English. For the learning styles, the school leaders can stream students and educate them according to their perceptual learning style preferences.

6.4. For Researchers

The following recommendations are offered for those who are interested to study the motivation for learning and student perceptual learning style preference in learning English as a foreign language: to ensure the objective of the study results, the English test scores should be collected several more times; the sample range can be larger to make it more representative; the variable of gender can be added to make studies more targeted; add more subscales from AMTB to research students' motivation for learning; use diverse questionnaires to test students' perceptual learning style preferences.

References


English Teaching and Learning Problems in The General Program of Bangbowitthayakhom School, Thailand

Haranee Supasan

Abstract
This research was conducted at Bangbowitthayakhom School, Thailand, and aimed to investigate teachers and students' English language teaching and learning problems in the General Program as well as find feasible measures to solve the problems. A mixed research design was used to process the data collection and data analysis. There were three instruments applied in this study. (1) the 5 Likert scale questionnaire was administered to 275 students in the General Program by randomly selected one room per one level ranging from Mathayom 1-6 with stratified sampling technique and (2) the 5 Likert scale questionnaire was administered to 24 teachers from the Foreign Language Department with purposive sampling technique. Additionally, (3) the semi-structured interview was performed by four teachers with purposive sampling technique as well. The data was analyzed by percentages, means, and standard deviation of the questionnaire. The data from the interview was transcribed, categorized, and described. The study’s results revealed that students agreed at a high level with the problems about themselves. The list of the top three statements was: (1) students lack opportunities of using English outside the class, (2) students think in Thai first before they translate it into English, as well as (3) students want to study with native speakers of English more than Thai teacher respectively. The results from teachers’ questionnaires showed that teachers agreed on a high level with problems involving students too. They mostly agreed that students thought in Thai first before they translated it into English. However, problems involving curricula and textbooks and other factors related to English language teaching were agreed to a moderate level. Lastly, problems involving teachers and assessment were at a low level. Despite this, teachers found feasible measures: game-based learning, and the flipped classroom method, and used student-centered approach to successfully solve problems. The teachers also recommend that the program should incorporate more opportunities for teacher development seminars. They believed these seminars would keep teachers up to date on the latest education techniques being used.

Keywords: English teaching and learning problems, measures, The General Program

1. Introduction
Thailand has a relatively short history of inclusion

With the English language (Kirkpatrick, 2010). Like numerous different nations in the district, Thailand doesn’t have a history of colonization by the British, so its educational system is mainly monolingual. Furthermore, Thailand is commonly referred to as an Expanding Circle country that speaks English as a foreign language. (Kachru, 2005). The role of the English language in Thailand is an indispensable tool for communicating for various purposes. It has played an increasingly important role as a communication medium among people from different countries, including Thailand. English is an essential subject in Thai schools, and every school in Thailand is required to teach English in the classroom. Therefore, English has come to be considered globally as an international or global language.

However, the current problem of English teaching and learning in Thailand has several dimensions. Baker (2008, as cited in Chanaroke & Niemprapan, 2020) the problem of teaching English in Thai classrooms is exacerbated by the perceived overall inadequacy of the English language level of disqualified and poorly trained ELT Thai teachers with a focused teaching style in grammatical details, resulting in Thai being the most commonly spoken language in the English classroom. Problems arise when attempting to implement more communicatively oriented language classrooms due to a lack of English proficiency. Obviously, Thai learners find it difficult to master English in both speaking and listening. This is because the language of instruction in the classroom is mostly Thai, and many teachers who teach English to Thai students are mostly non-native speakers at all levels of education.

According to Bangbowwitthayakhom School has followed a basic education core curriculum B.E.2551. However, the most obvious challenge is the school's English grades 80% of the General Program students will receive a grade of C-. From the opinions of foreign teachers and Thai teachers, most G.P. students do not understand
English communication well, including writing, speaking, and reading skills. They cannot understand work orders or even room activities such as Mathayom 1 students, they hardly have any basic English vocabulary, making them unable to speak or make sentences. Moreover, Mathayom 6 students have spent a significant amount of time studying English, yet they still struggle with basic communication skills and use the wrong tenses. Despite this, teacher-centered is the norm at this school, in which the teacher takes an active role in the learning process while the students sit in a passive, receptive mode and listen intently. Even in schools, the grammar-translation method is used. In the grammar-translation approach, students learn grammar while translating texts from the target language back to their native tongue. When English is taught this way, the emphasis is on memorizing vocabulary and grammar for exams rather than on teaching children to use the English language. It does not instill in children the importance of learning a second language (Panomket, T., personal communication, September 24, 2020)

This study sheds light on existing problems of English teaching and learning in the General Program in this public school in order to help both students and teachers solve problems in learning and teaching English more precisely. Specifically, teachers can take effective measures to enhance English language teaching and learning in the classroom. Then students will earn high grades in English subject and then be able to speak as well as use English confidently and effectively.

The purpose of this study are to examine the problems of English language teaching and learning.

The objectives for this study are:
1. To identify English learning problems of students in the General Program of Bangbowithayakhom School, Thailand.
2. To identify English teaching problems of teachers in the General Program of Bangbowithayakhom School, Thailand.
3. To find out some feasible measures teachers of English at Bangbowithayakhom School can take to deal with these problems.

2. Literature Review

2.1. English as a Foreign Language

EFL stands for English as a foreign language, is the term used to describe the study of English by non-native speakers in countries where English is not the official language.

EFL is used almost exclusively for specific, limited purposes, usually in a business context, such as international communication and education. EFL speaking countries are Egypt, Russia, China, Japan, Korea, and Thailand. Kachru (1991, p. 179) divides English users into three groups based on their level of usage concentration: 1) Those in the Inner Circle; 2) Those in the Outer Circle, and 3) Those in The Expanding Circle. Each circle's language has a different status. The Inner Circle speaks English as a native language, whereas the Outer Circle and Expanding Circle classify it as ESL and EFL. As a result, language learners in EFL countries must work extremely hard to master the English language. The process of learning English in EFL countries is limited by the constraints of classroom settings, in which learners must converse with teachers and friends who do not speak English as their first language. The opportunities to use English in EFL settings are limited. Because of these constraints, many EFL learners find it challenging to achieve a high level of English proficiency.

However, English has been considered a foreign language in Thailand, since it is neither an official language nor a medium of instruction. For many decades, English has played an essential role in Thai education. A teacher-centered approach is traditionally used in a typical English classroom in Thailand, in which teachers take control of their classes and students play a passive role (Saengboon, 2006). Thai students study English as a foreign language in the classroom. Still, they are less likely to be implemented outside the classroom environment, especially English, for daily use in all four skills, such as speaking, listening, reading, and writing. Consequently, Thais' average English proficiency level is low compared with other nations in Asia, such as Malaysia, the Philippines, and Singapore.

2.2. English in Thailand

In 1921, English was added to the school curriculum, but it was accessible only to the ruling class’s privileged community, such as court officials and administrative officers (Foley, 2005). English was primarily regarded as an academic subject and a foreign language instead of a communication medium. For much of the community in the country, it was not widely available. Until 1960, when it became part of the current Thai educational system, the general public had access to English.
English became compulsory for all primary schools in 1996, and students were required to complete mandatory education due to the National Education Act of Thailand (Foley, 2005 & 2007). Following the reformed Act, the teaching of English in public school initiates in Grade 1. It includes national awareness of English as a medium of communication and working language of the Association of Southeast Asian Nations (ASEAN). The Thai government considers English as a means of facilitating international cooperation, networking, sharing information with the global community, economic development, and competition, particularly with other ASEAN countries (Foley, 2005).

2.3. Theories on English language teaching and learning

Behaviorism, also known as behavioral learning theory, is a learning theory that states that all behaviors are learned through their interaction with the environment through a process called conditioning. Therefore, behavior is simply a response to environmental stimuli (Mcleod, 2017).

Cognitive theory is a proactive process in which students create new ideas and concepts based on their past and present language knowledge. Bruner (1973) as cited in Rao (2018), in the process of integrating learning experience into their existing cognitive structure, they develop abilities to select information, generate assumptions, and make decisions. This process enables them to go beyond the surface of the information provided and interact with their surroundings by exploring and manipulating objects.

Rao (2018) notes that sociocultural constructivist learning theory is important in SLA as it confirms that knowledge is created and developed through learning which arises from interactions with others. Vygotsky (1981) studied the role of social experience in the development of individual knowledge, which inspired the sociocultural perspective of S/FL acquisition. Vygotsky focused on the social context of learning, specifically how social and cultural contexts affect a learner's cognition or how the social environment accounts for the development of higher cognitive processes. Besides Vygotsky's sociocultural theory, human development is a socially mediated process in which children learn cultural values, beliefs, and problem-solving techniques through collaborative conversations with more educated members of society. Vygotsky's theory includes notions such as culture-specific tools, private communication, and the Zone of Proximal Development (Mcleod, 2018).

2.4. The Issues of EFL in Thailand

Rossukhon and Mr. Langlois (2012) claimed that English language education in Thailand is not new. It has been a core subject in Thai schools for decades. Yet, after years of English lessons from primary school, most Thai students’ English lies somewhere between inadequate and non-existent. Most high school students, especially those in more impoverished rural schools, can barely string a few words together to make a coherent sentence or write a small paragraph in English. Rossukhon’s teacher, Mr. Guillaume Langlois, a French native teaching English at the school for five years, said many Thai students could not speak English in real-life situations because they have seldom been urged to do so.

2.4.1. Thailand Falls in English Proficiency

ETS also reported the results of TOEIC (Test of English for International Communication) from 2010 to 2017. In the reports, Thailand was reliably among the poor-performing nations. The average scores on listening were always below 300, and the average reading scores were worse, which did not achieve half of the total score: 248. Reading is the most challenging part; however, the listening score is also low.

For over ten years, Education First (E.F.) revealed the English language skills ranking results for the year 2011, found that from 44 countries that do not use English as the national language, Thailand ranked at 42 (very low level). In 2012, Thailand ranked 53 out of 54 countries (very low level). In 2013, Thailand ranked 55 out of 60 countries (very low level). In 2014, Thailand ranked 48 out of 63 countries (very low level). In 2015, Thailand ranked 62 out of 70 countries (very low level). In 2016, Thailand ranked 56 out of 72 countries (very low level). In 2017, Thailand ranked 53 out of 80 countries (low level). In 2018, Thailand ranked 64 out of 88 countries (low level). In 2019, Thailand ranked 74 out of 100 countries, resulting in a total of 47.62 points (very low level). The year 2019 results were lower than the years 2018 and 2017. In 2020, Thailand’s proficiency levels are still very low on 89 from 100 countries. Thailand has the third-lowest score in Southeast Asia, behind Indonesia and ahead of Myanmar and Cambodia, and ranked 17th out of 25 countries in Asia.
The very weak performance by Thai students means that the country ranks third from the bottom for English proficiency among ASEAN nations.

**Table 1**: Thailand’s English Proficiency Trend from 2011-2020

<table>
<thead>
<tr>
<th>Year</th>
<th>Rank</th>
<th>Proficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>42 of 44 countries</td>
<td>Very low</td>
</tr>
<tr>
<td>2012</td>
<td>53 of 54 countries</td>
<td>Very low</td>
</tr>
<tr>
<td>2013</td>
<td>55 of 60 countries</td>
<td>Very low</td>
</tr>
<tr>
<td>2014</td>
<td>48 of 63 countries</td>
<td>Very low</td>
</tr>
<tr>
<td>2015</td>
<td>62 of 70 countries</td>
<td>Very low</td>
</tr>
<tr>
<td>2016</td>
<td>56 of 72 countries</td>
<td>Very low</td>
</tr>
<tr>
<td>2017</td>
<td>53 of 80 countries</td>
<td>Low</td>
</tr>
<tr>
<td>2018</td>
<td>64 of 88 countries</td>
<td>Low</td>
</tr>
<tr>
<td>2019</td>
<td>74 of 100 countries</td>
<td>Very low</td>
</tr>
<tr>
<td>2020</td>
<td>89 of 100 countries</td>
<td>Very low</td>
</tr>
</tbody>
</table>

Note: The maximum score is 100

Source: [https://www.ef.co.th/epi/](https://www.ef.co.th/epi/)

**2.5. The Factors that Impact on the Failure of EFL in Thailand**

Kaewmala (2012) commented that Thais’ English is dismal, and among the causes, the poor-quality and wrong-headed English-language education in the Thai school system is primary. Many Thai schools have begun to hire native speakers and English-speaking foreigners to teach English in recent years. However, the number of foreign instructors in the thousands is a small number. Most schools keep relying on Thai instructors, the majority of whom are unqualified to work. Many teachers do not speak the language well enough or do not have adequate English knowledge or teaching abilities to guide students in their study.

Zhou (2017) points out that policies and strategies of the Ministry of Education directly decide how much support English education can get in practice. As noted by Punthumasen (2007) the Ministry of Education has recognized the importance of English and made some policy adjustments to promote ELT in Thailand.

1) Allowing more international schools to be opened since 1957.

2) Announcing English as the first foreign language for the Thai school system in 1995.

3) Allowing launching English Programs in schools throughout the country since 1995.

Furthermore, the Ministry of Education has consistently implemented reforms to improve English education in Thailand. The education reforms implemented between 1996 and 2007 encouraged life-long learning and mandated that all Thai students receive a free twelve-year basic education. English became one of the eight compulsory strands that students must take beginning in Grade 1 (Wiriyachitra, 2002).

**3. Research Methods and Materials**

**3.1. Research Design**

The design of this study was mixed-method research, which was designed using both quantitative (questionnaires using the 5-point Likert scale) and qualitative (structured interviews) composing, students by questionnaire only with stratified sampling technique. While teachers by questionnaire and a semi-structured interview with purposive sampling technique. All of these methods were applied in the data collection and analysis stage. The main purpose of this research is to identified English teaching and learning problems from both students and teachers at Bangbowithayakhom School Thailand.

**3.2. Sample**

The sample for this study comprised two populations: students and teachers from Bangbowithayakhom School, Thailand.

1) There were a total of 2,317 students at Bangbowithayakhom School; the researcher randomly selected only 1 class per one level ranging from M.1-M.6 in...
the General Program. Randomly selected class were: M.1/5 there were 45 people, M.2/4 there were 46 people, M.3/7 there were 42 people, M.4/2 there were 48 people, M.5/4 there were 49 people, and M.6/5 there were 45 people. Therefore, all 275 students were asked to complete the questionnaire.

Table 2: The Level and Class of the Randomly Selected Students who Respond to the Questionnaire

<table>
<thead>
<tr>
<th>Students’ levels and classes</th>
<th>Selecte d class</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>M.1: (1/1), (1/2), (1/3), (1/4), (1/5), (1/6), (1/7), (1/8), (1/9)</td>
<td>1/5</td>
<td>45</td>
</tr>
<tr>
<td>M.2: (2/1), (2/2), (2/3), (2/4), (2/5), (2/6), (2/7), (2/8), (2/9)</td>
<td>2/4</td>
<td>46</td>
</tr>
<tr>
<td>M.3: (3/1), (3/2), (3/3), (3/4), (3/5), (3/6), (3/7), (3/8), (3/9)</td>
<td>3/7</td>
<td>42</td>
</tr>
<tr>
<td>M.4: (4/1), (4/2), (4/3), (4/4), (4/5), (4/6), (4/7)</td>
<td>4/2</td>
<td>48</td>
</tr>
<tr>
<td>M.5: (5/1), (5/2), (5/3), (5/4), (5/5), (5/6), (5/7)</td>
<td>5/4</td>
<td>49</td>
</tr>
<tr>
<td>M.6: (6/1), (6/2), (6/3), (6/4), (6/5), (6/6), (6/7)</td>
<td>6/5</td>
<td>45</td>
</tr>
<tr>
<td><strong>Total number of students:</strong></td>
<td>-</td>
<td><strong>275</strong></td>
</tr>
</tbody>
</table>

2) There were 24 teachers from the Foreign Language Department of Bangbowitthayakhom School. Participants consisted of 15 Thai teachers and nine foreign teachers, which included seven from the Philippines, one from America, and one from England.

All 24 English teachers responded to the questionnaire as the below table 3

Table: 3 Teachers from the Foreign Language Department who Respond to the Questionnaire

<table>
<thead>
<tr>
<th>Nationality</th>
<th>Number of teachers from the Foreign Language Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thai</td>
<td>15</td>
</tr>
<tr>
<td>Filipino</td>
<td>7</td>
</tr>
<tr>
<td>American</td>
<td>1</td>
</tr>
<tr>
<td>British</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>24</strong></td>
</tr>
</tbody>
</table>

3.3. Research Instrument

There were three different instruments in the study: (1) questionnaire for students, (2) questionnaire for teachers, (3) semi-structured interviews for teachers.

3.3.1 The questionnaire for students

The questionnaire consisted of three parts:

Part 1: requested about students’ general information.

Part 2: consisted of one category of English-learning problems involving student.

Part 3: open-ended question to solicit additional information from the students. The comments written in Thai would be translated into English later.

3.3.2 The questionnaire for teachers

The questionnaire for teachers consisted of three parts:

Part 1: requested about teachers’ general information.

Part 2: consisted of five categories of English-learning problems involving teachers, student, assessment, curricula & text books, and other factors.
Table 5: A Five-Point Likert Scale is used as an Indicator of Level of Agreement

<table>
<thead>
<tr>
<th>Scale</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>4</td>
<td>Agree</td>
</tr>
<tr>
<td>3</td>
<td>Uncertain</td>
</tr>
<tr>
<td>2</td>
<td>Disagree</td>
</tr>
<tr>
<td>1</td>
<td>Strongly Disagree</td>
</tr>
</tbody>
</table>

This part identified factors attributed to English teaching problems involving teachers, students, curricula and textbooks, assessments, and other factors contributing to successful teaching. The calculation of the weighted mean score was the primary method. A score of 5 on the rating scale was interpreted as a level of agreement to each item in the questionnaire, as shown in (Table 6)

Table 6: Score and Interpretation for Items

<table>
<thead>
<tr>
<th>Scale</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.51-5.00</td>
<td>Very high</td>
</tr>
<tr>
<td>3.51-4.50</td>
<td>High</td>
</tr>
<tr>
<td>2.51-3.50</td>
<td>Moderate</td>
</tr>
<tr>
<td>1.51-2.50</td>
<td>Low</td>
</tr>
<tr>
<td>1.00-1.50</td>
<td>Very low</td>
</tr>
</tbody>
</table>

Note: Source: Srisa-ard, 2010

3.4. Data Analysis

The researcher used statistical software programs to compare data analysis and the statistical methods as following:

1. To identify English learning problems of students in the General Program of Bangbowithayakhom School, Thailand. The data were obtained from doing questionnaires by students. There was only one category associated with the questionnaire for students, such as student-related problems. It was analysed respectively by descriptive statistics of frequencies, percentage, mean and standard deviation. These methods measured the levels of agreement and identified English learning problems of students in the General Program of Bangbowithayakhom School, Thailand.

2. To identify English teaching problems of teachers in the General Program of Bangbowithayakhom School, Thailand. The data obtained from completing questionnaires by teachers were analyzed respectively by descriptive statistics of frequencies, percentage, mean and standard deviation. This method measured the levels of agreement and identified English teaching problems of teachers in the General Program of Bangbowithayakhom School, Thailand.

3. To find out some feasible measures teachers of English at Bangbowithayakhom School can take to deal with these problems. The researcher collected data from the semi-structured interview was transcribed, classified, and analyzed. Content analysis determined some feasible measures teachers of English at Bangbowithayakhom School could take to deal with these problems.

4. Results and Discussion

The findings of the study based on the data from the questionnaires distributed to 275 GP student respondents as well as the questionnaires distributed to 24
English teacher respondents and data interpreted from the semi-structured interviews with one Thai teacher and three foreign teachers from the Foreign Language Department in the General Program of Bangbowitthayakhom School. The findings are divided into three main parts as follows: (1) Results from research objective one, (2) Results from research objective two, and (3) Results from research objective three.

4.1. The Result from Research Objective One

4.1.1 Students Respondents’ General Information

In objective one of this research, a total of 275 students at Bangbowitthayakhom School were randomly selected from each grade level: M.1/5 there were 45 people, M.2/4 there were 46 people, M.3/7 there were 42 people, M.4/2 there were 48 people, M.5/4 there were 49 people, and M.6/5 there were 45 people to assess their problems in learning English through twenty questions. Mean and Standard Deviation were the statistical tools used in this analysis.

4.1.2 Students’ Responses to Research Objective One

The respondents ranked at a high level of agreement; a total mean score was 3.56, and a total SD was 1.03. Moreover, 14 statements were highly agreed by the students. The list of the top three statements being: (1) students lack opportunities of using English outside the class (mean score: 3.99, SD: 0.93), (2) students think in Thai first before they translate it into English (mean score: 3.87, SD: 0.99), and (3) students want to study with native speakers of English more than Thai teachers (mean score: 3.77, SD: 0.94).

Meanwhile, six statements received a moderate level of agreement. The bottom three statements were: (1) students are not aware of the benefits of learning English outside the class (mean score: 2.69, SD: 1.22), (2) students do not have a good attitude towards the English subject (mean score: 2.99, SD: 1.03), and (3) students do not like the English subject (mean score: 3.09, SD: 0.97).

4.1.3 Students’ Open-Ended Questions

Students provided comments and suggestions about English language teaching and learning in this section. The following are comments from General Program students:

Problems related to teachers: most students wanted to study with foreign teachers because there were many new activities. Furthermore, foreign teachers were less strict than Thai teachers. However, just a few students expressed an interest in studying with Thai teachers.

Problems related to students: the majority of students stated that they did not have enough time and opportunities to practice speaking English in and out of class. Some did not have inspiration to study English, so that why they thought English was very hard. Moreover, they mentioned that when they spoke English, they had to think in Thai first.

Problems related to curricula and textbooks: some students wanted to study Thai-English and English-Thai translation subjects.

Problems related to skill set: most students desired to improve their listening and speaking skills. They also wanted teachers to teach more writing skills, such as essay writing.

4.2. The Result from Research Objective Two

4.2.1 Teacher Respondents’ General Information

There were 24 teachers consisted of nine foreign teachers and 15 Thai teachers who taught in the General Program of Bangbowithayakhom School, Thailand. Most of the respondents were female, 58.33%. Nearly half were between 31-40 years old, 41.67%, most Thai teachers, 62.50%, and most foreign teachers were Filipinos, 29.17%.

Regarding educational background, 62.50% were graduates with a bachelor's degree, while 37.50% hold a master's degree. 37.50% were teachers with 1-5 years of teaching experience; most teachers had to teach approximately 16-20 periods per week, 54.17%. Aside from teaching, Thai teachers had many responsibilities such as student affairs, head of high school level, head of public relations, level, school bank staff, teacher advisor, and general academic affairs. The foreign teachers did not have many other workloads. Some of them have international linkages. The teachers were required to describe their opinions on English teaching problems through questions. Mean and Standard Deviation were the statistical tools used in this analysis.

4.2.2 Teachers’ Responses to Research Objective Two

The following figure depicts the findings of a survey of English teaching problems based on five
categories involving teachers, students, curricula and textbooks, assessment, and other factors affecting English language teaching.

**Figure 1**: Overall English teaching problems in General Program of Bangbowithayakhom School

![Bar chart](image)

Figure 1 demonstrated that from the respective questions, English teaching problems involve teachers, students, curricula and textbooks, assessment, and other factors affecting English language teaching. Teachers agreed that problems involving students were at a high level. The list of the top three problems involving students were: (1) students think in Thai first before they translate it into English (mean score: 4.08, SD: 0.83), (2) students lack opportunities of using English outside the class (mean score: 4.04, SD: 0.81), as well as (3) students lack extra practice on their own (mean score: 3.96, SD: 0.69) respectively. However, problems involving curricula and textbooks and other factors related to English language teaching were moderate level. Lastly, problems involving teachers and assessment were rated at a low level.

**4.2.3. Teachers’ Open-Ended Questions**

For other English teaching problems that teachers were facing. The respondents gave the following answers:

Problems related to students: according to teachers, most Thai students spoke Thai with their peers in class and had no further language practice outside of class. Students thought that learning English was difficult and that they were disinterested in doing so. Furthermore, students were too embarrassed to interact and were too concerned with grammar to talk.

Problems related to other factors contributing to successful teaching and learning: teachers reported a lack of communication or cooperation among school administration, Thai teachers, and foreign teachers. In addition, there were too many students in class, and there were issues with online instruction. Furthermore, the school lacked language laboratories, as well as there were a few foreign teachers in government schools.

Problems related to lexical differences between American and British: the teachers mentioned that there were contradicting English vocabularies of American and British English. The students might experience confusion when they heard or spoke the two accents.

**4.3. Results from Research Objective Three**

This objective found some feasible measures for teachers of English to deal with the English teaching and learning problems in the General Program of Bangbowithayakhom School, Thailand. The researcher interviewed four English teachers in the Foreign Language Department, three foreign teachers, and one Thai teacher. This section was divided into two parts. (1) the interviewees’ general information and (2) their responses to the structured questions are presented. The statistical tool used for this analysis was Content Analysis.

**4.3.1. The Interviewees’ General Information**

This section contains basic information about the four respondents, including nationality, age, ELT experience, teaching objects, and teaching subject. The findings are as follows:

<table>
<thead>
<tr>
<th>Teacher</th>
<th>Nationality</th>
<th>Age</th>
<th>ELT Exp.</th>
<th>Teaching Obj.</th>
<th>Teaching Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>Filipino</td>
<td>31-40</td>
<td>7</td>
<td>M. 1-4</td>
<td>English for communication</td>
</tr>
<tr>
<td>F2</td>
<td>American</td>
<td>31-40</td>
<td>3</td>
<td>M. 1-3</td>
<td>Speaking and listening English</td>
</tr>
<tr>
<td>F3</td>
<td>British</td>
<td>31-40</td>
<td>7</td>
<td>M. 4-6</td>
<td>English for communication</td>
</tr>
<tr>
<td>T1</td>
<td>Thai</td>
<td>21-30</td>
<td>5</td>
<td>M. 1-5</td>
<td>English</td>
</tr>
</tbody>
</table>

**4.3.2. The Interviewees’ Responses**

The teachers gave an interview and suggestion about problem English language teaching and learning. The following is an interview from teachers in the Foreign Language Department.
Problems related to teachers: the majority of teachers said that they had no problems with themselves. According to the interview, they loved teaching the students and believed that teaching was a great career for them. Some teachers stated that the problem they faced with themselves was establishing their confidence and finding methods to grow as teachers.

Problems related to students: most teachers reported that the most difficult challenges they faced in their classrooms were: first, getting the full attention of all students had been difficult at times, which was exacerbated when various other activities around the school interfered with regular class scheduling or took students out of the lesson. Second, there was the language barrier. Thai students rarely dare spoke English in the classroom. Most of them spoke Thai, or some students didn't speak at all. Third, because each student's background was unique, it made teaching difficult for the teachers. Fourth, most students were uninterested in the lesson; some slept during class, while others did not pay attention. The next problem was students' inability to practice English. Furthermore, students get accustomed to grammar-translation methods rather than communicative learning and thus found it difficult to employ productive skills, particularly speaking skills.

Problems related to assessment: according to teachers, the assessment problems that they discovered first were a high emphasis on grammar and passing tests. Moreover, Thai teachers found it difficult to create and assess lessons for the listening and speaking parts.

Problems related to other factors contributing to successful teaching and learning: most teachers said that there were too many students in class, and they did not have much time to teach students.

The effective measures taken to deal with the problem: regarding the interview question 7, research objective three follows: first, teachers stated that game-based learning, as well as the flipped classroom method, was beneficial. In a smaller class, it was wise to incorporate personalized learning if possible. They attempted to make classes more enjoyable; as a result, students' enthusiasm to study increased. Second, teachers tried to get students accustomed to a more student-centered approach from the first M.1 class. Exposure to this as students advanced through the levels prepared them to expect that they would need to speak English, work communicatively in groups, interview in English, and present in English. Third, teachers tried to get students to practice more conversations, such as role-play, group, and individual presentations. Lastly, teachers applied movies in teaching and outside-reading books to enhance students' development in reading and listening skill.

4.4. Discussion
This section discusses the findings of this research by relating them to the findings of the previous research studies.

4.4.1 English Learning Problems of Students in the General Program of Bangbowithayakhom School, Thailand

The findings of a survey of English learning problems involving students based on research question one. There was a difference between the two studies, discussed below:

According to the finding in this study, students at BBW School ranked problems involving students at a high level of agreement. The list of the top three statements being:

(1) students lack opportunities of using English outside the class. (2) students think in Thai first before translating it into English, and (3) students want to study with native speakers of English more than Thai teachers. It is assumed that Bangbowithayakhom School is located in the countryside, which is quite different from Bangkok's schools. As a result, students have few opportunities to communicate in English with foreigners in reality. Furthermore, there are few foreign teachers in government schools; students are accustomed to being teacher-centered, with most English lessons focusing on grammar rather than speaking skills.

However, in Jiani Zhou’s study, the students’ overall attitudes toward problems involved themselves, indicating a moderate agreement level with the issues listed. The top three statements were: (1) students want to study with native speakers of English more than Thai teachers, (2) students lack knowledge in grammar and structure, and (3) students think in Thai first before they translate into English. It is assumed that Potisarnpittayakorn School, a relatively prominent school in Thailand, is based in this country’s capital city. This means that students in this school may have more opportunities to use English outside
4.4.2. English Teaching Problems of Teachers in the General Program of Bangbowithayakhom School, Thailand

The finding of English teaching problems involving teachers, students, curricula and textbooks, assessment, and other factors affected English language teaching based on research question two. There were some similarities between the two studies, which are discussed below:

According to the finding in this study, English teachers in BBW School agreed that problems involving students were at a high level. However, problems involving curricula and textbooks and other factors related to English language teaching were moderate. Lastly, problems involving teachers and assessment were rated at a low level.

In the same way, Jiani Zhou’s study stated that problems involving students were agreed to be significant by the respondents at a high level. However, problems involving curricula and textbooks and other factors related to English language teaching were moderately problematic. In contrast, problems involving teachers and assessment were rated at a low level of obstruction. It is assumed that these two schools were public schools, so they had similar problem factors.

In conclusion, both studies agreed that problems involving students were at a high level. According to this study, the top three items based on problems involving students were: (1) students think in Thai first before translating it into English. (2) students lack opportunities to use English outside the class, and (3) students lack extra practice on their own. Despite this, Jiani Zhou’s study stated that among the top three problematic items were: (1) students lack extra practice on their own, (2) students lack opportunities of using English outside the classroom, and (3) students think in Thai first before they translate it into English.

4.4.3. There are some feasible measures teachers of English at Bangbowithayakhom School can take to deal with these problems.

The finding of research question three according to teachers’ teaching experiences of English teaching problems in the General Program of Bangbowithayakhom School, they mostly encountered numerous issues. Including language barriers, getting students' attention during teaching, having too many students in a room, students' basic English not being the same, students not daring to speak English, and students lacking the motivation to learn the language and vocabulary knowledge. However, they used the effective measures to address the issues, such as game-based learning, the flipped classroom method, a student-centered approach, role play, presentations, and movies, to encourage students to speak more effectively.

Similarly, according to Jiani Zhou's study, the teacher attempted to show two main things to the passive students in order to deal with them. One thing was that English was all around them, and they would most likely need it in the near future if they wanted to study, work, or travel. Another point was that in order to acquire a language, students needed to apply all they had previously studied rather than switching from one language model to another. In order to enhance students' awareness of English and inspire them to study, teachers may utilize a variety of teaching media in class. Teachers prefer to get close to their students by utilizing online games to improve their students' awareness of English and inspire them to study. Students were frequently exposed to English movies and music. Besides, games and hands-on learning are key components of teaching. Moreover, clips were given to the students in order to encourage them to practice speaking English.

5. Conclusions

Regarding to the research question one, the finding showed that students' opinions revealed that they agreed at a high level with the problems about themselves. They mostly agreed that they lacked opportunities to use English outside the class, they had to think in Thai first before speaking English, and they also wanted to study with native speakers.

The finding in research question two, the results of the teachers’ opinions revealed that they agreed on a high level with problems involving students. They mostly agreed that the list of the top three issues are: (1) students think in Thai first before they translate it into English, (2) students lack opportunities of using English outside the class, and (3) students lack extra practice on their own. However, problems involving curricula and textbooks and other
factors related to English language teaching were agreed to a moderate level. Lastly, problems involving teachers and assessment were at a low level.

The finding in research question three showed additional problems that teachers faced as follow: first, getting the full attention of all students had been difficult at times, which was exacerbated when various other activities around the school interfered with regular class scheduling or took students out of the lesson. Second, there was the language barrier. Thai students rarely dare spoke English in the classroom. Most of them spoke Thai, or some students didn't speak at all. Third, because each student's background was unique, it made teaching difficult for the teachers. Fourth, most students were uninterested in the lesson: some slept during class, while others did not pay attention. The next problem was students' inability to practice English. Furthermore, students get accustomed to grammar-translation methods rather than communicative learning and thus found it difficult to employ productive skills, particularly speaking skills. However, teachers showed that they used these feasible measures to solve the problem successfully: (1) game-based learning, and the flipped classroom method to improve their motivation, (2) student-centered approach instead of a teacher-centered approach, (3) practice more conversation skills such as role-play and group/individual presentations, and (4) movies, and outside-reading books to improve students’ listening and reading skill. Besides, the teachers also recommend that the program incorporate more opportunities for teacher development seminars. They believed these seminars would keep teachers up to date on the latest education techniques being used.

References


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The Relationship Between Teachers’ Perceptions Towards Principal’s Transformational Leadership and Their Organizational Commitment in Yuehe Town Junior High School, China

Jinxue Chen

Abstract
The purpose of this study is to explore the relationship between teachers’ cognition of principals’ transformational leadership and their organizational commitment in Yuehe Town Junior High School, Tongbai County, Henan Province, China. This study took 65 full-time teachers as the research object and conducted a questionnaire survey. Means and standard deviations are used to determine teachers’ cognitive level of school principals’ transformational leadership and organizational commitment, and the Pearson product correlation number is used to analyze the relationship between teachers’ perceptions towards principal’s transformational leadership and their organizational commitment. In order to analyze the relationship between the two variables, Pearson product moment correlation coefficient was used, the results show that the teachers of the target school hold a relatively positive attitude towards the principal’s transformational leadership, and the level of their organizational commitment was high. Pearson correlation test shows that there is a significant correlation between junior high school teachers’ cognition of principals’ transformational leadership and their organizational commitment in Yuehe Town Junior High School, Henan Province, China.

Keywords: Teachers’ perception, Principal’s transformational leadership, Teachers’ organizational commitment

JEL Classification Code: I20

1. Introduction
The society today is rapidly changing and the competition is high. In the kind of competitive world, to use valuable and limited resources successfully and attain higher achievement is difficult for any organization (Palta, 2019). In educational organizations, there is no doubt that teachers’ organization commitment is the main influence for the development of a school. Apart from parents, teachers are the key factor for the students’ growth and development of school. The school education for the students to a large extent determines the development of the students and the formation of their outlook on life, values and world outlook. Also, the teacher is the person who spends the most time with the students when they are in school (Wu, 2005). Therefore, it is important to pursue teachers’ commitment and improve their work efficiency, otherwise, it is more difficult to reach the vision or to accomplish the organization’s long-term goals (He, 2013). For the better working performance of teachers in educational institutions and for the improvement of teachers’ motivation to achieve organization’s goals, the organizational commitment of teachers was crucial.

In China, as Zheng (2002) mentioned the implementation of the teacher appointment system makes a large number of free flow of teachers, which would result in the high turnover rate and cause more frequent changes in school personnel. This not only directly affects students’ achievement performance, but also affects the stability and development of school. Many studies have pointed out that the degree of employee commitment to an organization can not only be used as an indicator of the organization’s performance, but also can effectively predict employee performance, absences and turnover (Su & Zhao, 2005; Li, Xu & Zhang, 2006). These studies have also pointed out that the implementation of effective leadership can improve the level of commitment of the members of the organization, so the principal’s implemented leadership in the school organization may affect the teachers’ organizational commitment in the school.

Transformation leadership was not a new topic in Western leadership theory research since the last century, but it is still a new concept for many school leaders in China. Until recently, the report of the 19th National Congress of the Communist Party of China incorporated the strategy of rejuvenating the country through educational reform, especially the development of leadership as one of the important strategies for decisively building a well-off society in an all-round way (Xi, 2017). The principal’s...
transformational leadership and other leadership style in different school are being concerned, since the principal accountability system has been implemented at the school stage in China, and the principal is the first responsible person and core figure to deepen the educational reform and school development. development continue to deepen (Zheng, 2002).

1.2. Research Objectives

Based on the above research questions, the following objectives were developed for this study:

1. To determine the level of teachers’ perceptions towards the principal’s transformational leadership at Yuehe Town Junior high School, China.

2. To determine the level of teachers’ organizational commitment at Yuehe Town Junior high School, China.

3. To determine the relationship between teachers’ perceptions towards the principal’s transformational leadership and their organizational commitment at Yuehe Town Junior high School, China.

1.3. Research Hypotheses

One hypothesis was tested in this study.

There is a significant relationship between teachers’ perceptions towards the principal’s transformational leadership and their organizational commitment in Yuehe Town Junior high School, China.

1.4. Theoretical Framework

1.4.1. Transformational Leadership Theory

Burns (1978) first introduced the definition of transformational leadership. Transformational leadership theory is usually described as a process that lets followers understand their responsibilities and tasks in the organization, stimulates their needs, so as to help followers to achieve higher level performance. According to Burns (2003), the transforming approach has brought about significant changes in the lives of people and organizations. Transformational leader provides followers with more than just working for their own interests, inspires subordinates to chase high-level needs and encourages subordinates to contribute their organization to reach higher achievement. Bass (1985) added that transformational leader is not only to lead people to achieve the organizational goals, but also motivate their followers reach a higher level of expectations and achievements.

1.4.2. Side-Bet Theory of Organizational Commitment By Becker (1960)

Teacher organization commitment is a “psychological contract” between teachers and school organizations. It is a teacher’s identification, devotion, and loyalty to the school they teach and their profession. It reflects, to a certain extent, the teachers’ sense of happiness, accomplishment, The sense of honor and the stability of the entire teaching team.

1.5. Conceptual Framework

The conceptual framework of this study was based on the research objectives and theoretical framework of this study. For the teachers’ perceptions of principal’s leadership style, this researcher would use on transformational leadership based on Burns (1978) Transformational Leadership theory to focus on four dimensions including Idealized Influence, Inspirational Motivation, Intellectual Stimulation, Individualized Consideration. For the teachers’ organizational commitment, Side-Bet Theory of Organizational Commitment developed by Becker (1960) would be used, and focus on three dimensions: Affective Commitment, Continuance Commitment, Normative Commitment.
2. Literature Review

The concept of transformational leadership was first proposed by Burns (1978). He believes that when "leaders and subordinates promote morality and motivation to a higher level through mutual encouragement", we can see this type of leadership. In this process, both leaders and subordinates have experienced change. According to Burns (1978), Bass (1995) believes that determining the common interests between leaders and followers is very important for effective leadership, which also promotes subordinates' values, attitudes and motivation to a higher level of awakening and maturity.

Selamat, Nordin and Adnan (2013) found that there is a significant positive correlation between the transformational leadership of principals and the level of teacher organizational commitment, they suggested that transformational leaders should change the leadership of the school organization and help school staff members to update their personal views. Nasra and Heilbrunn (2016) also supported that transformational leaders can stimulate and improve teachers’ self-monitoring and self-control. Adjustment ability, so that teachers’ commitment to the school’s vision and mission is strengthened.

Researchers abroad and in China have studied and discussed the relationship between school transformational leadership and teacher organizational commitment. On the one hand, when researchers discuss the transformational effectiveness of schools, they often take some elements of teacher organizational commitment as an important measure of school organizational effectiveness.

The study of Pillair and Williams (2004) has shown that transformational leadership in schools is directly related to teacher trust, teamwork, and job satisfaction. Leithwood and Sun (2012) found that transformational leadership in schools affects school organizational culture and Organizational atmosphere can improve teachers’ learning school loyalty affects teachers’ goal setting and teachers’ confidence in school development and personal development, and ultimately affects school organizational effectiveness. On the other hand, when researchers explored the influencing factors of teacher organizational commitment, they found that school transformational leadership is one of the most critical and decisive factors. Aydin, Sarier and Uysal (2013) found that, compared with transactional leadership style, transformational leadership style is more capable of internalizing leaders’ values and educational concepts, and teachers are more willing to go beyond immediate personal interests. Pursue leadership.

In China, Zuo’s research found that the principal’s leadership style has different effects on teachers’ willingness to work, organizational identification and retention tendency. Among them, the high-task and high-care leadership style helps improve teacher organizational commitment. Zuo (2006) showed that the implementation of transformational leadership is conducive to the establishment of organizational norms and educational beliefs in schools that support teachers’ professional development and enhance teachers’ professional identity. School transformational leadership there is an all-cause-and-effect logical relationship with teacher organizational commitment, but the mechanism of the internal elements of school transformational leadership and teacher organizational commitment needs to be further clarified and discussed.

Amoroso (2002) study claimed that school transformational leadership mainly influence the teachers' beliefs, ambitions, values and other internal motivations. Under the guidance of the common vision and goals, school leaders and teachers unite, cooperate closely, and share work to promote school reform and school improvement. At the same time meet personal high - level needs and realize personal value pursuing, thereby inspiring teachers' recognition, devotion and loyalty to the school organization and teacher profession, and then to the greatest extent raising the level of teacher’s organizational commitment.

The empirical research on organizational commitment by Chinese scholars can be roughly divided into three categories. The first category is research on the status quo of organizational commitment and the impact of personal background variables on organizational commitment. These studies generally believed that the surveyed objects have high organizational commitment. Different background variables are significantly correlated with organizational commitments at different levels, such as Song (2005). It is believed that there are significant differences in the level of organizational commitment of teachers with teaching age and academic qualifications. Wang (2007) also found that there are significant differences in organizational commitments among teachers with different marriages, titles, ages, and the nature of work.

These studies preliminarily showed that the implementation of transformational leadership is conducive to the establishment of an organizational norm and educational belief in schools that support the professional development of teachers and enhance the professional identity of teachers. There is an all-factor between school
transformational leadership and teacher organizational commitment. The logical relationship of the consequences, but the mechanism of the school’s transformational leadership and teacher organizational commitment needs to be further clarified and discussed. Therefore, this study tries to test the relationship between teachers’ perceptions of principal’s transformational leadership and teacher’s organizational commitment in the selected school in China.

3. Methodology/Procedure

3.1. Population and Sample

The study conducted a questionnaire survey on all full-time teachers in the first semester of the 2020 academic year. As the school’s HR department reported there are only 65 full-time teachers who are currently working in, all 65 full-time teachers in this school will be used as the participants for this study. The school Principal, administrators and other technical staffs are not included as respondents.

3.2. Research Instrument

To determine the relationship between teachers’ perceptions towards the principal’s transformational leadership and their organizational commitment at Yuehe Town Junior high School, China. This study through a questionnaire with quantitative analysis. The questionnaire is divided into two parts, 40 items totally. The first part of the questionnaire is to determine the teachers’ perceptions of principal’s leadership style, and the second part of the questionnaire is to determine the teachers’ organizational commitment. Descriptive statistics and Correlational analysis would be used for this quantitative and correlational design.

In order to collect the data for this study, the researcher firstly had obtained the permission from the principal of Yuehe Town Junior High School. After the proposal defense, the researcher would send the questionnaires to a professional translation agency for translation, and then distributed the Chinese questionnaire to the full-time teachers working in the school in November. By December, 2020, all the questionnaires are expected to be returned and the computation of the data would be started.

3.3. Validity and Reliability

The questionnaire is divided into two parts in this study. The first part of the questionnaire was to identify the teachers’ perception towards the principal leadership styles. The instrument of this part researcher used MLQ questionnaire which is highly validated questionnaire by Bass and Avolio (2000). In terms of reliability the MLQ has shown frequent results with reliability scores for each of the scales ranging from 0.74 to 0.91, all of the scales’ reliabilities were generally high. The second part of the questionnaire was adopted from Allen and Meyer, (1990) organizational commitment questionnaire. The validity of organization commitment questionnaire was approved by 3 experts from Program Director of Karuna Mission Social Solidarity of Graduate School of Education in Assumption University.

4. Findings

4.1. Findings for Research Objective 1

Table 1 shows the summary of the Means and Standard Deviations of the level of teachers’ perceptions towards principal’s transformational leadership in Yuehe Town Junior high School, Tongbai county, Henan province, China. The level of the mean in total for principal’s transformational leadership was in level of high, which the score was 3.61, the range of 3.51-4.50. The score for individualized consideration was the lowest (3.46), and the score for inspirational motivation was the highest (3.74), the level was high.

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Idealized Influence</td>
<td>3.64</td>
<td>.87</td>
<td>High</td>
</tr>
<tr>
<td>Inspirational Motivation</td>
<td>3.74</td>
<td>.79</td>
<td>High</td>
</tr>
<tr>
<td>Intellectual Stimulation</td>
<td>3.61</td>
<td>.88</td>
<td>High</td>
</tr>
<tr>
<td>Individualized Consideration</td>
<td>3.46</td>
<td>.95</td>
<td>Moderate</td>
</tr>
<tr>
<td>Overall</td>
<td>3.61</td>
<td>.87</td>
<td>High</td>
</tr>
</tbody>
</table>

4.2. Findings for Research Objective 2

Table 2 shows the summary of the Means and Standard Deviations of the level of teachers’ organizational commitment in Yuehe Town Junior high School, Tongbai county, Henan province, China. In summary, the level of the mean in total for organizational commitment was in the range of 3.51-4.50 interpretations, the level was high, which the score was (3.68). The lowest score for was continuance
commitment, in the range of 3.51–4.50, the level was high, and the score was (3.57). The highest score for was affective commitment, in the range of 3.51–4.50, the level was high, and the score was (3.80).

Table 2: Summary of Teachers’ Organizational Commitment (N=65)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affective Commitment</td>
<td>3.80</td>
<td>1.20</td>
<td>High</td>
</tr>
<tr>
<td>Continuance Commitment</td>
<td>3.57</td>
<td>1.36</td>
<td>High</td>
</tr>
<tr>
<td>Normative Commitment</td>
<td>3.67</td>
<td>1.35</td>
<td>High</td>
</tr>
<tr>
<td>Overall</td>
<td>3.68</td>
<td>1.30</td>
<td>High</td>
</tr>
</tbody>
</table>

4.3. Findings for Research Objective 3

The results of Table 3 showed the analysis of the relationship between teachers’ perceptions towards principal’s transformational leadership and their organization commitment in Yuehe Town Junior High School, Tongbai county, Henan province, China. The result showed that r = .465, Sig. (2- tailed) was .000, which was smaller than .05. That is, at the level of .05 (even .01), there was a strong positive correlation between teachers’ perceptions towards principal’s transformational leadership and their organizational commitment perceived by teachers in the school. In conclusion, the hypothesis for this research was accepted, in other word, there was a significant relationship between teachers’ perceptions towards principal’s transformational leadership and their organizational commitment in Yuehe Town Junior High School, Tongbai county, Henan province, China.

Table 3: Pearson Product Moment Correlation between Teachers’ Perceptions Towards Principal’s Transformational Leadership and Their Organizational Commitment in Yuehe Town Junior High School (N=65)

<table>
<thead>
<tr>
<th>Correlation Test</th>
<th>Principal’s Transformational Leadership</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers’ Organization Commitment</td>
<td>Person Correlation Sig. (2-tailed)</td>
<td>.465** .000</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (2 tailed).

5. Conclusions

This study examined all the full-time teachers in Yuehe town junior high school by questionnaire, to determine the level of teachers’ perception towards the principal’s transformational leadership and their organizational commitment.

According to the finding of objective 1, this study found that the teachers’ perceptions towards the principal’s transformational leadership in the selected school were regarded as high level in general. Among the four components, Teachers’ perception of individualized consideration from principals is less, teachers’ perception on individualized consideration regarded as moderate, meanwhile, for the idealized influence, inspirational motivation and intellectual stimulation were regarded as high. The findings showed that teachers have a high perception of the transformational leadership of principals. The transformational leadership style of principals has an influence on teachers, and there are still deficiencies in personalized care. Principals need to care more about teachers, not only to provide help and support in work, but also to give care in life, support teachers in spirit, and improve teachers’ work quality Enthusiasm and enthusiasm.

According to the finding of objective 2, based on the data analysis results of three aspects of the commitment of teachers’ organizations, teachers’ perceptions towards their organizational commitment in the target school were regarded as high. Teachers in the school used the word “sometimes” to explain their feeling of it. The scores of teachers’ affective commitment was the highest, although the lowest was the score of teachers’ continuance commitment, but the level was high. According to these three aspects of the resulted of teachers’ organizational commitment, it can be concluded that teachers have deep feelings for the school and will not easily leave the school. The school makes teachers have a sense of belonging and are willing to pay for the school. In order to improve the retention rate of teachers, encourage teachers’ enthusiasm in work, and provide more support to help and care for teachers.

According to the finding of objective 3, Pearson Product Moment Correlation Coefficient showed that sig.(2-tailed) between teachers’ perceptions towards principal’s transformational leadership and their organizational commitment was .000, the r value was .465, which is less than .05. On account of the result of the data analysis, there is a strong positive relationship between teachers’ perception towards principal’s transformational leadership...
and their organizational commitment in Yuehe Town Junior high School, China. The resulted support and provide the idea that transformational leadership of principals can have a strong impact on Teachers’ organizational commitment, and it is positive and firm.

6. Discussion

First, the study found that According to the analysis of the data results, the mean values of the transformational leadership styles perceived by the surveyed teachers in this study are higher than the median 3, indicating that the leadership styles perceived by middle school teachers are in the upper middle level, which is basically consistent with the research results of Tian (2005); Wang , (2007); Wang, Huang and Feng, (2013). The average score of transformational leadership is 3.61, in which the idealized influence, inspirational motivation and intellectual stimulation score is higher, and the score of individualized consideration is relatively low. The average score of Wang Sainan and Wang Lei’s research on transformational leadership is 3.51 and 3.25 respectively. Comparatively speaking, the average score of transformational leadership in this study is slightly higher than the previous research results. These are in line with the actual situation of primary and secondary schools in our country. The analysis of the reasons showed that the principal responsibility system is implemented in primary and secondary schools in our country, and the principal’s responsibility and power are relatively large, especially the transformational leadership. The principal obtains the teachers’ trust, admiration, loyalty and respect with his own quality by virtue of his idealized influence. At the same time, the principal’s leadership style is not far behind the teachers’ expectations by giving meaning to his work. The results show that the school principals do not care enough for teachers, and they need to create space for teachers’ personal development, create an atmosphere and environment conducive to teachers’ reflection, cooperation and learning, and influence teachers’ pursuit of higher level with personal charm. In order to better link the improvement of teachers’ ability with the development of school reform.

The results showed that teachers have a high level of organizational commitment to the school. The scores of teachers’ organizational commitment were affective commitment, normative commitment and continuance commitment. On the one hand, with the development of teachers’ professionalization, teachers pay more and more attention to the embodiment of their own value, and pay attention to whether the individual’s specialty can be brought into play in the school, whether the school can provide working conditions and learning and improvement. On the other hand, school-based management is an important direction of reform. Teachers and school organizations are partners. Teachers have more opportunities to participate in school affairs and have the right to decide on curriculum and teaching, which can strengthen teachers’ sense of responsibility for the school. Therefore, they will have higher emotional commitment. In terms of teachers’ organizational commitment, these research results were consistent with the research of scholars (Chen, 2007). Teachers’ organizational commitment refers to the psychological binding force that teachers identify with and accept the school’s development vision, school culture and values, and that teachers would to make every effort for the school’s development and reform, and are eager to stay in the school. According to research results, the level of teachers’ organizational commitment is mainly affected by three factors: the satisfaction of teachers’ personal needs (especially the satisfaction of personal development needs: work itself, promotion opportunities, career development and promotion space), social comparison and the degree of internalization of social norms (Chen, 2007).

This study showed that principals learn to listen to teachers and establish good communication between principals and teachers are very important factors to improve teachers’ organizational commitment. According to the needs of professional psychology, the career of teachers is divided, and the teachers between teaching years are in the stage of gradual maturity and stability (Long, 2002). At this stage, after many successful encouragements and failure setbacks, teachers may mobilize their work or change their careers, determine their own direction and path of professional and technical development, and aspire to become the backbone of professional and technical work in the school. Their understanding of the profession tends to be realistic and lay a solid foundation for long-term professional development. For the teachers at this stage, the headmaster should focus on helping them to improve their own quality through unremitting efforts, and strive to engage in education and teaching work, so that they can experience the sense of achievement and self-satisfaction in school, experience the fun and challenges in work, and improve their retention commitment.

When exploring the relationship between transformational leadership and teachers’ organizational
commitment, the results showed that there is a significant positive correlation between them. That is to say, there is a significant positive correlation between the dimensions of transformational leadership and the dimensions of teachers’ organizational commitment as well as the overall commitment. That is to say, if the principal adopts more transformational leadership style in practical work, the higher the organizational commitment of teachers is. Through further analysis, it is found that the four dimensions of transformational leadership have significant predictive power on Teachers’ organizational commitment. This shows that school administrators should have a strong sense of dedication and devotion to their work, set an example and keep their words and deeds in line, so that teachers can understand the future of the school, point out their goals and development directions, and consider their personal situation, create an environment for their growth, care about their development, family and life, It is helpful to strengthen teachers’ recognition of the school and form higher organizational commitment.

7. Recommendations

7.1. For Teachers

The researchers suggest that teachers should pay more attention to the specific aspects of the principal’s transformational leadership style, and provide feedback to school administrators if they have any suggestions on school management. In this way, teachers can help school leaders understand teachers’ views, so as to help school leaders better carry out school management projects.

7.2. For Principal

principals should maintain communication channels with teachers, share information with teachers, help teachers reduce work pressure, improve teachers’ work efficiency, and improve their personal skills in dealing with pressure and problems. It is suggested that principals should have a clear teaching structure and orientation to make it easier for teachers to teach and learn and reduce their workload. More importantly, principals should continuously evaluate students’ performance and provide feedback regularly to help teachers' professional development. In addition, it is suggested that principals should improve teachers' working conditions, guide new teachers, provide opportunities for teachers to participate in school decision-making process, encourage teachers to continuously learn and develop for their own majors and promote teachers' cooperation. In short, improving effective principal support will increase teachers’ organizational commitment, which will be a major obstacle to school management and a major wish of principals. However, it is worth improving teachers’ organizational commitment that principals support their teachers in different fields.

7.3. For School Administrators

School administrators should find a good way to accept teachers’ suggestions and encourage teachers to express their feelings to the school. According to the feedback from teachers, this method should be private, regular and transparent. Only when school administrators understand teachers’ real ideas and needs, can schools formulate better management system to enhance teachers' organizational commitment. School administrators should give more emotional care to teachers to encourage them to do a good job.

7.4. For Future Researchers

This study aims at those who are interested in studying the relationship between teachers’ perceptions towards principal’s transformational leadership and their organization commitment in Yuehe Town Junior High School, Tongbai county, Henan province, China. The object of this study is 65 full-time teachers of Yuehe town junior high school in 2020. The results of this study will not be used to promote or improve other schools. Future researchers can also conduct similar research through quantitative and qualitative methods. The hybrid approach will determine teachers’ views, so as to obtain more understanding, information and better results, improve teachers’ loyalty to the school, and try more diversified learning methods. In addition, future researchers can also compare public and private schools and consider more variables that affect teachers’ organizational commitment, such as educational background, nationality and so on.

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A Study of the Relationship Between Teachers’ Leadership Capacity and Teachers’ Decision-Making Styles in Gangbei Construction Primary School, Guigang, Guangxi Province, China

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Watana Vinitwatanakhun\(^2\)

Abstract

Keywords: Teacher, Teachers’ leadership capacity, Teachers’ decision-making styles. The study is carried out to explore the relationship between teachers’ perceptions of their leadership capacity and their decision-making styles in Gangbei Construction Primary School. 112 full-time teachers from the academic year of 2021, Gangbei Construction Primary School are included in the survey. The analytical statistic was Mean and Standard Deviation and Pearson Product-moment coefficient. The result shows the main purpose of the study is to examine the relationship between teachers’ leadership capacity and their decision-making styles. The study found that “teacher’s leadership capacity” and teachers’ decision-making styles” were significantly correlated, \( r = .84 \), sig. (2-tailed) was .000. The result shows that Pearson Correlation test indicated that there was a strong relationship between teachers’ perceptions of their leadership capacity and their decision-making styles in the Gangbei Construction Primary School in Guigang, Guangxi Province, China.


1. Introduction

Buhalis (2000) pointed out that the improvement of educational level lays the very foundation of a country’s social and economic development. The key to improving educational level relies on the improvement of school teaching level. The improvement of teacher leadership is a vital driving force for the enhancement of the teaching level. Therefore, the focus of improving a country’s educational level should be the improvement of teachers’ leadership, which can facilitate developing campuses with pluralistic features and cultivating students of all-round development.

Entering the 21st century, teachers are required to improve their knowledge, skills and capabilities related to teaching and learning. Leadership and teachers are the key to achieving educational goals because both help with improving the quality of teaching and learning. Only teachers with leadership skills and a comprehensive understanding of their professional abilities can achieve the teaching quality (Henrique & Ye, 2020).

For the past seven decades, China’s basic education has kept abreast with time, condensed China’s experience, voiced China’s voice and contributed China’s wisdom to education of humankind. However, there still exist inconsistency in local educational level and disequilibrium in teaching level. Teachers’ teaching level exerts a direct impact on the development level of China’s basic education. Therefore, a team of high-quality teachers remains a problem to be solved. Harris & Lambert (2003) mentioned that to cultivate high-quality teachers that can satisfy the demand of modern education, teachers should improve their leadership, constantly improve their innovative awareness and ability, and strengthen the supervision of daily teaching activities. Therefore, teachers’ confidence and leadership can be improved in practical manner. The sustainable development of basic education in China will be further promoted.

Sentočnik (2018) points out that decision-making style has externalities. For schools, the arbitrary decision-making style of school leaders will make teachers feel sensitive. For teachers, they tend to make consultative decisions and are more willing to share their own teaching experiences and teaching ideas with colleagues. Different decision-making methods will exert different impacts on students. Dictatorial decision-making style is not only conducive to the growth of students, but also guides students in a wrong way for that style tends to emphasize their own role, while ignoring the role of the team. The consultative decision-making style and group decision-making style are more conducive to build students’ group consciousness and
team spirit and lay much more emphasis on the role of the group.

Vroom (2003), decision-making style, lays the basis of decision-making factors. Decision-making styles are based on personal characters, degrees, capabilities, and the living environment. Children growing up in teachers’ family, often learn how to walk away, learn humility, and thus in many ways it is not easy to form extreme and autocratic negotiation decision making style. Meanwhile, professional ability also directly affects decision-making style. The stronger the professional ability is, the better they are at listening to experts’ opinions. In a professional academic exchange meeting, professors often express themselves and communicate and collide with different opinions, which is conducive to forming new opinions and promoting the creation of new technologies.

Nowadays, teachers’ leadership capacity and decision-making grow all the more important in the educational field. The school finds that the increase in the number of teachers recruited each year should raise the admission standards to improve the teaching quality of teachers and students’ performance. Then teacher’s leadership capacity and decision-making style may represent teacher’s comprehensive ability, and teachers with good leadership and decision-making style will also better communicate with and solve problems between parents and the school, so the school will further investigate the impact of teachers’ leadership capacity and decision-making style on the school.

1. 1 Research Questions
1.1.1 What is the teachers’ perception of their leadership capacity in Gangbei Construction Primary School of Guigang city, China?
1.1.2 What are the decision-making styles of teachers in Gangbei Construction Primary School of Guigang city, China?
1.1.3 Is there any relationship between teachers’ leadership capacity and their decision-making styles in Gangbei Construction Primary School of Guigang city, China?

1. 2 Research Objectives
Three objectives in this research:
1.2.1 To determine the teachers’ perception of their leadership capacity in Gangbei Construction Primary School of Guigang city, China.
1.2.2 To determine the decision-making styles of teachers in Gangbei Construction Primary School of Guigang city, China.
1.2.3 To determine the relationship between the teachers’ leadership capacity and their decision-making styles in Gangbei Construction Primary School of Guigang city, China.

1. 3 Conceptual Framework
Figure 1 below is the conceptual framework of this study, which explains two variables and the design of the study purposes.

![Conceptual Framework of this Study](image)

2. Literature Review
2.1 High Leadership Capacity Theory
Amit et al., (2007) defined that high leadership capacity is a kind of ability to grasp the mission of an organization and mobilize people to go for this mission. High leadership capacity makes a team and has a strong combating effectiveness. High leadership consists of four components: (1) Intense focus on a shared vision; (2) Reflection and innovation; (3) Share Governance; (4) Monitor and Respond to student achievement. Lambert (1998) described that high leadership is a group of leaders or crowd of people who can establish high expectations or professional partnerships in their organizations. In terms of educational organizations, high leadership will lead the school's effective action under a shared vision, which will be reflected in the school management, teaching, learning process.

2.2 High Leadership Capacity Theory of Teacher Professional Development
The high leadership theory of teachers’ professional development is based on the theory of adult development and combines with other fields such as
psychology, education and so on. The high leadership theory of teacher professional development mainly focuses on the development law of teachers’ entire careers. Different researchers have conducted a lot of research on leadership in different stages of teacher professional development.

Buhalis (2000) pointed out the development of teacher career as a cycle, starting with pre-service education, and ending with the establishment of ability growth, stability and stagnation, and career depression. Such a theoretical framework is relatively complete. Steffy (2001) also added a new career stage before the end of teachers’ careers and believed that appropriate assistance and support for teachers who were in a low stage of development could enable teachers to embark on the path of high leadership in professional development.

2. 3 Theory of Decision-Making Styles

According to Scott and Bruce (1995), decision-making style is not a personality trait, but a learned and habitual response pattern those individuals tend to show in decision-making situations. Ding, Xu, Yang, Li & Heughten (2020) pointed out that decision-making style is a learned and usual response mode that a person shows in decision-making situations. Greenberg (2016) believes that decision-making style is a mixture of how a person recognizes and understands a situation and how he/she chooses to deal with a specific situation. The decision-making style with alternatives is chosen by the manager. The Vroom-Yetton decision-making style focuses on the environment and conditions for managers to cooperate with others in the decision-making process. Those who try to implement the decision-making process should mainly understand the availability of information and the structure of the problem, the follower’s strict acceptance of the decision and the time for the final decision. According to Vroom, Yetton cited by Russel (2018), five decision-making styles are proposed, namely Vroom Yetton's decision-making model, which calls on all teachers to participate in the school-level decision-making process. The following describes these five decision-making methods in the order of unilateral to shared.

The researcher reviewed theories about leadership capacity, there are three viewpoints: leadership capacity is an ability; leadership capacity is the influence; leadership capacity is a combination of strengths. There are essential differences between leadership capacity and leader. Building leadership capacity and improving the leadership skills of teachers and administrators can lead to improved school sustainability and improved student achievement. Leadership capacity is a vital part of a leader, which refers to the leader's ability to guide and lead to achieve goals under certain circumstances. The difference between the two is that leadership capacity covers activities and knowledge in various aspects such as leadership process, leadership behavior and leadership ability, while leadership capacity focuses on the ability, mainly considering the leader's ability and its ability structure.

On the other hand, a review of the importance of decision-making styles also suggests that different individuals have preferred styles. Some individuals prefer a dictatorial decision-making style, preferring to act on their own terms. Some individuals prefer team decision-making and make decisions based on the opinions of others.

3. Materials and Methods

The research aimed to explore the relationship between teachers’ leadership capacities and their different decision-making styles in the Gangbei Construction Primary School in Guangxi Province, China. The investigator would use two variables to design a quantitative relationship study, using descriptive statistics and a correlation method to explore the research objectives.

3. 1 Research Instrument

A questionnaire was used to survey the teacher’s leadership capacity and their decision-making styles. The research questionnaire included three parts as follow:

Part (I) Demographics factors, including gender, age, education background, and working experience.

Part (II) is teachers’ leadership capacity; the researcher focused the investigation on four components with 5 Likert scales for 17 items of questionaries.

Part (III) concerns three difference decision-making styles which comprise of autocratic decision-making style; consultative decision-making style; group decision-making style with Five-point Likert Scale 16 items of questionaries

3. 2 Population

All the full-time teachers are included into the selected school in the academic year of 2021. According to the record of Human Resource Department, there were 112 teachers twoking in the school, as a result, the 112 full-time teachers were invited to take part in this study.

The teachers were required to answer the questions according to their preferences and perceptions of their leadership capacity and decision-making styles and refer to
Five-points Likert Scale interpretation criteria as showed in table 1 below.

Table 1
Five Point of Likert Scale Interpretation

<table>
<thead>
<tr>
<th>Agreement Level</th>
<th>Score</th>
<th>Scale</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>5</td>
<td>4.51-5.00</td>
<td>High</td>
</tr>
<tr>
<td>agree</td>
<td>4</td>
<td>3.51-4.50</td>
<td>Very high</td>
</tr>
<tr>
<td>Undecide/Not Sure</td>
<td>3</td>
<td>2.51-3.50</td>
<td>Neutral</td>
</tr>
<tr>
<td>disagree</td>
<td>2</td>
<td>1.51-2.50</td>
<td>Low</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>1</td>
<td>1.00-1.50</td>
<td>Very low</td>
</tr>
</tbody>
</table>

4. Findings

Research Objective One

The research objective one of this study was to determine the teachers’ perceptions of their leadership capacity in Gangbei Construction Primary School in Guigang city, Guangxi province, China.

Table 2 shows the mean and standard deviation of the intense focused vision of teachers' leadership capacity to determine the leadership capacity of teachers in Gangbei Construction Primary School. As can be seen from Table 1, the total mean value shows that teachers’ perception of school is 3.24, which is regarded as "neutral". The highest average score of 3.51 for all projects in this component was "intense focus on vision"; The lowest average score was 3.07 in the "share governance", but the average score for this component was between 2.51 and 3.50, which was also considered "Neutral ".

Table 2
Summary of Means and Standard Deviations of Teachers’ Perception towards Their Leadership Capacity (n=112).

<table>
<thead>
<tr>
<th>Leadership Capacity</th>
<th>Mean</th>
<th>SD</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intense Focus on Vision</td>
<td>3.51</td>
<td>.60</td>
<td>High</td>
</tr>
<tr>
<td>Reflection and Innovation</td>
<td>3.26</td>
<td>.73</td>
<td>Neutral</td>
</tr>
<tr>
<td>Share Governance</td>
<td>3.07</td>
<td>.76</td>
<td>Neutral</td>
</tr>
<tr>
<td>Monitors and Responds to Achievement</td>
<td>3.14</td>
<td>.80</td>
<td>Neutral</td>
</tr>
<tr>
<td>Total</td>
<td>3.23</td>
<td>.60</td>
<td>Neutral</td>
</tr>
</tbody>
</table>

Research Objective Two

The objective two of this study was to determine the teachers’ perceptions towards their decision-making styles in Gangbei Construction Primary School.

Table 3 shows the summary of the mean and standard deviation scores of the four constructs of high leadership capacity. Those mean and standard deviation scores were the results of the statistical analysis on data collected from teachers at Gangbei Construction Primary School regarding Teachers’ Perceptions of their Decision-Making Styles. As can be seen from the statistical results in the table, the mean score of 3.60 was for Group decision-making styles which got the high level and that teachers are more inclined to group decision-making, since it was in the scale range of 3.51-4.50. Consultative decision-making styles got an average score of 3.42, followed by group decision-making styles, which was also in the range of 2.51-3.50. Autocratic decision-making styles got the lowest mean score among the three decision-making styles at 3.30, which was in the scale range of 2.51-3.50. In conclusion, it is proves that the teachers’ perception of their decision-making styles at Gangbei Construction Primary School was identified as "Neutral".

Table 3
Summary of Means and Standard Deviations of Teachers’ Perception towards Their Decision-Making Styles (n=112).

<table>
<thead>
<tr>
<th>Decision-making styles</th>
<th>Mean</th>
<th>SD</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group Decision-Making styles</td>
<td>3.60</td>
<td>.80</td>
<td>High</td>
</tr>
<tr>
<td>Consultative Decision-Making styles</td>
<td>3.42</td>
<td>.72</td>
<td>Neutral</td>
</tr>
<tr>
<td>Autocratic Decision-Making styles</td>
<td>3.30</td>
<td>.80</td>
<td>Neutral</td>
</tr>
<tr>
<td>Total</td>
<td>3.44</td>
<td>.63</td>
<td>Neutral</td>
</tr>
</tbody>
</table>

Research Objective Three

The objective three of the research study was to identify the relationship between teachers’ leadership capacity and decision-making styles in Gangbei Construction Primary School.

Table 4 shows the analysis of the relationship between teachers’ leadership capacity and decision-making styles. The result showed that the value of Pearson correlation (r) was 0.84 and sig. (2-tailed) was .000. Since the Sig. (2-tailed) was smaller than .05 (even .01), indicates there was a significant correlation between teachers' perception of leadership and decision-making style, and the
positive correlation indicates that the improvement of leading teachers' ability may contribute to the improvement of their decision-making ability. To sum up, there was a strong relationship between teacher's leadership capacity and their decision-making style in Gangbei Construction Primary School, Guigang, Guangxi province, China.

Table 4

<table>
<thead>
<tr>
<th>Decision-Making styles</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership Capacity</td>
<td>Pearson 0.84**</td>
</tr>
<tr>
<td>Variables</td>
<td>There was a significant relationship.</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed) 0.000</td>
</tr>
</tbody>
</table>

5. Discussion

The statistical analysis of the responses of teachers to the survey questionnaire showed that the total mean score of teachers' leadership capacity was at 3.23. Based on the interpretation criteria, the mean score between 2.51-3.50 was to be interpreted as Neutral. Therefore, the primary school teachers' leadership capacity is Neutral, which reflects that teacher require to improve their own leadership capacity. Therefore, schools do need to adopt different measures to improve teachers' leadership capacity. Teachers have certain recognition of their leadership skills, and principals are very important to develop and build strong leadership skills. Teacher leadership is based on cooperation, motivation, principal authorization, and administrative behavior. At this point, collaboration is a key function for leaders to share the school's vision and mission.

On the other hand, the study showed that the total mean score of the decision-making styles of teachers at Gangbei Construction Primary School was 3.44. According to the interpretation character, this mean score was regarded as Neutral. So, it was interpreted that the decision-making styles of teachers at Gangbei Construction Primary School was Neutral.

The teachers' leadership capacity in Gangbei Construction Primary School which indicated that intense focus on vision, teachers in this school have a strong desire for leadership. Therefore, school leaders really need to improve the leadership of teachers through different methods. In schools, for example, it's not just principals and leaders who can lead; The principal should develop the leadership of the teachers. At the same time, teachers can also play the role of leadership, which depends on their desire for leadership and their own ability.

Because the study is focused on decision-making style of teachers from public primary school, the data showed that teachers preferred group decision-making styles. Dennis (2012) conducted a comparative study of the perception of decision-making styles between teachers in private and public universities. In the study, Dennis (2012) also practices three different styles towards teachers and principals, while the group decision-making style received more attention. autocratic decision-making and consultative decision-making style had a significant relationship. However, Dennis (2012) concluded that there was no significant difference in decision-making styles between the two universities. Dan and Ye (2020) shows that there was a significant relationship between teachers’ perception towards school climate and their decision-making styles at the selected primary school. The target school teachers like and use the group decision-making style the most, while the authoritarian style is the least. According to her findings, for school teachers, they are not only the managers and decision makers in their own classrooms, but also the participants in the entire school teaching system. Therefore, the individual teaching ability and decision-making styles affect the process and quality of school education. And for that, teachers' perception of different decision-making styles is not only significantly related to leadership capacity, but also significantly from school climate.

Basie (2009) study found that there are some key elements that can improve the comprehensive competitiveness of the school, the level of the school teaching at the same time, accompanied by improvements of school popularity. More and more students want to enter school, good teachers also hope to improve the quality of school teaching, which can be formed through leadership capacity and decision-making style, good tradition, the understanding of the sustainable development and improvement of the school in the future, and finally to promote the improvement of teachers' teaching and the growth of students.

Research also proves that the close positive correlation between teachers' perceptions of their leadership capacity and their decision-making styles in schools, the study hopes to establish a connection between teachers and administrators and contributes to sustainable development. At the same time, this study also found that most teachers
use group decision-making styles, many of which are democratic decision-making styles, and only a few are authoritarian decision-making styles. In fact, teachers who tend to use mild decision-making styles are more likely to make fair decisions before making decisions in the team.

6. Conclusion

According to the data interpretation criteria, there is a strong need for teachers from Gangbei Construction Primary School to improve their leadership capacity. From the highest to the lowest mean scores, these four components were listed as below: (1) Monitors and Responds to Achievement 3.14, (2) Share Governance 3.07, (3) Reflection and Innovation 3.26, (4) Intense Focus on Vision 3.51. However, among the four components of leadership variables, Intense Focus on Vision scored the highest, and in the score Interpretation, “high” was obtained. On the other hand, share governance got the “lowest”. More attention should be given to share governance cultivation in the cultivation of teacher leadership in the future.

According to the data results, teachers’ perception of their decision-making styles at the targeted school were regarded as moderate. In the three different decision-making styles, the average score from high to low is group decision-making Styles (3.60), consultative decision-making styles (3.42), autocratic decision-making styles (3.30). The autocratic decision-making styles was the least preferred and used.

The researcher recommended that all teachers in this school enhance their leadership capacity and choose their own preferred decision-making styles as well as concentrate on working with peers and groups in the school. They should give them more help and allow them to learn effectively and pay more attention to students’ achievements. It is also recommended that teachers who maintain an open attitude, are good at listening, accepting, and sharing ideas with others, as this will also help them improve their leadership capacity.

Future researchers should use quantitative and qualitative approach to study teachers’ perceptions of leadership and decision-making styles. Hybrid methods can enable teachers to have a deeper understanding on their leadership, leadership capacity and decision-making styles. In addition, the study could also help future researchers provide opinions and encourage them to conduct similar studies at other schools or in different countries Finally, other relevant variables also can be selected from the influencing factors of leadership and risk decision-making to explore the influence of this factor on leadership and risk of decision-making.

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The Correlational Study of Chinese Junior High School Students’ Motivation and Attitudes Toward the Learning English as a Foreign Language Situation with Their Academic Achievement

Yanqiu Lin¹
Richard Lynch²

Abstract

The purpose of this quantitative correlational study was to determine whether there was a significant relationship between Grade 9 students’ motivation and attitudes toward the learning situation for learning English as a foreign language with English academic achievement at a private school in China. A total of 110 Grade 9 students participated in this study. Students’ motivation and attitudes toward the learning situation for learning English as a Foreign Language Questionnaire which was adapted from Gardner’s (2004) international version of Attitude/Motivation Test Battery (Gardner, 2010) was used in this study consisting of 50 items (Gardner 2004, 2010) under five subscales. The researcher collected data from Grade 9 students studying in the 2021-2022 academic year at a private school in China. For the analysis of the collected data, descriptive statistics, and correlational analysis (using multiple correlation coefficient) was used. The findings of the research indicated that there was a weak correlation among the students’ motivation and attitudes toward the learning situation for learning EFL with English academic achievement. Based on the findings, the researcher provides recommendations for students, teachers, school administrators, future researchers.

Keywords: English Academic Achievement, English As A Foreign Language, Attitudes Toward the Learning Situation, Motivation, Socio-Educational Model, Attitude/Motivation Test Battery (AMTB), A Private School, China.

JEL Classification Code: C12, I20

1. Introduction

Nowadays, English has become the international common language, and it is officially used as a very common foreign language in various sectors in many countries. English, as one of kind of international common language, has been played a crucial role in recent decades. It has become a dominant language globally. In most of fields, the Internet, newspapers, books, travel, business, products, English fluency is required.

With the high speed of China’s economic development, many people are keen on learning English as their foreign language in China. According to the previous studies, the results showed that many scholars and users were learning English in China, such as doctors, people in business, investors, traders, engineers, educators, etc., which was one of the main reasons China became the biggest market in the world (Bolton, 2003; He & Zhang, 2010; Jiang, 2002).

Motivation is an inseparable part for learners to study English as a foreign language. If the learners lack motivation in learning a second/foreign language, even though they have enough abilities, they cannot achieve the goal they made.

Gardner (1980) stated that attitude is a psychological phenomenon that refers to people's inner experiences and behaviors, such as thinking or feeling about someone or something. It was mainly reflected by people's words, expressions, and behaviors. Choy (2006) also stated that attitudes could help people to know their own emotions. The inside feelings of students have a significant influence on students’ academic performance and achievement motivation.

For this research, the researcher focus on Grade 9 students at a private school in China and the study aims to find out if there is a significant relationship between motivation and attitudes toward the learning situation for learning EFL with their English academic achievement.

1.1. Research Objectives

The following research objectives will be conducted for this study.
1. To identify the level of motivation for learning English as a foreign language of Grade 9 students at a Private School, China.
2. To identify the level of attitude toward the learning situation for learning English as a foreign language of Grade 9 students at Private School, China.
3. To determine the level of English academic achievement of Grade 9 students at a Private School, China.
4. To determine if there is a significant relationship between motivation and attitude toward the learning situation for learning English as a foreign language with English academic achievement of Grade 9 students at a Private School, China.

1.2. Theoretical Framework

In this study the researcher used one theory to examine the variables of this research study. The socio-educational model of second language acquisition theory by Gardner (2010) to explain, measure, and analyze the motivation and attitudes toward the learning situation for learning EFL.

1.2.1 Gardner’s (2010) Socio-Educational Model of Second Language Acquisition

Gardner (2010) claimed that language learning motivation consists of learners’ efforts, expectations, and attitudes that contribute to achieving language learning goal. The socio-educational model pointed that the language learning situation is an indispensable component in learning English as a foreign language and that learning motivation is affected by the nature and quality of the learning context, curriculum, the quality of instruction, the teachers, school activities, lesson plan, and the materials among other variables. Second/Foreign language learning motivation and attitudes toward the learning situation are the major focus of this theory. In the socio-educational model of second/foreign language acquisition, there are three components to assess motivation: motivational intensity, the desire to learn English, attitudes toward learning English, and there are two components to assess attitudes toward the learning situation; English teacher evaluation, English course evaluation (Gardner, 2010).

1.3. Conceptual Framework

This study aims to find out if there is a significant relationship between motivation and attitude toward the learning situation for learning English as a foreign language with English academic achievement of Grade 9 students at a Private School in China, the motivation theory applied in this research is based on Gardner’s socio-educational model (Gardner, 2010). Figure 1 presents the conceptual framework of this research study.

2. Literature Review

In this section, some previous studies related to the research variables addressed in this study are reviewed and summarized.

2.1. Previous Studies on Students’ Motivation with English as a Foreign Language Academic Achievement

Oranpattanachai (2013) adopted a study on students’ motivation and their English language achievement in Thailand. Four hundred twenty students participated, and results stated that the students’ motivation correlates with their academic achievement.

Genc and Aydin (2017) developed a study on students’ motivation and attitudes toward learning English in Turkey. Four hundred sixty-two participants in the research and data collected used a quantitative research paradigm and used a questionnaire. The findings clearly stated that students had favorable attitudes toward learning English.

Alkaabi (2016) completed a study on Saudi students’ motivation and attitudes toward learning English in U.S. 181 students enrolling at diverse schools and universities participated, and Alkaabi interviewed seven students. The findings stated that students had favorable attitudes toward learning English and a high wish to study the English language well.

Wiriyanusorn and Lynch (2019) developed a study on students’ motivation and orientation of motivation
toward learning Thai in Thai. The sample composed of 29 non-Thai students in Years 4 to 6 and 44 non-Thai students in Years 7 to 9 non-Thai students at the target school had slightly low levels of motivation toward learning Thai and both Years 4 to 6 and Years 7 to 9 non-Thai students’ orientation of motivation was instrumental.

Abi (2019) administered a study on students' motivation to learn English. Two hundred students participated, and the findings showed that student's motivation and attitude toward the learning situation in learning English were high. In addition, students were eager to learn English because they desired to interact with other communities in a different cultural environment, broadening their knowledge and experience in English.

Bobkina and Fernandez (2012) developed a study on motivation and attitudes toward learning English in major industrial and technical engineering. A total of 72 engineering students were from 2 different engineering schools, and the results of the study showed that the students had an excellent pleasant attitude toward learning English.

Asmali (2017) completed a study on Turkish students' motivation and attitudes toward learning English, with 192 participants in this study. The results revealed that students' motivation and attitudes toward learning English had a high level of pleasant attitude toward learning English.

Chalak and Kassaian (2010) developed a study on the motivation and attitudes toward learning English. One hundred eight Iranian students enrolled in English translation. One of the findings indicated that the students had excellent pleasant attitudes toward learning English in motivation and attitudes toward learning English.

Lungley and Lynch (2017) conducted a study on students' motivation for self-selected reading in English and their academic achievement at Thai International School. The study sample was composed of 83 grade 8 to grade 12 students participated. The findings showed that the students' motivation for self-selected reading in English correlated with their reading achievement.

2.2. Previous Studies on Students’ Attitudes Toward the Learning Situation with English as a Foreign Language Academic Achievement

Rukh (2014) developed a study on students’ attitudes toward learning English and their academic achievement. The study used a quantitative approach and questionnaire to collect data from the participants. Two hundred business students participated, and the findings showed that the students' attitudes toward learning English had a relationship with academic achievement.

Htun and Lynch (2019) conducted a study on students’ attitudes toward learning EFL according to their preference for instructional strategies in Myanmar. A total of 203 learners participated. The study used descriptive statistics and one-way analysis of variance (ANOVA) for statistical hypothesis testing. The findings stated that the learners had positive attitudes toward learning English as a foreign language.

Fakeye (2010) developed a study on students’ attitudes toward learning English and their academic achievement from five middle schools in Nigeria. A total of 400 senior secondary students participated, and the results indicated that students’ attitudes toward learning English had a relationship with and their achievements in the study.

İnal, Evin, and Saracoğlu (2005) studied attitudes toward foreign language and academic achievement. A total of 421 students participated, and the report indicated that students’ attitudes toward foreign languages had a relationship with their academic achievement.

In 2009, Momani conducted a study on attitudes toward learning English and academic achievement from Jordanian secondary. The results showed that the students had pleasant attitudes toward learning English in their academic achievement in reading comprehension and attitudes toward learning English.

3. Research Methods and Materials

3.1. Methodology/Procedure

The researcher will use a convenience sample of 110 students from the total population of 596 for Grade 9 students will be used at the target school. Since Grade 9 has 11 classrooms in the target school, one EFL teacher teaches two classrooms each. Therefore, the researcher tried to contact all the EFL teachers from the target classrooms by emailing them. However, only one teacher replied to an email and agreed to help the researcher. For this reason, out of 11 classrooms for Grade 9, the researcher will conduct this study in 2 classrooms of Grade 9 from the target school.

3.2. Research Instruments

For this study, Students’ Motivation and Attitude Toward the Learning Situation for Learning English as a Foreign Language Questionnaire and the monthly test of
English as a foreign language subject were used to collect the research data.

Students’ Motivation and Attitudes Toward the Learning Situation for Learning English as a Foreign Language Questionnaire. The survey questionnaire consisted of two parts, comprised of 50 items, to measure and analyze the variables of this research. Part I is the students’ demographic information asking students the name and the class. Part II of question consists of the items which measured the students’ motivation and attitudes toward the learning situation in learning EFL adapted from three subscales of Gardner’s (2004) International Attitude/Motivational Test Battery (Gardner, 2010).

The AMTB is aimed to analyze and measure students’ motivation and attitudes toward the learning situation in learning EFL and comprises of 12 subscales (104 items). In the current study, only five subscales from AMTB will be used in this study. To calculate the attitude toward the learning situation, two subscales from AMTB, English teacher evaluation (10 items) and English course evaluation (10 items), will be used. To measure the motivation for learning EFL, three subscales of AMTB; Motivational intensity (10 items), Desire to learn English (10 items), and Attitudes toward learning English (10 items), will be used (see Appendix A).

To investigate the students’ level of motivation and attitudes toward the learning situation for learning EFL, in this study a 7-point Likert scale was utilized. The students have to select one out of six choices (1 = strongly disagree, 2 = moderately disagree, 3 = slightly disagree, 4 = slightly agree, 5 = moderately agree, 6 = strongly agree). Table 3 presents the score and interpretation for both positively and negatively worded items of the motivation subscales.

Questionnaire for Student’s Motivation and Attitudes Toward the Learning Situation was composed of 25 positively worded items which are used to measure and analyze the students’ motivation and attitudes toward the learning situation for learning EFL. To investigate the students’ level of motivation and attitudes toward the learning situation for learning EFL, in this study, 7-point Likert scales will be utilized. The students have to select one out of six choices (1 = Strongly disagree, 2 = Moderately disagree, 3 = Slightly disagree, 4 = Slightly agree, 5 = Moderately agree, 6 = Strongly agree).

4. Results and Discussion

4.1 Research Findings

From the analysis of the collected data, the following findings were obtained.

4.1.1. Findings from Research Objective 1

Grade 9 students’ motivation in learning EFL can be interpreted as slightly low since the mean scores were M= 3.87, SD= 1.60. For motivational intensity, the mean was M= 3.81, SD=1.61 which can be interpreted as slightly low. As for the desire to learn English, the mean was M= 3.89, SD= 1.58 which can also interpret as slightly low. As for attitudes toward learning English, the mean was M= 3.91, SD= 1.60 which can also be interpreted as slightly low.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Grade 9</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation for learning English as a foreign language</td>
<td>3.87</td>
<td>1.60</td>
</tr>
<tr>
<td>Motivational intensity</td>
<td>3.81</td>
<td>1.61</td>
</tr>
<tr>
<td>Desire to learn English</td>
<td>3.89</td>
<td>1.58</td>
</tr>
<tr>
<td>Attitudes toward learning English</td>
<td>3.91</td>
<td>1.60</td>
</tr>
</tbody>
</table>

4.1.2. Findings from Research Objective 2

The overall mean score for Grade 9 students’ attitudes toward the learning situation was M= 3.93, SD= 1.63 and according to interpretation, the mean score can be interpreted as slightly low since the score was between 3.01-4.00.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Grade 9</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes toward the learning situation</td>
<td>3.93</td>
<td>1.63</td>
</tr>
<tr>
<td>English teacher evaluation</td>
<td>4.04</td>
<td>1.62</td>
</tr>
<tr>
<td>English course evaluation</td>
<td>3.82</td>
<td>1.64</td>
</tr>
</tbody>
</table>

4.1.3. Findings from Research Objective 3

The overall mean score for Grade 9 students’ English academic achievement for learning English as a foreign language was M=72.16, SD=16.65 which can interpret as moderate.
Table 3
Mean Scores, Standard Deviations and Interpretations of the Grade 9 Students’ English Academic Achievement for Learning English as a Foreign Language.

<table>
<thead>
<tr>
<th>N</th>
<th>Grade 9</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>110</td>
<td>72.16</td>
<td>Moderate</td>
</tr>
<tr>
<td>5.72</td>
<td>.88</td>
<td>Moderately</td>
</tr>
</tbody>
</table>

4.1.4. Findings from Research Objective 4
Table 4 displays the multiple correlation analysis (using multiple correlational coefficients) in this study.

Table 4
Multiple Correlation Coefficient Analysis Between Students’ Motivation and Attitudes toward the learning situation and their English Academic Achievement for Learning English as a Foreign Language

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>R</th>
<th>R²</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students’ motivation and attitudes toward the learning situation for learning English as a foreign language with English academic achievement</td>
<td>.23</td>
<td>.052</td>
<td>2.107</td>
<td>2.96</td>
<td>&lt;.05</td>
</tr>
</tbody>
</table>

Regarding to this research objective, the following findings were obtained. there was a weak correlation among the students’ motivation and attitudes toward the learning situation for learning English as a foreign language with English academic achievement (R = .23, p < .05) at the significant level of .05. In the Table 19 also presented that students’ motivation and attitudes toward the learning situation for learning English as a foreign language explained 5.2% of the variances with English academic achievement (R² = .052, F (2,107), p < .05). The rest 94.8% of the variance of English academic achievement is explained by other factors such as, language anxiety, parental encouragement, the teachers’ encouragement or self-efficacy for learning language.

4.2 Discussion
In this section, the findings obtained from this study are discussed, placing them in context with previous studies. The discussion is organized by variables.

4.2.1. Relationship between students’ Motivation for Learning EFL and their English Academic Achievement

Motivation is one of the most important factors which defines second/foreign language learning’s success or failure (Dörnyei, 1994), and it has a certain influence on students’ performance, attitudes, achievement (Gardner, 2010). Meanwhile, motivation is one of the factors that can call forth one’s interest to reach a goal of the task. Gardner and Lambert (1972) mentioned that integrative motivation and instrumental motivation is for the possibility utilitarian gain or needs of finding a good job.

The finding of the current study found that Grade 9 learners at target school had slightly low level of motivation in learning EFL. The findings also revealed that student’s motivation was related to their English academic achievement. The result was in line with Wiriyanusorn and Lynch’s research (2019) found that Years 4 to Years 6 and Years 7 to Years 9 non-Thai learners’ overall motivation for learning Thai was slightly low. Wiriyanusorn and Lynch’s research (2019) reasoned that due to the age of the learners, activities in class, teachers, learning Thai as a compulsory subject, and learning atmosphere. All these factors could affect students’ level of motivation in learning Thai language. According to Wiriyanusorn and Lynch (2019), the low motivation of the students could also affect to their motivation to learn.

Learning English as a foreign language is one of the three required courses (the other two courses are Chinese literature and mathematic) from Grade 7 in China. There are some major factors of some students at target school are not interest in learning English due to Chinese is the main language in teaching in all subjects. First, some students would rather spend their time on subjects other than English, they had no desire to learn English and English is not really an important goal in their life. Second, English teachers use the grammar-translation method, they focus on the knowledge and exam, some students memorize the English sentence patterns in order to pass the English exam without a good learning method, and the purpose of some students for learning English are to meet the requirement for school, to enter their favorite school, or to get a reward. Third, class activities cannot stimulate students’ participation, some teachers nearly focus on good students when joining the activities and other students have less chances to involve to practice their English speaking. Lastly, students learn English 5 classes a week and communicate in English only in class, most of them rarely practice speaking English with friends outside school.
4.2.2 Relationship between Students’ Attitudes toward the Learning Situation for Learning EFL and their English Academic Achievement

Attitudes is viewed as a dominant factor affecting individual language performance and it plays a crucial part in language learning as it has impact in students’ learning outcome in their learning process. Gardner (2010) stated that learning situation is a substantial element in second language learning and considers the motivation to learn the language to be influenced by the learning context. Gardner (2010) also mentioned that in this case includes the objective nature of the curriculum, the teacher, the individual course, the views and regulations of the school authorities, the materials, the time and importance allotted to language instruction, and the quality of instruction. All these factors have a main impact in the individual but the importance is the students’ reaction. For this reason, the researcher has focused on evaluative reactions to the teacher and the course.

The findings from this study presented that students’ attitudes toward the English teacher was slightly high. The result was in line with Htun and Lynch’s research (2019) which surveyed that student from elementary to intermediate level of EFL classes at Gateway Learning Center (GLC), Hpa-an Township, Karen State, Myanmar. The findings from this study founded that the students’ attitudes toward English teacher were positive. Htun and Lynch (2019) reasoned that learner had a good feeling toward their English teachers, and it indicated that students were looking forward to going to class because their English teacher was so good. Most of EFL teachers from Gateway Learning Center (GLC) had a positive attitude toward teaching and they always inspire students in class.

The findings from this study presented that English teacher evaluation were slightly high, and the result was founded that students believed that their English teacher was better than any of their other teachers, and English teacher had an interesting style and was a great source of inspiration to the learners, the students were looking forward to going to the English class. However, students’ attitudes toward the English course was slightly low, the result was founded that learners may be get bored in the English class, or they had little interest in English class and lessons of the class. According to researcher’s discussion with English teacher from the target class, the class activities did not arouse the students’ interests so that the students get bored in the class, the design of the assessment are test-based, and the lessons were using grammar-translation method. In conclusion, the researcher stated that all these factors could affect the level of students’ attitudes toward the English course.

4.3. Recommendations

Based on the study findings, the following recommendations are provided for students, school administrators, teachers, and future researchers.

4.3.1. Recommendations for Students

Based on the findings of the study, the results showed that the level of students’ motivation and attitudes toward the learning situation were slightly low. This help them to develop their own goals and understand their motivation and attitudes toward the English teacher and English class. Furthermore, the important point is that the stronger motivation and attitudes learners hold, the more learning results students could get. From this research study, the students would become aware of some cogitations concerning their English academic achievement can be affected by their motivation and attitudes. The students may also get some helpful improvement from this study, students should establish a good habit of learning to develop interest for the purpose of meaningful learning.

Additionally, the students could also gain some improvements from this study, and the students could also make progress and make a good chance to succeed in learning EFL.

4.3.2. Recommendations for Administrators

The findings of this study stated that the importance of students’ motivation and their attitudes toward the learning situation in learning English as a foreign language. For this reason, it is suggested that the stakeholders are aware of the concepts of learning motivation, attitudes and its relation to success in learning English.

The findings from this study stated that the importance of students’ motivation and their attitudes toward the learning situation in learning English as a foreign language. For this reason, it is suggested that the stakeholders are aware of the concepts of learning motivation, attitudes and its relation to success in learning English.

School administrators are viewed as the leadership role in the school. Administrators can approve and give support to the teachers’ ideas in order to arouse students’ motivation in learning English. As motivation is an important factor for successful English language learning. Administrators are highly advocated to take students’ motivation into account when developing school curriculums and school policies. Administrators can consider planning teacher in-service sessions drawing attention to motivational strategies in teaching to help teachers stimulate students’ motivation and improve their learning outcomes in learning English.
4.3.3. Recommendations for Teachers

For the teachers, to stimulate students’ motivation, the teachers are highly advocated that provide a positive teaching environment. It is very important that the teachers should integrate motivational strategies into their lessons to cultivate learners’ creativity, enthusiasm, and ambition in learning English. Furthermore, the researcher suggested that the teachers can try different teaching methods and creative more positive learning environment to motivate students in learning English.

4.3.4. Recommendations for Future Researchers

Future researchers could consider applying larger sample sizes to investigate the relationship between students’ motivation, attitudes toward the learning situation and English academic achievement. With large samples, the results will be more reliable and will provide broader findings.

Future researchers could also consider conducting a longitudinal study that follows up with changes in students’ motivation and attitudes for learning English throughout the school year and into subsequent years and explore the relationship between the changes of their motivation, attitudes with their language achievement.

Future researchers could also consider doing a mixed study both quantitative and qualitative approaches to explore deeper students’ motivation and attitudes for learning English. Through the qualitative approach, a more insightful perspective can be taken to understand the factors that influence students’ motivation and attitudes for learning English.

Future researchers should also investigate other variables such as imperativeness, language anxiety, parental encouragement, self-efficacy in learning language and so on. A thorough study will provide researchers with a more accurate understanding of the factors that affect students’ English language learning, which will help the teachers and administrators in planning and enhancing the curriculum, and ultimately improve student’s learning.

5. Conclusions

From the research findings, the following conclusions were drawn.

5.1. Research Objective 1

The first objective of this research indicated the level of Grade 9 students’ motivation for learning EFL from a Private School, China, was slightly low. Students had a slightly low effort in the learning, showed slightly low desire to learn English, and slightly low attitudes in learning EFL. Regarding to the three subscales of the motivation for learning EFL, it can also conclude that Grade 9 students put little effort in the English lesson and classroom activities, the students no desire to learn English and do not want to learn language, and the students show a low attitude toward language learning at a Private School, China. This suggests that the students’ motivation for learning EFL could still be increased by the joint effort of teachers as well as the students themselves.

5.2. Research Objective 2

The second objective of this research indicated the level of Grade 9 students’ attitudes toward the learning situation for learning EFL from a Private School, China, was slightly low and the students showed slightly low feedback to the English course, the students seem to are not interested in the learning materials, the lesson plan, and classroom activities. However, students had a slightly high reaction to the English teacher, the students have a good attitude to the English teachers’ effective teaching, teacher feedback, teacher behaviors and teacher’s expectations. The findings of study showed that attitudes toward the learning situation for learning EFL can be increased by the joint effort of teachers’ teaching methods, teachers’ expectations as well as the students’ effort, the students should be taking the challenge and make an effort to join their lessons and take an active part in the classroom activities, and the teacher should be improved their abilities in different aspects of teaching EFL.

5.3. Research Objective 3

The third objective of this research indicated the level of Grade 9 students’ EFL academic achievement from a Private School, China, was moderate. The researcher employed mean and standard deviation to determine learners’ EFL academic achievement. This suggests that the students’ EFL academic achievement at a private school in China could still be increased with the combined effort of the update teachers’ instructional strategies as well as the students’ collaboration. The learners should be taking the
challenge and make an effort to learning something from their English classroom.

5.4. Research Objective 4

The fourth objective of this research revealed a weak correlation among the students’ motivation and attitudes toward the learning situation for learning EFL with English academic achievement at a Private School, China at .05 level. It shows that students’ motivation and attitudes toward the learning situation for learning EFL explained 5.2% of the variances with English academic achievement. The rest 94.8% of the variance of English academic achievement is explained by other factors such as, language anxiety, parental encouragement, the teachers’ encouragement or self-efficacy for learning language.

References


A Study of The Relationship between Teachers’ Perception towards Professional Development and Their Job Satisfaction at Kunming Hengshui experimental Middle School Chenggong Campus, China

Dan Wu¹
Watana Vinitwatanakhun²

Abstract
This research sought to determine the relationship between teachers’ perception towards professional development and their job satisfaction at Kunming Hengshui Experimental Middle School Chenggong Campus, China in the 2020-2021 academic year. The researcher collected the data from 100-full-time teachers by using a questionnaire survey from the Kunming Hengshui Experimental Middle School Chenggong Campus, China. To do so, the study evaluated the teachers’ perception towards professional development as well as job satisfaction in which Means and Standard Deviations were used for descriptive and quantitative analysis. Finally, the relationship between these two variables was analyzed by the researcher and assessed through Pearson Product Moment Correlation Coefficient analysis. The basis of the professional development concept of this study was founded on Guskey’s (2003) theory of Professional Development. Moreover Herzberg’s (1959) Motivation-Hygiene theory was the foundation to support the researcher’s concept of job satisfaction. The research finding indicates that the teachers at the Kunming Hengshui Experimental Middle School Chenggong Campus, China had a relatively high perception towards the professional development and job satisfaction. A high positive relationship between teachers’ perception towards professional development and their job satisfaction was identified with the Kunming Hengshui Experimental Middle School Chenggong Campus, China.

Keywords: Teachers’ Perception, Professional Development, Job Satisfaction, Kunming Hengshui Experimental Middle School Chenggong Campus, China


1. Introduction
The society of the 21st century needs high-quality talents. Education determines the quality of talents, and high-quality teachers are one of the important topics in the world. Therefore, teacher professional development has become the trend of international teacher education reform, and it has been valued by administrators. It is also a topic of great theoretical significance of the current practice of China’s education reform.

Perry (1980) argues that teachers should focus on enriching professional knowledge, enhancing professional skills, and improving professional abilities. Meanwhile, we should have a more comprehensive understanding of the deep-seated causes, enhance educational self-confidence, and constantly improve teachers’ ability and level. In the National Medium and Long-term Education Reform and Development Plan, China (2010) promulgated and implemented the construction of the teaching team is specifically put forward as the most important content of the safeguard measure. Then also proposed: schools should improve teacher training system and plan to improve teachers’ academic level and teaching ability. Train high-quality teachers, academic leaders and principals through training and academic communication.

Job satisfaction determines the trend of career development. Employees’ experience, emotion, cognition and behavior at work will affect their work efficiency and work quality. Ulla (2018) reported that when teacher’s perception has a high level of job satisfaction, they will practice and innovate teaching methods according to the current teaching situation to improve professional skills and classroom management methods. When teachers’ perception has a low level of job satisfaction, they will be reluctant to participate in any professional development activities. Therefore, compared with professional development, teacher’s job satisfaction is also an important factor, which means that it will affect the quality of teaching.

At present, China regards the construction of a high-quality professional and innovative teacher team as one of the ten strategic tasks of education modernization,
starting from the construction of teacher ethics and teaching style, teacher qualification access system, teachers’ professional ranks and assessment system, establishing a teacher education system with Chinese characteristics, carry out teachers’ pre-service training and post-employment development to improve the status and treatment of teachers. (Sun et al., 2019).

1. 1 Research Questions

1.1.1 What is the level of teachers’ perceptions towards professional development at KHEMSCC, China?
1.1.2 What is the level of teachers’ perceptions towards job satisfaction at KHEMSCC, China?
1.1.3 Is there any significant relationship between teachers’ perceptions towards professional development and their job satisfaction at KHEMSCC, China?

1. 2 Research Objectives

1.2.1 To identify the level of teachers’ perceptions towards professional development at KHEMSCC, China.
1.2.2 To identify the level of teachers’ perceptions towards job satisfaction at KHEMSCC, China.
1.2.3 To determine the significant relationship between teachers’ perceptions towards professional development and their job satisfaction at KHEMSCC, China.

1. 3 Conceptual Framework

The conceptual framework used in this study as shown below in Figure 1.

Figure 1
Conceptual Framework of This Study

2. Literature Review

2. 1 Guskey’ s Theory of Professional Development

Guskey (2000) proposed a five-level teacher professional development evaluation model. These five levels range from simple to complex. The first four levels focus on training participants and their organizations, and the last one focuses on training participation. Guskey (2000) emphasized that each level provides important information and represents a unique dimension in the evaluation process. The basic content of Guskey’s five-level teacher professional development evaluation model is student response, student learning, organizational support and changes, student application of new knowledge and new skills, and student learning results. (Guskey, 2000).

There are several types of teacher characteristics of effective professional development. Guskey’s theory is widely used. The analysis lists of characteristics of effective professional development to promote visionary leadership articles were written by Guskey (2003). He created a list of 21 categories to classify career development characteristics. According to the list, he found that the most common characteristics of teachers’ professional development are:

(1) Provide sufficient time and resources for educators,
(2) Promote cooperation and collaboration,
(3) Enhance teachers’ content and instructional knowledge.

Guskey (2003) pointed out that time and resources are a necessary part of professional development, sufficient teaching time can help teachers develop and practice new teaching strategies, enhance and broaden new teaching knowledge, improve their teaching ability and skills, so as to improve students’ academic performance. As far as the subject is concerned, the more time the school spends on the subject, it means that school attaches great importance to this subject. (Guskey, 2003).

Promoting cooperation is also the basic feature of teachers’ professional development. Cooperation provides an opportunity for school administrators and teachers to exchange teaching strategies and share ideas and skills. At the same time, teachers can improve their career development experience. In teaching, cooperation can help teachers carry out classroom activities smoothly, and improve students’ enthusiasm for classroom learning. Teachers can provide more help to students by sharing knowledge, therefore collaboration will encourage teachers to learn more actively (Vasdravellis, 2014).

The enhancement of teachers’ content and pedagogic knowledge is also one of the basic characteristics. When teachers have a good understanding of what they need to teach, they can create an efficient classroom atmosphere and help students learn professional knowledge effectively. Researcher believes that the essence of teachers’ professional development is to analyze, summarize and solve problems with their own discipline. (Wenglinsky,
2000). Teachers’ awareness of efficient classroom is very important. Teachers should understand students’ interests in the subject and combine good teaching knowledge to improve classroom efficiency. An excellent teacher needs to have rich teaching knowledge, good classroom management skills, excellent teaching strategies and teaching skills (Abell & Lee, 2008).

2.2 Herzberg’s Motivator-Hygiene Theory

Herzberg’s two-factor theory (1966) shows that work factors are divided into motivation factors and hygiene factors. Motivation factors are mainly used in work, and employee satisfaction is mainly affected by work, content and other factors (Lumadi, 2014). The “hygiene factor” in Herzberg’s two-factor motivation theory is closely related to the employees’ working environment, physical health and other factors. Improving the working environment and satisfying the basic needs of employees can improve employee satisfaction, but this short-term behavior lacks persistence. To improve employees’ enthusiasm, it is necessary to pay attention to spirit staff, achievements and challenges. By reasonably increasing job responsibility and promoting the growth and development of employees, it can produce long-term motivation effect (Wang, 2019).

According to Herzberg’s two-factor theory (1966), to improve and maintain employees’ works enthusiasm, we must first meet the needs of employees in hygiene factors to prevent dissatisfaction, and then meet the needs of employees’ motivation factors to stimulate employees’ work enthusiasm. However, the conditions of punishment should also be informed to recipients in advance. Zeng (2017) mentioned that the hygiene factors of teaching are mostly external factors, such as learning environment and learning conditions including, for example, teacher-student relationship, classmate relationship, classroom atmosphere, final grades, teaching facilities, hardware equipment, scholarships, etc. These factors affect students’ enthusiasm for learning from the outside.

3. Methodology

To determine the relationship between the level of teachers’ perception toward professional development and the level of job satisfaction at the KMEMSCC in the 2020-2021 academic year. This study employed descriptive statistics and correlation methods. The relationship between the teachers’ perception toward professional development and job satisfaction examined to use descriptive analysis and the Pearson Moment Correlation Coefficient analysis.

3.1 Population

100 full-time teachers were surveyed at the KHEMSCC in the 2020-2021 academic year.

3.2 Research Instrument

This study employed a questionnaire to investigate the teachers’ perception towards professional development and job satisfaction. The research questionnaire included three parts as follow:

- Part (I) Demographics factors, including gender, age, education background, and working experience.
- Part (II) is concerning professional development which comprise of 16 survey items, personality with Five-Point Likert Scale.
- Part (III) is concerning job satisfaction which comprise of 22 survey items, personality with Five-Point Likert Scale.

3.3 Validity and Reliability

The validity of the instrument of Part II was based on the previous research study from Wu (2015), the researcher originally sourced from Meagher (2011) with .52. The validity of the instrument of Part III was based on the previous research study from Mai (2013) with .84.

4. Results

There is a significant relationship between teachers’ perceptions towards professional development and their job satisfaction at the KHEMSCC.

4.1 Research Objective One

Table 1 shows the total mean scores of teachers’ perception towards professional development was 3.74, in the range of 3.51-4.50, which was interpreted by this researcher as high according to the data interpretation standards. The mean score of time and resource received 3.53, which was represented as being at a prominent level. The mean score of collaboration received 3.95, which was represented at a high level. The mean score of enhancement of teacher’s knowledge received 3.79, which was represented at a high level.
4.2 Research Objective Two

Table 2 shows that the total mean scores of teachers’ perceptions towards job satisfaction was 3.68, in the range of 3.51-4.50, which was interpreted as being high according to the data interpretation standards. The mean score of motivation factors received 3.73, which was represented at a high level. The mean score of hygiene factors received 3.64, which was represented at a high level.

Table 3 shows that Pearson’s correlation r is 0.671 and Sig. is.004, which is smaller than.05 and indicating that the relationship between teachers’ perception towards professional development and job satisfaction is strongly positive. It was concluded that there is a significant relationship between teachers’ perception towards professional development and their job satisfaction.

4.3 Research Objective Three

Table 3 shows that Pearson’s correlation r is 0.671 and Sig. is.004, which is smaller than.05 and indicating that the relationship between teachers’ perception towards professional development and job satisfaction is strongly positive. It was concluded that there is a significant relationship between teachers’ perception towards professional development and their job satisfaction.
variables was .004, which was less than .05, which meant that there was a significant relationship between the teacher’s perception of professional development and job satisfaction in the KHEMSCC. The Pearson Correlation r value was .671**, which means that the relationship between teachers’ perception towards professional development and job satisfaction in the KHEMSCC was a very strong positive.

6. Discussion

As noted by Guskey (2003) mentioned, schools must pay more attention to study effective professional development in terms of sufficient time and resources, because educational resources also keep pace of the development of society. Therefore, teachers must practice and innovate the new classroom management model and improve their autonomous learning ability to expand their knowledge and skills, meanwhile give students a better teaching experience. In addition, Liu (2019) pointed out that effective time management is especially important for teacher’s professional development. School should organize their time to help teachers improve their qualities and promote students’ academic development. These findings shows that the interpretation level of time and resources is high. This shows that teachers have sufficient time and resources during professional development activities, all of which come from the full support of the school, meanwhile teachers have actively supported the professional development plan.

In line with Richards and Farrell (2005) cooperation can enable new teachers to learn teaching experience from expert teachers. By sharing problem solving ideas and innovative teaching methods, we can strengthen the interaction between colleagues and coordinate the relationship between colleagues. Zeng (2017) maintains that according to China’s education present situation, cooperative teaching is a creative and effective teaching model based on the cooperation between teachers, and it is the core of promoting teachers’ professional development. Improve teaching skills by integrating teachers’ professional knowledge; Strengthen the ideological and emotional exchange among teachers to form good professional emotion. Since teachers’ perceptions towards professional development are a high standard of cooperation, researchers believe that teachers have a chance to discuss and exchange their experiences and opinions during activities. Teachers also believe that it is effective to cooperate with others in professional development plans.

China’s education in the 21st century is facing new forms, strong knowledge plays a positive role in promoting the professional development of teachers in China and it is of great significance to cultivate excellent talents in the new period and realize the goal of education and teaching reform (Liu Zengmei & Chen Hua, 2020). Because the teachers’ perception towards professional development is a high standard in terms of enhancement of teacher’s knowledge, the researcher believes that teachers have realized that strengthening teaching development activities is a way to improve teaching knowledge and indirectly affect students’ achievement.

Herzberg (1959) argued that if employees receive training and give them the appropriate resources and foundation, they will continue to work hard. Therefore, school leaders must provide regular training to school employees to improve their work efficiency and level. Zhao (2020) pointed out that teachers’ professional development supports, principals’ teaching leadership and recognition of teachers’ work have a significant impact on teachers’ job satisfaction, which is higher than teachers’ individual level. When school leaders praise teachers for their work performance, they will improve their work efficiency and complete their work with high quality. Because teachers’ perception of job satisfaction with this study is a high standard in terms of motivation factors, the researchers believe that teachers are satisfied with their work and get a pleasant feeling from their work, so they will make a good contribution to the school.

According to the results, teachers are highly satisfied with hygiene factors, the researcher believes that most teachers have a good communication with school administrators and are satisfied with the nature and content of their work. Among the hygiene factors, salary is the most controversial part, which greatly affects teachers’ perception of job satisfaction. Therefore, it needs to be paid fairly by administrators. However, the results of the study show that teachers are dissatisfied with their opportunity to receive increased salaries. The salary of teachers in China is at a medium level, but there is of heavy work pressure and long working hours, so teachers expect a higher salary. Wu (2015) indicated that paying a high salary is to bring recognition to employees, enhance their self-esteem and make them satisfied with their work.

As Ferguson Patrick (2011) pointed out, education quality is the key to the success of a school. It is closely related to teachers’ professional knowledge and teaching mode, so it is very important to improve classroom teaching.
management. At the same time, job satisfaction plays an important role in stimulating teachers’ work enthusiasm and increasing the number of high-quality teachers. In this way, the relationship between professional development and job satisfaction of teachers can be achieved.

According to the data analysis of this study, the researcher made suggestions for the level of teachers and school administrators, as well as help to future researchers. At the same time, I hope it can help the KHEMSCC develop better in the future.

For Teachers at KHEMSCC: All teachers actively participate in professional development plans, improve their own teaching knowledge, innovation ability and professional skills. In addition, all teachers should actively participate in school affairs and decision-making, fully express their views, ideas and fully demonstrate their innovative talents. Secondly, all teachers should use various teaching methods in class to encourage students to participate in activities and stimulate students’ creativity. At present, China’s classroom model is still teacher-centered, so it is necessary to change the teaching method and let students fully express their ideas.

For School Administrator at KHEMSCC: Firstly, school leaders need to listen to instructors more and know what they really think. When teachers are dissatisfied with their work, they will choose to leave or choose a new working environment, which is not conducive to the development of the school. According to the results of the study show that most teachers are not satisfied with their salaries and believe that salaries and contributions are not equal. Therefore, the researchers recommend that school leaders establish a fair management system to improve teachers’ job satisfaction. Finally, school leaders need to provide a development plan, inform the school of the future development plan, arrange the work of teachers, and set development goals for teachers.

For Future Researchers: Future researchers can also use quantitative and qualitative methods to conduct similar research. In addition, future researchers can also compare the situation of public schools or other campuses of the same school based on this research and formulate professional development plans by using more variables that may affect teacher job satisfaction, including age, gender, teaching years, and educational background. Future researchers can change the research factors, such as turnover rate, welfare, family situation and so on. At the same time, when conducting research on the same subject, we can also change the research object, only for school managers and leaders. In short, this research can be extended to schools in all provinces of China.

7. Acknowledgement
I would like to express my thanks to my thesis advisor, Asst. Prof. Dr. Watana Vinitwatanakun. Professor Watana Vinitwatanakun provided me with patient guidance during my master’s degree and encouraged me when I was in difficulties. She inspired me during the process of writing my thesis. Thank you for your support and encouragement.

8. References


A Study of the Relationship Between Teachers’ Motivation and Teachers’ Commitment at Experimental Middle School Affiliated to Yunnan Normal University

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Abstract
In this study, the prime target is to identify the relationship two variables of relationship which is teachers’ motivation and teachers’ commitment in the Experimental Middle School Affiliated to Yunnan Normal University. 114 full-time teachers participated in the study. They have all been certified in Experimental Middle School Affiliated to Yunnan Normal University in the 2021 academic. The average and standard deviation were used to analyze teachers' consciousness of teachers' motivation. It was found that teachers' perception of teachers' motivation was high (3.70) and another variable of teachers’ commitment also got a high score(3.71); To study the correlation between the two variables, The study used the Pearson Product Moment Correlation Coefficient method and data r = .642, SIG. (two tailed) was .002. The results show that teachers in target schools hold a relatively positive attitude towards teachers' motivation. Pearson correlation test’s results shows that there is a prominent correlation between the teachers' motivation and teachers' commitment in Experimental Middle School Attached to Yunnan Normal University.

Keywords: Teacher, Teachers’ Motivation, Teachers’ Commitment.
JEL Classification Code: E44, F31, F37, G15 [Please provide 3-5 JEL codes for indexing purpose]

1. Introduction
Nwakasi and Cummins (2019) find that No matter what kind of enterprise, school or organization, employees always hope to be encouraged by leaders, whether economic or non-economic, so that their commitment to work will increase. The success of a school depends largely on the professionalism and commitment of teachers. Active and responsible teachers are more effective in participating in school activities, so they perform better in their work, because they are keen to use their own efforts to achieve organizational goals. (Khan, 2019). According to the Annual Report on China's Education (2018), the turnover rate of teachers is constantly increasing, especially in underdeveloped areas. This situation will be more obvious. Kamaylar (2016) There is no doubt that the commitment of teachers determines the strategic development plan of a school, and the motivation of work is one of the most important structures in psychology. This structure exists in all work environments, such as education. In this case, a concept - teacher motivation - is the decisive factor for school success (Viseu et al., 2016). Therefore, for Chinese teachers, it is very important for schools to introduce appropriate teacher motivation mechanisms, which can help stabilize the schoolteacher team and improve teaching quality.

Every teacher has different needs for teacher motivation in different career periods. Recently, the Experimental Middle School Affiliated to Yunnan Normal University has also implemented the idea of establishing a motivation mechanism. However, because China has recently implemented the teacher award system and the limited benefits of compulsory education, there is no research on the relationship between the motivation system and the commitment of teachers in schools. These problems will affect the quality of education and teachers' organizational commitment (Li, 2020). Therefore, it is necessary and urgent to carry out research in this field in China's underdeveloped areas, especially in Yunnan Province with underdeveloped education. An effective teacher-teacher motivation mechanism can help schools increase teacher commitment, help stabilize teacher teams in underdeveloped areas, reduce the loss of educational talents, and increase teachers' motivation and improve
teaching quality Madjid and Bahiroh (2020). Just as most young teacher pays less attention to financial motivations than non-financial motivations, they pay more attention to their career growth and good vocational training to help them find the appropriate career goals and sense of belonging to the organization to increase the teacher commitment of young teachers. Therefore, according to this research, it provides some efficient references for schools in poor areas of Yunnan Province to establish teacher motivation mechanisms.

2. Research Questions

1. How is the motivation level of Experimental Middle School Affiliated to Yunnan Normal University to teachers?
2. How is the commitment level of Experimental Middle School Affiliated to Yunnan Normal University to teachers?
3. What is the relationship between teachers’ motivation and teachers’ commitment at Experimental Middle School Affiliated to Yunnan Normal University?

3. Research Objectives

There were three objectives in this research:

1. To identify the teachers’ motivation level at Experimental Middle School Affiliated to Yunnan Normal University.
2. To identify the teachers’ commitment level at Experimental Middle School Affiliated to Yunnan Normal University.
3. To determine the relationship between teachers’ motivation and teachers’ commitment at Experimental Middle School Affiliated to Yunnan Normal University.

4. Literature Review

Becker (1960) generally describes organizational commitment as a tendency to participate in "consistent activity route", because when the activity stops, the accumulation of "marginal notes" will be lost. Generally speaking, "unilateral bet" refers to anything of value (time, energy, money) invested by individuals. In other words, organizational commitment will no longer be strong, accompanied by the disappearance of these interests. Based on this theory, Meyer and Allen (1997) proposed that three main elements constitute organizational commitment. These three different elements include:

- Affective Commitment - Organizations make use of these factors to build positive relationships between employees and organizations by identifying employees with organizational culture, goals and values.
- Continuance Commitment - The organization increases employees' commitment by making them feel that leaving the organization will make them lose their economic interests or social ties.
- Normative Commitment - Create an organization through training and identification of employees; Employees have a sense of belonging and responsibility to the organization.

Herzberg (1959) was curious to know the employees' opinion by asking these questions: What do people want from their jobs? Do they just want a higher salary? or do they want security, good relationships with co-workers, opportunities for growth and advancement or something else altogether? To understand employee attitudes and motivation, Herzberg set out to determine the effect of attitude on motivation by interviewing people to describe situations where they felt really good, and really bad about their work. Herzberg's research results show that the factors leading to job satisfaction are different from those leading to job dissatisfaction. Therefore, Herzberg developed motivational health theory to explain these results. Herzberg (1959) identified motivators as factors that motivate employees to work. They are called:

- Intrinsic Motivators - These incentives lead to job satisfaction; They come from employees' needs for employees' future career growth. Motivation factors include achievement, recognition, work itself, responsibility, and progress.
- Extrinsic Motivators - Which were identified as factors that prevented job dissatisfaction. Hygiene factors include Supervision, Working condition, Interpersonal relationship.

5. Conceptual Framework

The purpose of this research is to investigate the relationship between teachers' cognition of teachers' motivation and teachers' commitment in Experimental Middle School Affiliated to Yunnan Normal University.

Figure 1 shows the conceptual framework of this study. The study has two main variables, teachers' motivation, and teachers' commitment. The teachers' commitment factors on the left are based on the Meyer and Allen (1997) developed the three-component organization commitment. The teachers’ motivation factors on the right
are based on the Herzberg (1959) identified motivators as factors that motivate employees to work which included 2 key components.

Figure 1. The conceptual framework of this study.

6. Research Method

This study was designed as a quantitative and relational research. Researchers used questionnaires to collect data and studied the cognition of target groups by descriptive and correlation analysis to analyze the data of this study. The research tool is a questionnaire survey, which consists of three parts.

Part 1: It is mainly the demographic data of the questionnaire. The questionnaire investigated the demographic data such as teachers' position, gender, age, and academic status, as well as your time engaged in teaching services?

Part 2: Teacher Motivation, there were totally 45 questions under 8 evaluation factors. Question 6 to 11 were used to measure factor (1) Supervision which focuses on the school administrations’ competence to manage and transform the school mission to the teachers, which influenced teachers to work efficiently. Question 12 to 19 were used to measure factor (2) Working conditions which investigate working conditions with teachers’ motivation in aspects of teachers. Question 20 to 26 were used to measure factor (3) Interpersonal relationships which focus on the relationship of teachers among their colleagues and supervisors. Question 27 to 30 were used to measure factor (4) Achievement. Question 31 to 34 were used to measure factor (5) Recognition to evaluate, interpret, and consider the level of teachers’ motivation in recognition during their work experience in Experimental Middle School Attached to Yunnan Normal University in Yunnan, China. Question 35 to 39 were used to measure factor (6) Work itself. Question 40 to 44 were used to measure factor (7) Responsibility. Question 45 to 50 were used to measure factor (8) Advancement.

Part 3: About Organizational Commitment. A total of 20 questions about teachers' organizational commitment were designed to investigate teachers’ organizational commitment from three aspects.

7. Findings

The first research objective was to identify the teachers' consciousness of teachers’ motivation in Experimental Middle School Affiliated to Yunnan Normal University.

Table 1 shows the Means and Standard Deviations of the level of teachers’ perceptions towards Extrinsic Factors about Teachers’ Motivation in Experimental Middle School Affiliated to Yunnan Normal University (n=114), the question items " I believe my salary is fair." had a very high level, which was (4.13), and the item " I believe safe working at my workplace." Had the moderate level, which the score was (3.43). The total level for the level of teachers’ perceptions towards Extrinsic Factors about Teachers’ Motivation in the school was high (3.71).

| Table 1 Means and Standard Deviations of the Level of Teachers’ Motivation Relate to Extrinsic Factors |
|-------------------------------------------------|-----------|-----------|-----------|
| Items                                           | Mean      | S.D.      | Interpretation |
| The competence of my supervisor in making      | 3.71      | 0.79      | High       |
| decisions.                                      |           |           |            |
| The way my boss handles his people.             | 3.62      | 0.86      | High       |
| The way organization policies are put into practice. | 3.83      | 0.91      | High       |
| The attitude of the administration is very      | 3.71      | 0.87      | High       |
| accommodative in my company.                   |           |           |            |
| I am proud to work for this company because its policy is favorable for workers. | 3.69  | 0.88 | High |
| I completely understand the mission of my company. | 3.71 | 0.91 | High |
| The physical environment where I work.          | 3.65      | 0.77      | High       |
| I believe safe working at my workplace.         | 3.43      | 0.86      | Moderate   |
| I believe my job is secure.                     | 3.69      | 0.92      | High       |
| My workplace is located in an area where I feel comfortable. | 3.58  | 0.83 | High |
### Items | Mean | S.D. | Interpretation
--- | --- | --- | ---
I feel satisfied because of the comfort I am provided at work. | 4.02 | 0.87 | High
I am proud to work for my company because of the pleasant working conditions. | 3.58 | 0.91 | High
I believe my salary is fair. | 4.13 | 0.85 | High
It is easy to get along with my colleagues. | 3.95 | 0.82 | High
My colleagues are helpful and friendly. | 3.63 | 0.83 | High
Total | 3.71 | 0.61 | High

**Table 2**
Table 2 shows the Means and Standard Deviations of the level of teachers’ perceptions towards Intrinsic Factors about Teachers’ Motivation in Experimental Middle School Affiliated to Yunnan Normal University (n=114), the question items "I am able to do things that I don't go against my conscience." had a very high level, which the score was (4.51), and the item "The praise I get for doing a good job." had the moderate level, which the score was (3.44) and (3.36). The total level for the level of teachers’ perceptions towards Extrinsic Factors about Teachers’ Motivation in the school was high (3.69).

**Means and Standard Deviations of the Level of Teachers’ Motivation Relate to Intrinsic Factors**

<table>
<thead>
<tr>
<th>Items</th>
<th>Mean</th>
<th>S.D.</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am proud to work in this company because it recognizes my achievements.</td>
<td>3.54</td>
<td>0.84</td>
<td>High</td>
</tr>
<tr>
<td>I feel satisfied with my job because it gives me feeling of accomplishment.</td>
<td>3.61</td>
<td>0.84</td>
<td>High</td>
</tr>
<tr>
<td>I feel I have contributed towards my company in a positive manner.</td>
<td>3.63</td>
<td>0.85</td>
<td>High</td>
</tr>
<tr>
<td>The feeling of the accomplishment that I get from the job.</td>
<td>3.61</td>
<td>0.85</td>
<td>High</td>
</tr>
<tr>
<td>I feel appreciated when I achieve or complete a task.</td>
<td>3.63</td>
<td>0.88</td>
<td>High</td>
</tr>
<tr>
<td>My manager always thanks me for a job well done.</td>
<td>3.54</td>
<td>0.88</td>
<td>High</td>
</tr>
<tr>
<td>I receive adequate recognition for doing my job well.</td>
<td>3.46</td>
<td>0.87</td>
<td>Moderate</td>
</tr>
<tr>
<td>The praise I get for doing a good job.</td>
<td>3.44</td>
<td>0.85</td>
<td>Moderate</td>
</tr>
<tr>
<td>My work is thrilling, and I have a lot of variety in tasks that I do.</td>
<td>3.59</td>
<td>0.83</td>
<td>High</td>
</tr>
<tr>
<td>I empowered enough to do my job.</td>
<td>3.56</td>
<td>0.82</td>
<td>High</td>
</tr>
<tr>
<td>My job is challenging and exciting.</td>
<td>3.64</td>
<td>0.85</td>
<td>High</td>
</tr>
<tr>
<td>I have the chance to tell my colleagues what to do.</td>
<td>3.61</td>
<td>0.85</td>
<td>High</td>
</tr>
<tr>
<td>I am able to do things that I don't go against my conscience.</td>
<td>4.51</td>
<td>0.79</td>
<td>Very High</td>
</tr>
<tr>
<td>I have freedom to use my own judgement.</td>
<td>4.21</td>
<td>0.79</td>
<td>High</td>
</tr>
<tr>
<td>I have a chance to do different thing from time to time.</td>
<td>4.14</td>
<td>0.73</td>
<td>High</td>
</tr>
<tr>
<td>I have a chance to work alone on the job.</td>
<td>3.95</td>
<td>0.84</td>
<td>High</td>
</tr>
<tr>
<td>I have a chance to try my own methods of doing the job.</td>
<td>3.56</td>
<td>0.82</td>
<td>High</td>
</tr>
<tr>
<td>I have a chance to do something that makes use of my ability.</td>
<td>3.76</td>
<td>0.73</td>
<td>High</td>
</tr>
<tr>
<td>I will choose career advancement rather than monetary incentives.</td>
<td>3.55</td>
<td>0.80</td>
<td>High</td>
</tr>
<tr>
<td>My job allows me to learn new skills for career advancement.</td>
<td>3.72</td>
<td>0.84</td>
<td>High</td>
</tr>
<tr>
<td>There are chances to advance on this job.</td>
<td>3.36</td>
<td>0.94</td>
<td>Moderate</td>
</tr>
<tr>
<td>I am proud to work in my company because I feel I have grown as a person.</td>
<td>3.54</td>
<td>0.81</td>
<td>High</td>
</tr>
<tr>
<td>My job allows me to grow and develop as a person.</td>
<td>3.74</td>
<td>0.91</td>
<td>High</td>
</tr>
<tr>
<td>My job allows me to improve my experience, skills, and performance.</td>
<td>3.68</td>
<td>0.81</td>
<td>High</td>
</tr>
</tbody>
</table>
Table 3 shows the conclusion of the Means and Standard Deviations of the level of teachers’ motivation in Experimental Middle School Affiliated to Yunnan Normal University. In summary, the overall average level of teachers' motivation is 3.51-4.50, with a high level, with a score of 3.70. The internal factor scores of teachers' motivation are the lowest, ranging from 3.51 to 4.50, with a higher level, with a score of 3.69. The external factor scores of teachers’ motivation are the highest, ranging from 3.51 to 4.50, with a high level, with a score of 3.71.

### Table 3

**Means and Standard Deviations of the Level of Teachers’ Motivation**

<table>
<thead>
<tr>
<th>Teachers’ Motivation</th>
<th>Mean</th>
<th>S.D.</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extrinsic Factors about</td>
<td>3.71</td>
<td>0.61</td>
<td>High</td>
</tr>
<tr>
<td>Teachers’ Motivation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intrinsic Factors about</td>
<td>3.69</td>
<td>0.64</td>
<td>High</td>
</tr>
<tr>
<td>Teachers’ Motivation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3.70</strong></td>
<td><strong>0.58</strong></td>
<td>High</td>
</tr>
</tbody>
</table>

The second research objective of this study was to identify the teachers’ consciousness of teachers’ commitment in Experimental Middle School Affiliated to Yunnan Normal University.

Table 4 summarizes the mean and standard deviation of teachers’ consciousness of teachers’ organizational commitment in Experimental Middle School Affiliated to Yunnan Normal University. To sum up, the overall average level of organizational commitment is between 3.51-4.50, with a high level and a score of 3.71. The score of continuous commitment is the lowest, between 2.51-3.50, at the medium level, with a score of 3.41. The score of emotional commitment is the highest, between 3.51-4.50, at the medium level, with a score of 3.9

### Table 4

**Means and Standard Deviations of the Level of Teachers’ Organization Commitment**

<table>
<thead>
<tr>
<th>Organization Commitment</th>
<th>Mean</th>
<th>S.D.</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affective Commitment</td>
<td>3.90</td>
<td>0.8</td>
<td>High</td>
</tr>
<tr>
<td>Continuance Commitment</td>
<td>3.41</td>
<td>0.92</td>
<td>Moderate</td>
</tr>
<tr>
<td>Normative Commitment</td>
<td>3.81</td>
<td>0.84</td>
<td>High</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3.71</strong></td>
<td><strong>0.62</strong></td>
<td>High</td>
</tr>
</tbody>
</table>

The third research objective of this study was to identify the relationship between teachers’ consciousness of teachers’ motivation and teachers’ commitment in Experimental Middle School Affiliated to Yunnan Normal University.

Table 5 shows the analysis of the relationship between teachers' cognition of teachers' motivation and teachers' commitment. The results show that r = 0.642, SIG. (2) is 0.002, less than 0.05. In other words, at the level of 0.05 (even 0.01), there is a strong positive correlation between teachers' motivation and teachers' commitment. Perceived by schoolteachers. In conclusion, the hypothesis of this study is accepted. In other words, there is a significant correlation between teachers' perception of teachers' motivation and teachers' commitment in Experimental Middle School Affiliated to Yunnan Normal University.

### Table 5

**Pearson Product Moment Correlation Result between Teachers’ Motivation and Teachers’ Commitment**

<table>
<thead>
<tr>
<th>Correlation Test</th>
<th>Teachers’ Motivation</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers’ Organization Correlation</td>
<td>Pearson Correlation</td>
<td>.642***</td>
</tr>
<tr>
<td>Commitment Sig. (2 tailed)</td>
<td></td>
<td>.002</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (2-tailed).**

**Discussion**

On the basis of the analysis results, teachers' perception of teachers' motivation is high (3.70), and teachers' organizational commitment is also high (3.71). The results show that there is a significant and positive
The correlation between teachers' cognition of teachers' motivation and teachers' commitment in Experimental Middle School Affiliated to Yunnan Normal University. At the same time, through interviews, all teachers felt the changes in the motivation mechanism of schoolteachers: indicating teachers' concern for the incentive mechanism of schoolteachers.

On the basis of the analysis results, teachers regarded the highest attitude towards school's teacher motivation mechanism in the selected school. The level of teachers' commitment determines whether an educational institution can succeed, and the main factor affecting teachers' commitment is the level of teachers' motivation. Teachers, as knowledge workers, should be regarded as the main assets of the school. Teacher incentive is the key to the success or failure of the school. Saraswathi (2011) defines motivation as the willingness to make high-level efforts to achieve organizational goals, which is conditional on the ability to meet some individual needs. Motivation is the power to make people act in their own way. These views could be further proved from the strength of human motivation. Motivation is personal needs, material desires, work motivation or temporary impulse.

The Extrinsic Factors about Teachers' Motivation and Intrinsic Factors about Teachers' Motivation in this study both had a high level. It shows that today's teacher motivation mechanism is a three-dimensional concept, which has the direct motivation brought by financial reward. Saraswathi (2011) believes that there are new types of workers in the 21st century, namely knowledge workers, such as teachers, doctors and so on. To improve the motivation of knowledge workers, it is necessary to require knowledge workers to have everyone's responsibility, self-management and autonomy, which is also consistent with the research results. Such like the items "I am able to do things that I don't go against my conscience." "I have freedom to use my own judgement." and "I have a chance to do different thing from time to time. Both of them had a high score in the Intrinsic Factors about Teachers' Motivation. Madjid and Bahiroh (2020) confirm that motivation has a positive and significant impact on teacher performance, implying that to increase the teacher performance, teachers’ motivation, both internal and external, should be noted.

In the teachers’ motivation, there is also an element that cannot be ignored, that is, colleague relationship and communication. Madjid and Bahiroh (2020) believes that increasing teacher Work Motivation by means of interpersonal communication is very effective to be used in increasing teacher work motivation. With interpersonal communication, it will be easier to convey something, whether it is a form of openness, showing empathy, providing support, a positive feeling, and fostering a sense of equality or equality. By using interpersonal communication, it will be easier to accept and of course can foster a sense of kinship, a sense of pleasure between superiors and subordinates, so that the message delivery process can run smoothly, and a backflow will certainly be created. Things like this are certainly very helpful for increasing teacher work motivation and feel it is very helpful in increasing work motivation. This phenomenon is also reflected in the questionnaire, and the scores of relevant questions are at a high level.

Additionally, the teachers’ organizational commitment in Experimental Middle School Attached to Yunnan Normal University’s score was 3.71 in total which means the level was high. The affective commitment had the highest score (3.90), then normative commitment got the second highest score 3.81, the lowest was continuance commitment (3.41) in the moderate level. Kamaylar (2016) also mentioned that the organizational commitment of the No.2 basic education high school is ranked as follows: the first is affective commitment, the second is normative commitment, and the last is continuous commitment.

In terms of Affective Commitment, the highest score is teachers' "emotional attachment to the school, and the level is high. According to the affective commitment theory (Meyer & Allen, 1997), the data show that employees have emotional dependence, identification and dedication to employees, and their loyalty and hard work to the organization are mainly due to their deep feelings towards the organization, not all of them based on non-financial incentives. However, teachers will be happy to invest the rest of their career in school because school is the lowest. The results show that some teachers have considered leaving school. Research shows that teachers' feelings for schools are not single. On the one hand, they have emotional attachment to organizations. On the other hand, considering leaving school is for some reason. This result may be a warning to school administrators.

Teachers' Normative Commitment score is second higher. Problem item teachers believe that it is wrong to leave the organization with the highest score at the first high level, while problem item teachers find that a person must always be loyal to his / her organization is often the lowest. Data show that teachers want to stay in school and believe
in the value of school. This result reflects the obligation of teachers to stay in the organization and is also a commitment of teachers to stay in schools. This is the social responsibility formed by the long-term impact of society (Meyer & Allen, 1997).

On the basis of the interview, one of the important reasons for teachers to leave school is the change of compensation system. From the data analysis and interviews, teachers mentioned the changes of the reward system in recent years and believed that it was because the needs of some teachers were not fully met. (Meyer & Allen, 1997) concluded that employees' perception of the cost of leaving the organization is a commitment to stay in the organization in order to avoid losing profits earned over the years. The same view of Kamaylar (2016) shows that most teachers do not have much interest in continuing education in schools because of the influence of internal and external factors on their continuing commitment.

According to the 1960 Side Bet Theory, the higher the employee's organizational commitment, the stronger the sense of belonging to the organization. The researchers analyzed the data of this study and found that teachers have a high organizational commitment in the school, which means that teachers have a strong sense of belonging to the school. The researchers found that the results of the data show that teachers' motivation is at a high level and teachers' organizational commitment is also at a high level. According to Pearson product moment correlation coefficient, there is a correlation between teachers' perception of teachers' motivation and organizational commitment.

**9. Conclusion**

This study investigated all of the full-time jobs teachers in Experimental Middle School Affiliated to Yunnan Normal University by questionnaire, to identify the level of teachers’ perception towards teachers’ motivation and teachers’ commitment. The study found that schoolteachers have a positive view of teachers' motivation mechanism. Teachers in the school have the perception of high levels of both Extrinsic Factors about Teachers' Motivation and Intrinsic Factors about Teachers' Motivation, it could be seen that teachers had relative. The organizational commitment of schoolteachers is at a high level; Among them, teachers' affective commitment is the highest and teachers' continuous commitment score is the lowest among the three commitments, which present as the level of moderate. On account of the result of the data analysis, there is a strong positive relationship between teachers’ perceptions towards teachers’ motivation and teachers’ commitment in Experimental Middle School Affiliated to Yunnan Normal University.

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The Effect of Computer-Assisted Phonics Games on Thai Kindergarten Students’ Listening Proficiency and English Phonics Achievement

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Abstract

Purpose: This study was aimed at comparing the Kindergarten 2 students’ listening proficiency and English Phonics achievement before and after using computer-assisted phonics games in English Phonics class at an international school in Bangkok during the academic year 2020-2021. This research followed a one group pre-test post-test pre-experimental research design. One conveniently chosen class of 13 Kindergarten 2 students participated in this 8-week study. An instructional intervention was implemented in English Phonics class two sessions per week and 40 minutes per session. Statistical data analysis indicated that the difference between participants’ listening proficiency before and after using computer-assisted phonics games in English Phonics class was significant, favoring the latter condition favoring the use of computer-assisted phonics games. Moreover, the participants’ listening proficiency improved from good before using computer-assisted phonics games, to excellent after using such games. It was also found that there was a significant difference in participants’ English Phonics achievement before and after using computer-assisted phonics games in English Phonics class, favoring the use of computer-assisted phonics games. Results from the data analysis also showed that Kindergarten 2 students’ English Phonics achievement improved from a recommendation for English Phonics class support before using computer-assisted phonics games, to an excellent achievement after using such games. Based on the research findings, recommendations for students, teachers, administrators, curriculum developers and future researchers are provided.

Keywords: Listening Proficiency; English Phonics Achievement; Kindergarten Students; English Phonics Class; Computer-Assisted Phonics Games

JEL Classification Code: C12, I20, I21, N35

1. Introduction

The importance of learning foreign languages in Thailand is recognized in the Basic Education Core Curriculum B.E. 2551 (A.D. 2008), which emphasizes the need of Thai students to learn foreign languages at all school levels (Ministry of Education, 2008). In order to learn English as a foreign or a second language, students can benefit from a systematic instruction that emphasizes on phonological awareness (i.e., the ability to identify sounds in spoken words and hence recognize that a spoken word consists of a sequence of individual sounds), which is strongly connected to the development of language literacy (Swanson et al., 2005). Phonological awareness can be expressed through phonics skills and listening proficiency skills such as identifying and manipulating words and syllables, rhyming, matching initial consonants, and counting the number of phonemes existing in spoken words. Therefore, phonological awareness is an essential skill for helping learners in early childhood progress in their development of phonics skills and listening proficiency skills throughout early years, and has been proven to be linked to reading and spelling success at primary level, as well as to improve communication in general (State Government of Victoria, 2020). Phonics skills and listening proficiency skills can be developed by activities that promote sound skills, phonics songs, reading, and the use of technology that encourages the development of such skills (Walsh, 2017). There is a current increase in the use of computer-assisted programs for the purpose of education learning in Thailand. These computer-assisted games, especially online phonics games, are fun and beneficial to the learners to focus and engage in their language course (Philips, 2010). Nessy Learning and Starfall Education are among the several online platforms that provide computer-assisted phonics games and structured programs for the purpose of teaching and learning English language skills, including reading, listening, blending words, vocabulary and making sentences. The computer-assisted phonics games from these platforms are structured multisensory phonics teaching tools, and had shown to improve language learners’ listening, reading and spelling skills while learning a first, second or foreign language (Nessy Learning, 2017, 2020; Starfall Education, 2021).

Despite of the many benefits of using computer-assisted phonics games on children’ listening proficiency and English Phonics achievement, English language
education at kindergarten level in Thailand has been reported to be mainly provided in a traditional way (e.g., Lee & Eamoraphan, 2017; Parreno & Eamoraphan, 2017), which negatively impacts students’ English phonics achievement, English listening proficiency and English speaking proficiency. With all this in mind, the researchers decided to develop a study to compare the Kindergarten 2 students’ listening proficiency and English phonics achievement before and after the use of computer-assisted games in English Phonics class at an international school in Bangkok, Thailand.

2. Research Objectives

The researchers, concerned with the use of a traditional teaching method in the English Phonics class at an international school in Thailand, particularly in Kindergarten 2, designed a comparative study to address the following objectives.

1. To determine the levels of students’ listening proficiency before and after using computer-assisted phonics games in English Phonics class in Kindergarten 2 at an international school in Bangkok.
2. To determine the levels of students’ English Phonics achievement before and after using computer-assisted phonics games in English Phonics class in Kindergarten 2 at an international school in Bangkok.
3. To determine whether there is a significant difference between students’ listening proficiency before and after using computer-assisted phonics games in English Phonics class in Kindergarten 2 at an international school in Bangkok.
4. To determine whether there is a significant difference between students’ English Phonics achievement before and after using computer-assisted phonics games in English Phonics class in Kindergarten 2 at an international school in Bangkok.

3. Theoretical Framework

This study was conducted based on the following supporting theories: the emergent literacy theory, the constructivist theory, and the computer-assisted language learning (CALL) theory.

3.1. Emergent Literacy Theory

In young children, the progress of literacy is multifaceted and closely connected with reading and writing experiences in both at home and at school (Teale & Sulzby, 1986). The emergent literacy theory states that reading, speaking, listening, and writing abilities are interrelated and develop synchronously. Improvement in one area concurrently influences another; exposure to writing experiences are also working to enhance a child’s reading skills and vice versa (Teale & Sulzby, 1986).

3.2. Constructivist Theory

The constructivist theory (or simply put as “constructivism”) provides a framework to explain how students are able to build up their knowledge bases upon what they have already learnt. According to this theory, the effective approach for assembling new knowledge shall develop in making the lesson easy and creating new ways to present and shape the information (Bruner, 1986, 1990, 1996). Furthermore, this theory states that the instructor’s responsibility is to simplify the information with the suitable materials for all the student’s present state of understanding. The curriculum also should be established in a way that the learner can progress upon what they have studied.

3.3. Computer-Assisted Language Learning (CALL) Theory

Computer-assisted language learning (CALL) theory is a learning model for the digital age, in which computers are used for teaching and for learning languages. For example, computer technology can be employed for interactive learning as well as for presentation support during a language class. Critical thinking is encouraged during the computer-assisted language learning, and CALL has been seen to improve communicative competence (Vinther, 2005). The application and use of technology in language classrooms (e.g., the use of online or computer-assisted phonics games) are now being implemented since very early years (Nessy Learning, 2017, 2020; Starfall Education, 2021).

4. Conceptual Framework

The conceptual framework of this study is depicted in Figure 1. The independent variable of this study was the use of computer-assisted phonics games, while the dependent variables were the level of listening proficiency before and after using computer-assisted phonics games and the level of English phonics achievement before and after using computer-assisted phonics games.
5. Literature Review

In this section, some previous studies related to the research variables addressed in this study are reviewed and summarized.

Parreno and Eamoraphan (2017) conducted a study to compare the Kindergarten 2 students’ achievement in English Phonics before and after the use of English Phonics online games from the educational website Starfall, and to examine their perceptions toward such games. For this study, 11 Kindergarten 2 students of St. Mark’s International School in the academic year 2015-2016 participated during the two-month study. The data analyses showed that there was a significant difference between the pre- and post-tests scores of Kindergarten 2 students before and after using English Phonics online games at a significance level of .05. The study found that Kindergarten 2 students’ English phonics achievement was already good before the use of English Phonics online games, and increased to excellent after the use of such games.

Seesawat (2016) conducted a research focusing on the improvement of elementary school students’ English comprehension through educational games. She carried out her case study with 39 students from Room 3 of Grade 3 students of the intensive English programs at Assumption College Ubonratchathani during the academic year 2015. The aims were to examine the situation of English comprehension of Grade 3 students from the target school, and implement and instructional development intervention (IDI) using educational games, in order to examine the initial impact of the IDI and improve the participants’ English comprehension, including their reading comprehension, listening skills, reading skills, writing skills and speaking skills. The study found a significant difference in the participants’ English comprehension between the pre- and post-IDI through educational games.

6. Methodology/Procedure

In this section, details on the study’s population, sample and research instruments are provided.

6.1. Population and Sample

This study was conducted in the academic year 2020-2021 at an international school in Bangkok, Thailand. The main focus group on this study was based upon Kindergarten 2 students, with a total convenience sample of 13 students out of a population of 26 students.

The instrumental scope of this study included an English Phonics test and a listening proficiency test, that were administered as pre- and post-tests before and after the instructional intervention.

The instructional scope was limited to two English Phonics lessons a week for over eight weeks, and the lessons consisted of 40-minute periods per class. There were two classes of Kindergarten 2 and the researchers chose one class, the first author’s own class, to conduct the research. The other class was taught in the traditional way, but was not considered in this study, which followed a pre-experimental research design. During the experiment, several computer-assisted games from educational websites, such as Nessy Learning and Starfalls, were used in this study, and implemented by the first author to her own class. The students were engaged in the computer-assisted games after each lesson was introduced. Then, the students worked, either individually or as a group, to help complete the games and find the answers to them on the smartboard.
6.2. Research Instruments

Two research instruments were used for this study: the Listening Proficiency Test and the English Phonics Achievement Test. Both research instruments were administered as pre- and post-tests to the experimental group.

6.2.1. Listening Proficiency Test

This assessment tool was comprised of the sounds of chosen phonics words from those that participants have learned in English Phonics class during Kindergarten 1 and Kindergarten 2 Term 1 and Term 2, and were reinforced during the experimental period (which fell within Kindergarten 2 Term 3) using the Jolly Phonics Books 1-7, consonant-vowel-consonant (CVC) words and word families. The test items were chosen by the first author herself, based on some English Phonics tests administered in the target school in previous years. The Listening Proficiency Test assessed how the students hear and respond by choosing the right choice after listening to the sentences or words in English as a foreign language accordingly. The Listening Proficiency test consisted of 9 multiple choice questions, giving the students three choices per item (a, b and c; see Figure 2).

Table 1 shows the scoring rubric used to assess participants’ performance in the Listening Proficiency Test.

<table>
<thead>
<tr>
<th>Score</th>
<th>Mean score</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>8-9</td>
<td>8.01-9.00</td>
<td>Excellent</td>
</tr>
<tr>
<td>6-7</td>
<td>6.01-8.00</td>
<td>Good</td>
</tr>
<tr>
<td>4-5</td>
<td>3.01-6.00</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>≤ 3</td>
<td>≤ 3.00</td>
<td>Recommendation for English Phonics class support</td>
</tr>
</tbody>
</table>

6.2.2. English Phonics Achievement Test

The English Phonics Achievement Test was designed to assess students’ demonstration of phonological awareness and understanding of the information learned in English Phonics class, both before (pre-test) and after (post-test) the

Listening Proficiency Test

For each item, listen to the word you hear to complete the sentences and circle the letter a, b or c of the BEST answer.

1. A man has a red ________.
   a) can
   b) van
   c) pan

2. The ________ helps the sick pet
   a) vet
   b) van
   c) pet

3. The pig is wearing a ________.
   a) big
   b) wig
   c) dig

Figure 2: Sample Items of the Listening Proficiency Test

Use of computer-assisted games. This test consisted of two parts: a “Matching” section (comprised of seven words) and a “Fill in the blanks” section (comprised of six words). The understandings and skills assessed by each word item were learned in English Phonics class during Kindergarten 1 and Kindergarten 2 Term 1 and Term 2, and were reinforced during the experimental period (which fell within Kindergarten 2 Term 3) using Jolly Phonics Books 1-7 as well as CVC words and word families.

Matching Section: This was the first section of the test. The Matching section had the same test format that the target international school in Bangkok has been using for many years with their Kindergarten 2 students. This section assessed students’ understanding in forming seven words using the blending techniques that they learned in English Phonics class during the experimental period (see Figure 3). In this section, a maximum score of seven points was possible.

Fill in the Blanks Section: The second section of this research instrument required students to fill in the right letters to complete the word correctly. To complete each of the six words in this section, the students had to correctly fill in two letters. For each correct word, students were awarded 2 points, 1 point per correct letter (see Figure 4). Participants’ English Phonics achievement was assessed by
students understanding of the meaning and choosing the correct spelling of the phonics from the given six words. In this section, a maximum score of 12 points was possible.

![Figure 3: Sample Items in the Matching Section of the English Phonics Achievement Test](image)

Figure 3: Sample Items in the Matching Section of the English Phonics Achievement Test

![Figure 4: Sample Items in the Fill in the Blanks Section of the English Phonics Achievement Test](image)

Figure 4: Sample Items in the Fill in the Blanks Section of the English Phonics Achievement Test

All the words appearing in the English Phonics Achievement Test were learned during kindergarten 2 English Phonics class Term 1 and Term 2, and were reinforced during the experimental period, which fell within Kindergarten 2 Term 3.

Table 2 shows the scoring rubric used to assess participants’ performance in the English Phonics Achievement Test. This scoring rubric followed the grading standards of the target international school.

| Table 2: English Phonics Achievement Test Scoring Rubric |
|---------------------------------|----------------|----------------|
| Score  | Mean score  | Interpretation |
| 18-19  | 17.50-19.00 | Excellent      |
| 16-17  | 15.50-17.49 | Good          |
| 14-15  | 13.50-15.49 | Satisfactory  |
| ≤ 13   | ≤ 13.49     | Recommendation for English Phonics class support |

7. Research Findings

From the analysis of the collected data, the following findings were obtained.

7.1. Findings From Research Objective 1

Regarding to this research objective, the following findings were obtained.

- The level of students’ listening proficiency before using computer-assisted phonics games in English Phonics class in Kindergarten 2 at an international school in Bangkok was good, $M = 7.77, SD = 1.36$.
  - The level of students’ listening proficiency after using computer-assisted phonics games in English Phonics class in Kindergarten 2 at the target school was excellent, $M = 8.92, SD = .28$.
  - The difference between the means, from the pre-test to the post-test, showed an increase in mean outcome of $8.92 - 7.77 = 1.15$ units.

7.2. Findings From Research Objective 2

Regarding to this research objective, the following findings were obtained.

- The level of students’ English Phonics achievement before using computer-assisted phonics games in English Phonics class in Kindergarten 2 at an international school in Bangkok was a recommendation for English Phonics class support, $M = 12.69, SD = 4.17$.
  - The level of students’ English Phonics achievement after using computer-assisted phonics games in English Phonics class in Kindergarten 2 at an international school in Bangkok was excellent, $M = 18.45, SD = 1.33$.
  - The difference between the means, from the pre-test to the post-test, showed an increase in mean outcome of $18.45 - 12.69 = 5.76$ units.

7.3. Findings From Research Objective 3

Regarding to this research objective, the following findings were obtained.

- From performing a dependent sample t-test, it was found that there was a significant difference between students’ listening proficiency before and after using computer-assisted phonics games in Kindergarten 2 English Phonics class at the target school, favoring the use of computer-assisted phonics games, $t(12) = -3.09, p < .009$. 


7.4. Findings From Research Objective 4

Regarding to this research objective, the following findings were obtained.

• From performing a dependent sample t-test, it was found that there was a significant difference between students’ English Phonics achievement before and after using computer-assisted phonics games in English Phonics class in Kindergarten 2 at the target school, favoring the use of computer-assisted phonics games, t(12) = -5.40, p < .001.

8. Discussion

In this section, the findings obtained from this study are discussed, placing them in context with previous studies.

8.1. Kindergarten 2 Students’ Listening Proficiency Before and After Using Computer-Assisted Phonics Games in English Phonics Class

The research findings showed that students’ listening proficiency after using computer-assisted phonics games in English Phonics class was significantly greater than the students’ listening proficiency before using computer-assisted phonics games in English Phonics class in Kindergarten 2 at an international school in Bangkok. The result is similar with Seesawat (2016), who conducted research on improving English comprehension of 39 Thai Grade 3 students through educational games. Similarly to the current study, Seesawat (2016) found that after an appropriate implementation of an instructional intervention using educational computer games in the class, English listening proficiency, and English comprehension in general, were significantly greater than before using the games. The researchers believe that the children have a better motivation and show more interest through computer-assisted games. Once they are interested in the activities, they will also use the language, pay attention and focus through listening to instruction hence their listening skills will also improve. Computer-assisted games are interesting and engaging as for many students it is more stimulating than lectures and other teacher-centered learning activities.

An excellent level of the participating Kindergarten 2 students’ listening proficiency after using computer-assisted phonics games in English Phonics class at the target school shows that, after the first author introduced and integrated the computer-assisted phonics games into the lesson plan, the children’s English listening proficiency has improved. The researchers believe that the children learned through play, and they had fun with interactivities games. This is in line with Warschauer and Healey (1998) who states that CALL allows students to access, practice, and learn the target language in an almost limitless variety of real-life situations and environments.

8.2. Kindergarten 2 Students’ English Phonics Achievement Before and After Using Computer-Assisted Phonics Games in English Phonics Class

In the current study, the level of Kindergarten 2 students’ English Phonics achievement after using computer-assisted phonics games in English Phonics class at an international school in Bangkok was excellent. This indicates that these Kindergarten 2 students demonstrated an excellent level of mastery of the phonological awareness and understanding of the information learned in English Phonics class. This result is similar with the one reported by Parreno and Eamoraphan (2017), who conducted a study to compare the Kindergarten 2 students’ achievement in English Phonics before and after the use of English Phonics online games from the Starfall educational website (www.starfall.com). Based on their findings, the use of online games in English Phonics is recommended in teaching and learning English Phonics, especially for young learners. Within the classroom, learning should be student-centered and accomplished through active discovery learning (McLeod, 2018a) through computer-based programs. The researchers believe that the students were having fun and actively engaged with the games that they were not focused that they are learning. They are relaxed and getting to practice through structured programs set in the plans which helped them to increase their motivation and increase their willingness as well as readiness to participate which help in their learning. Phonics skills and listening proficiency skills can be developed by phonics songs, reading, activities that promotes sound skills as well as technology that encouraged the development of these skills (Walsh, 2017).

The research findings also showed that students’ English Phonics achievement after using computer-assisted phonics games in English Phonics class was significantly greater than the students’ English Phonics achievement before using computer-assisted phonics games in English Phonics class in Kindergarten 2 at an international school in Bangkok. Thus, the results from the current study show that the role of teacher is to encourage and facilitate, not to present unalterable facts. Vygotsky (1978) also argued that social interaction is crucial for cognitive development and
that a child’s learning always occurs in a social context in co-operation with someone more skillful providing language opportunities with systematic programs (McLeod, 2018b). These can help explain the increase levels of the outcome of students’ English phonics achievement after using computer-assisted phonics games, which were played and allowed interaction with their classmates in each lesson during the experimental period.

9. Recommendations

Based on the study findings, the following recommendations are provided for students, teachers, school administrators and future researchers.

9.1. Recommendations for Students

In this study, Kindergarten 2 students has been introduced to computer-assisted phonics games. Based on the study’s results, the students’ listening proficiency and English Phonics achievement had significantly improved after the use of computer-assisted phonics games. Students should create the habit of playing and interacting more with educational computer-assisted phonics games under their teacher’s and parents’ support, in order to develop by themselves their listening proficiency and enhance their English Phonics learning.

9.2. Recommendations for Teachers

Based on the results of this study, Kindergarten 2 teachers, especially English Phonics teachers and English teachers of young learners, can integrate or use English phonics computer-assisted games in classroom activities. They should also integrate suitable computer-assisted games as a teaching-learning tool. The English Phonics teacher should always be updated and seek new teaching and learning approaches that are best fit to increase motivation and effective learning environment for their students. The researchers believe that by integrating or using English phonics computer-assisted games in their classroom activities, students will be able to share ideas, build knowledge together and increase their motivation as well as making the class more fun and draw more attention from students in phonics and listening activities. By doing this, it will help the teacher to easily provide reflection on students’ achievement before and after using English phonics computer-assisted games.

9.4. Recommendations for School Administrators

According to the research methods used by the researchers in this study and the results of students’ listening proficiency and English Phonics achievement, the researchers believe that school administrators have some room for adjustment and changes to optimize the best learning environment for teachers and students. School administrators may install and get the license of computer-assisted games, not only the games used in this research, but also other educational online games for other subjects, as integrated teaching-learning tools in the classroom. School administrators could install and set up good tools such as interactive pens, projectors, interactive board to support the learning environment. Lastly, school administrators can purchase the monthly, termly, or yearly license of these interactive games for the teachers to use with their students.

9.5. Recommendations for Curriculum Developers

Curriculum developers can use this study to integrate the interactive games in textbooks for Kindergarten 2 English Phonics class. Curriculum developers can also work with English Phonics teachers of each kindergarten level to consider which interactive games are appropriate and suitable for each level and collaborate with school administrators to purchase the license and set up the tools in each grade level, according to the curriculum plan.

9.5. Recommendations for Future Researchers

Future researchers should further investigate the role of English Phonics computer-assisted phonics games in students’ learning in a larger context. In this study, the researchers conducted an 8-week experiment, 16 sessions in total and students’ listening proficiency and English Phonics achievement were found to have significantly increased after introducing and using computer-assisted phonics games in English Phonics class. The researchers suggest that future researchers can extend the experimental period for a longer period of time, preferable for a whole semester or school year, in order to get a clearer view of the influence of computer-assisted phonics games in kindergarten students’ education. It would be suggested to consider bigger sample sizes and various student levels and backgrounds in normal class settings.

Lastly, future researchers may also consider conducting a quasi-experimental study instead of a pre-
experimental one, using another class of the same level as a control group for comparison. This could give more ideas and results on traditional and alternative methods for the teaching and learning of English language in early childhood education.

References
A Correlational Study of Motivation and Language Anxiety For Learning Chinese as A Foreign Language with Chinese Academic Achievement of Thai Grade 6 Students

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Abstract

Abstract: The purpose of this quantitative correlational study was to determine whether there was a significant relationship among Motivation and Language Anxiety with academic achievement for Learning Chinese as a Foreign Language of 164 Grade 6 students from a Thai government school in Trang, Thailand. The Motivation and Language Anxiety for Learning Chinese as a Foreign Language Questionnaire was used to collect data. The survey questionnaire was adapted from Gardner’s Attitude/Motivation Test Battery. Descriptive statistics (means, standard deviations) and multiple correlational analysis were used to analyze the data. The study findings indicated a significant relationship among the target variables - motivation and language anxiety for learning Chinese as a foreign language with Chinese academic achievement. Specifically, the research findings indicated that Grade 6 students displayed a slightly low level of motivation and a slightly low level of language anxiety for learning Chinese as a foreign language. The research found that there was very weak relationship between Grade 6 students’ motivation and their language anxiety for learning Chinese as a foreign language with Chinese academic achievement.

Keywords: Academic achievement, Chinese as a foreign language, motivation, language anxiety, Thai government school, Trang, Thailand.

JEL Classification Code: C12, I20

1. Introduction

Chinese, especially Mandarin, is the most widely spoken language in the world (Myers, 2018). The increase in China's trade has also led to a continuous increase in the amount of Chinese as a foreign language (CFL) learners around the world (Baverstock, 2019). Students’ motivation in language learning involves their motivational intensity in the classroom or the lesson, the students’ desire to learning the language, and their attitude toward learning the language (Gardner, 2005). Studies about foreign language learning anxiety have become trendy in Asian countries like Japan, Thailand, China, and Korea (Partridge & Eamoraphan, 2015). Moreover, a high level of anxiety in learning a language will negatively affect students' success in foreign language acquisition (Partridge & Eamoraphan, 2015).

This study focused on Grade 10 students at a Thai government school in Trang, Thailand and it investigated whether there is a significant relationship between the students’ motivation and language anxiety for learning Chinese as a foreign language with their Chinese academic achievement.

The target school has five native Chinese as a foreign language teacher and teaches Chinese as a foreign language from nursery to grade 12 students once a week. Most of the students are Thai and they need to take the Chinese proficiency test (HSK-Hanyu Shuiping Kaoshi) examination from Grade 3. The Thai students have different levels of motivation and most of them feel nervous to speak Chinese as a foreign language in front of the people in daily life.

In the class 80% of the students, they do not have the confidence to speak Chinese as a foreign language either inside the classroom or when they meet native Chinese people outside of the class. If the content learned in class can be used in the actual situation outside of class, this will stimulate students’ enthusiasm for Chinese as a foreign language learning. Otherwise, it may weaken the positive attitude towards Chinese as a foreign language learning.

For the reasons above, this researcher has decided to investigate the relationship between Grade 6 students’ motivation and their language anxiety for learning Chinese as a foreign language with Chinese academic achievement at a Thai government school in Trang, Thailand.
1.1. Research Objectives

Accordingly, the following research objectives was developed for this study.

1. To identify the level of motivation for learning Chinese as a foreign language of Grade 6 students at a Thai government school in Trang, Thailand.

2. To identify the level of language anxiety for learning Chinese as a foreign language of Grade 6 students at a Thai government school in Trang, Thailand.

2.1. To identify the level of Chinese academic achievement for learning Chinese as a foreign language of Grade 6 students at a Thai government school in Trang, Thailand.

3. To identify whether there is a significant relationship between Grade 6 students’ motivation and their language anxiety for learning Chinese as a foreign language with Chinese academic achievement at a Thai government school in Trang.

1.2. Theoretical Framework

In this research study, the researcher implemented Gardner’s (2010) socio-educational model of second language acquisition to measure and interpret the study variables.

1.2.1. Socio-Educational Model of Second Language Acquisition

In the socio-educational model, Gardner (1985) posted that motivation is a combination of effort, positive attitude, and desire to attain a goal whilst having the feeling of satisfaction during the process of learning the second/foreign language. The motivated person should display effort, desire, and affect together (Gardner, 2010). The score for measuring motivation would be the aggregate of three measures: motivational intensity, desire to learn a language, and attitudes toward learning the language (Gardner, 2010).

In 2010, Gardner had proposed in his study that language anxiety refers to a situation in the language learning classroom and the anxiety that the students feel while they are using the language in their daily lives. Gardner (2010) also stated that when the students first enter the language learning classroom, their general anxiety might be stimulated. Language anxiety is negatively related to language achievement and the students’ motivation for learning that language.

1.3. Conceptual Framework

The purpose of this study was to investigate the level of Grade 6 students’ motivation and language anxiety for learning Chinese as a foreign language with academic achievement at a Thai government school in Trang, Thailand and to determine whether there is a relationship between them. The detail of the conceptual framework for this study was shown in Figure 1.

Figure 1
Conceptual Framework of This Study

2. Literature Review

Several studies have been conducted to find the level and relationship of the motivation in language learning, language anxiety in language learning and their academic achievement. On the other hand, there is little study has focused on the relationship between motivation and language anxiety in CFL with Chinese academic achievement.

2.1. Previous Studies Related to Between Motivation and Academic Achievement

Gardner (2010) had acknowledged that motivation in learning second/foreign language is not a simple construct, and it can only measure by the combination of many affective elements. Motivated students display desire to learn the language, became happier in the language classroom and put more efforts in their lessons (Gardner, 2005).

Siphora and Lynch (2019) also conducted a study focusing on students’ motivation for learning English as a foreign language according to their preferences for indirect learning strategies of 215 students at Nelson English Language Center in Yangon, Myanmar. The finding of this study revealed that the students were highly motivated to learn English as a foreign language.
Li and Lynch (2016) conducted a relational study between motivation for learning and academic achievement among basic and advanced level students studying Chinese as a foreign language. The population of the study was 139 students form years 3 to 6 who are studying Chinese as a foreign language at Ascot International School in Bangkok, Thailand. The finding revealed that the students from the advance class had positive relationship between intrinsic, extrinsic motivation and academic achievement of the students.

Thant and González (2019) conducted a comparative-corrrelational study on the attitude/ toward and motivation for learning English as a foreign language of Grade 9 students from three different ethnic groups from No. 2 Basic Education High School, Eastern Shan State, Myanmar. The population of the study was 199 students from No. 2 Basic Education High School, Eastern Shan State, Myanmar. The finding revealed that the students had high motivation for learning English as a foreign language.

Nant and Eamoraphan (2020) conducted a study focusing on the relationship between motivation and perceived parental encouragement for learning English as a foreign language with English achievement of grades 6 to 8 students at St. John’s private school, Pathein, Myanmar. The participants were 157 Grades 6-8 students from St. John's Private School during the academic year of 2018-2019. The finding revealed that the students had a very high motivation for learning English as a foreign language.

2.2. Previous Studies Related to Language Anxiety and Academic Achievement

According to Gardner (2010), language anxiety can be employ in two type, language classroom anxiety and language use anxiety. If the students’ anxiety in a language increases the academic achievement of the students can decrease and if the academic achievement of the students improves as a result the students’ anxiety in the language is also reduced (Gardner, 2005).

Rerkjaraskul and Lynch (2020) conducted a comparative study of English communication anxiety and English oral skills self-efficacy. The participants were 66 grades 7 to 9 students who are attending English program at the demonstration school of Ramkhamhaeng University. The finding revealed that the students from each grade level had moderately level of English communicate anxiety which means students have anxiety to communicate with others in the classroom and outside of the classroom.

Partridge and Eamoraphan (2015) conducted a comparative study on students’ foreign language classroom anxiety through cooperative learning. The participants were 173 Thai program students from St. joseph Bangna school, Thailand. The finding revealed that the students had mid-level foreign language classroom anxiety across the population of Grade 6.

Feng and Eamoraphan (2020) conducted a comparative study of Thai adult learners’ attitudes toward learning Chinese culture in Chinese as a foreign language class among three levels: beginner, intermediate and advanced. The participants were 100 students from the beginner level, 60 students from the intermediate level, and 50 students from the advance level from a Chinese learning center in Bangkok, Thailand. The finding revealed that the students from all the level have the positive attitude toward Chinese language learning.

In 1994, MacIntyre and Gardner conducted a study to examine the type of language learning situation that can be affected by language anxiety. This study was extended from MacIntyre and Gardner’s study from 1991 which used Tobias’ (1986) model and investigated the effect of anxiety on input and output in both native and second languages in second/foreign language acquisition. There were a total of 185 participants from elementary and high school levels in Sarajevo, Bosnia, and Herzegovina. The investigation reported that combine the effect of language anxiety in all three stages, the anxious student with less experience has more difficulty in demonstrating the knowledge than the relaxed students.

3. Research Methods and Materials

3.1. Methodology/Procedure

The population of this study was 164 Grade 6 students from a Thai government school in Trang, Thailand in the academic year of 2021-2022. All of the Grade 6 students are Thais and all three classes are taught by the same native Chinese speaking teacher. The study was employed a population sample of all 164 Grade 6 students who are studying Chinese as a foreign language (CFL) at a Thai government school in Trang, Thailand in the academic year of 2021–2022. Table 1 shows the number of this study’s population sample by grade level section. In this section, details on the study’s population, sample and research instruments are provided.
3.2. Research Instruments

The Motivation and Language Anxiety for Learning Chinese Questionnaire (see Appendix) was used to assess the students’ level of motivation and the students’ level of language anxiety for learning Chinese as a foreign language. The Chinese midterm tests scores was collected to measure Chinese academic achievement.

Motivation and Learning Anxiety for Learning Chinese Questionnaire

The researcher used the Motivation and Language Anxiety for Learning Chinese as a Foreign Language Questionnaire to collect the data. The questionnaire contains two parts. The first part asked for the students’ demographic information about the students’ name, grade level and gender.

The second part asked the students’ level of motivation for learning CFL and the students’ level of language anxiety for learning CFL. The questionnaire items was adapted from five subscales of Gardner’s (2004) international version of Attitude/Motivation Test Battery (Gardner, 2010). The five subscales of questionnaire items that was adapted from AMTB are attitudes toward learning CFL, desire to learn Chinese as a foreign language which was used to assess the students’ level of motivation for learning CFL, and language class anxiety for learning CFL, language use anxiety for learning CFL which measured the students’ level of language anxiety for learning CFL.

4. Results and Discussion

4.1. Research Findings

From the analysis of the collected data, the following findings were obtained.

4.1.1. Findings From Research Objective 1

The Grade 6 students displayed slightly low motivation for learning Chinese as a foreign language. The overall mean score was 3.83 and according to the interpretation the mean score indicates a slightly low level of motivation since the score was between 3.01- 4.00.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Grade 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation for learning Chinese as a foreign language</td>
<td>3.83</td>
</tr>
<tr>
<td>Motivational intensity</td>
<td>3.90</td>
</tr>
<tr>
<td>Desire to learn Chinese as a foreign language</td>
<td>4.12</td>
</tr>
<tr>
<td>Attitudes toward learning Chinese as a foreign language</td>
<td>3.46</td>
</tr>
</tbody>
</table>

4.1.2. Findings From Research Objective 2

The Grade 6 students’ language anxiety for learning Chinese as a foreign language. As presented in Table 2, the Grade 6 students displayed slightly low language anxiety for learning Chinese as a foreign language. The overall mean score was 3.86 and according to the interpretation, the mean score indicated a slightly low level of language anxiety since the score was between 3.01- 4.00.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Grade 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning Anxiety for Learning CFL</td>
<td>3.86</td>
</tr>
<tr>
<td>Language class anxiety for learning CFL</td>
<td>3.69</td>
</tr>
<tr>
<td>Language use anxiety for learning CFL</td>
<td>4.02</td>
</tr>
</tbody>
</table>

4.1.3. Findings From Research Objective 3

The third research objective of this study was to identify the level of Chinese academic achievement for learning Chinese as a foreign language of Grade 6 student at a Thai government school in Trang, Thailand. Data were obtained from students’ Chinese mid-term assessment test scores in August 2021 in the 1st semester of the academic year 2021-2022 were used. The mean score of Grade 6
students’ Chinese as a foreign language academic achievement was 18.17.

Table 4
The Grades 6 Students’ Overall Mean Scores, Standard Deviations, and the Interpretation of Chinese Academic Achievement Score

<table>
<thead>
<tr>
<th>Grade level</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 6</td>
<td>164</td>
<td>18.17</td>
<td>1.01</td>
<td>Excellent</td>
</tr>
</tbody>
</table>

4.1.4. Findings From Research Objective 4

Table 5 shows the result of a multiple linear regression. This is to analyze the percent of variance and a significant predictive relationship between the students’ motivation and language anxiety for learning Chinese as a foreign language with Chinese as a foreign language academic achievement.

Table 5
Multiple Correlation Coefficient of Students’ Motivation and Language Anxiety for Learning Chinese as a Foreign Language with Chinese as a Foreign Language Academic Achievement

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>R</th>
<th>R²</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students’ motivation and language anxiety for learning Chinese as a foreign language with Chinese academic achievement</td>
<td>.152</td>
<td>.023</td>
<td>2.1</td>
<td>1.89</td>
<td>.15</td>
</tr>
</tbody>
</table>

Table 5 indicated that there is a very weak correlation among the students’ motivation and language anxiety for learning Chinese as a foreign language with Chinese as a foreign language academic achievement (R = 0.15, p< .15). In the Table 5 also presented that students’ motivation and language anxiety for learning Chinese as a foreign language explained 2.3% of the variances with Chinese as a foreign language academic achievement [R² = .023, F (2,161)]. The rest 97.7% of the variance of Chinese academic achievement is explained by other factors such as students’ attitude toward the language, parental encouragement, students’ attitude toward their teachers or the lessons that are created by the teachers, learning environments, students’ self-belief for learning language.

4.2. Discussion

This section discusses the findings obtained from this research and discusses links to previous studies. The researcher organized the section based on the variables. The purpose of this study was to determine the relationship between the students’ motivation and their language anxiety for learning Chinese as a foreign language with Chinese academic achievement at a Thai government school in Trang.

4.2.1. Motivation for learning Chinese as a Foreign Language and Academic Achievement

The finding of the first research objective indicated that the Grade 6 students displayed slightly low motivation for learning Chinese as a foreign language at a Thai government school in Trang, Thailand. In addition, the results also found that Grade 6 students’ motivation in learning Chinese as a foreign language was found to be very weakly correlated with their Chinese academic achievement. The result was expected based on previous studies that used same variable with current research (Li & Lynch, 2016; Siphora & Lynch, 2019; Thant & González, 2019).

Motivation plays a significant role in successful second/foreign language learning classrooms. Students with high motivation are achieve higher. On the other hand, students with lower motivation obtain lesser achievement (Gardner, 2010). The students from the target school are seemed to have less desire in learning Chinese as a foreign language and did not enjoy the language class language greatly. The quality of the curriculum, teachers, instructional strategies, lesson plans in the education setting is also the reason why the students show less interest in their language learning classroom since those are a great influence on the level of students’ motivation in the language learning classrooms (Gardner, 2010). The students displayed slightly low motivation since the target students are from Thailand most of the students are Thais and in Thailand, Chinese as a foreign language is not widely used. In addition, according to the researcher discussion with the teacher from the target classroom, the other reason for the students to have slightly low motivation is that the students learn Chinese as a foreign language in the classroom, but the students do not have opportunities to use that language in their daily life.

Motivation for learning English as a foreign language should be examined in different point of view,
socio-economic factors, educational or institutional factors which involve learning environment, teachers, teaching materials and teaching strategies and perhaps the political factors, to be able to understand the core of motivation and its significant relationship on students’ achievement (Gardner, 2010). According to Ushioda and Dörnyei (2011), motivation is a tool which support and lead students to achieve their goals. Motivation is generally accepted as a students’ desire or essential which can energize processing things in order to convince them (Gardner, 2005). If the students are motivated in second/foreign language learning, they will try harder and push their selves toward a goal.

4.2.2. Language Anxiety for Learning Chinese as a Foreign Language and Academic Achievement

The finding of the first research objective was identified that the Grade 6 students displayed slightly low language anxiety for learning Chinese as a foreign language. In addition, the results also found out that Grade 6 students’ language anxiety in learning Chineses as a foreign language was found very weak and negatively correlated with their academic achievement for learning CFL. The result was expected based on previous studies that used similar variables with current research (Feng & Eamoraphan, 2020; Maclntyre & Gardner 1994; Partridge & Eamoraphan, 2015; Rerkjaraskul & Lynch, 2020).

Language anxiety has a negative correlation with language academic achievement (Gardner, 2010). Similarly, in this current study, the results indicated that language anxiety in learning Chinese as a foreign language are negatively correlated with Chinese academic achievement. The teachers, parents, and classmates can also influence the students’ anxiety level (Gardner, 2010). According to the researcher’s discussion with the Chinese teacher from the target class, the researcher found out that the students from target class sometime feel anxiety in learning language because they do not want to disappoint their people from their surroundings, or they just want those people to be proud of what the students can do. Similarly, the researcher also found out that the more the parents put pressure on the students to get better results in their academic achievement, the more the students feel anxiety in learning language. The way the teachers teach and instructions that the teachers use also can influence the level of anxiety that the students feel (Ushioda & Dörnyei, 2011).

According to Gardner (2010), students’ language anxiety and academic achievement are correlated negatively. If the students feel anxiety in their language learning situation, the academic achievement of the students can decrease and similarly the academic achievement of the students improves as a result the students’ anxiety in the language is also reduced (Gardner, 2005). Similarly, the finding of the current research indicated that the language anxiety in learning Chinese as a foreign language is negatively correlated with their Chinese academic achievement. When the students have higher level of anxiety in using Chinese language, they will also feel anxiety to go Chinese class and the less they use Chinese language in public or in their daily life.

4.3. Recommendations

The researcher provides some recommendations to the teachers, students, school administer, parents and future researchers.

4.3.1. Teachers

The teachers should be aware of the different factors which contribute to the student’s learning motivation and at the same time which factors can influence their academic achievement. The teachers also should become more aware of how students’ language anxiety will affect students’ learning motivation, which in turn affects students’ academic performance. Therefore, with regards to knowing students’ motivation can have effect to the improvement or development of their learning Chinese as a foreign language.

Therefore, the researcher recommends that the teachers should use different teaching methods to help students to reduce their pressure and lead students to be more confident in using Chinese as a foreign language. If teachers have the right attitude towards their students by providing a positive learning environment, they can also help to lower student learning anxiety and so improve the students’ academic achievement. This will enhance motivation to learn better and provides students with greater opportunities for success.

4.3.2. Students

The findings of the research have indicated that self- The researcher recommends that the students is that students should have less anxiety in learning Chinese as a foreign language and not to be afraid to tell their teacher if they found some difficulties in their lessons. Students should know their strengths and weaknesses. If they know their strengths in learning Chinese as a foreign language, all they need to do is to focus on their weaknesses in order to get better outcomes. Students should not be afraid to ask
questions and if they cannot understand, always ask questions.

4.3.3. School Administrators

The school should be aware that the different factors which contribute to the student’s learning motivation and language anxiety, at the same time which factors can influence their academic achievement. The school administrators should working together with the people around the students and parents can help the students to improve their education since the school is responsible for the development of the students’ learning and the achievement of the school. Therefore, the researcher recommends that the school administrators is that they can encourage the teachers by supporting the teachers’ need and encourage the teachers to find some ways to relieve students’ learning anxiety. Since the findings of this study stated the importance of language anxiety in learning Chinese as a foreign language, administrators can also set in-school in-service training to help teachers better implement teaching in the classroom. In addition, the school administrators should also provide better learning and teaching environments for the teachers and students. The administrators should also plan some events concerning with Chinese culture so that the students have more opportunity to use Chinese language.

4.3.4. Parents

Based on the findings, parents will realize that with their active guidance and effective encouragement toward the students can help the students to be highly motivated and becomes successful learners in Chinese as a foreign language. Therefore, the researcher would like to recommend to the parents of the students is that they support the students and put less pressure to the students, and care about children’s difficulties that they can face in learning and psychological pressure. The parents also should make better communication with their children which will help children learn Chinese as a foreign language more actively.

4.3.5. Future Researchers

This was a quantitative study, and it was designed to investigate the relationship between Grade 6 students’ motivation and their language anxiety for learning Chinese as a foreign language with Chinese academic achievement at a Thai government school in Trang. Therefore, this study findings cannot be generalized to all students at a Thai government school in Trang. Based on this study, the researcher would like to recommend future researchers to conduct research design using other motivational frameworks that can be more inclusive. The future researchers also should conduct research in other variables that can have effects on students’ academic achievements in learning Chinese as a foreign language. This study findings may assist future researchers who are interested in researching this area and provide the relevant data and research inspiration to help further research.

5. Conclusions

From the research findings, the following conclusions were drawn.

5.1. Research Objective 1

The finding of this research objective 1 indicated that a slightly low motivation level in Grade 6 students at a Thai government school in Trang, Thailand indicated that students have slightly high level of desire to learn Chinese as a foreign language while motivation intensity, and attitude toward learning Chinese as a foreign language also have slightly low levels. From the findings, it can also conclude that students have high desire to learn but their attitude toward the language was slightly low so that their motivation in learning language is also low.

5.2. Research Objective 2

The finding of this research objective 2, to identify the level of language anxiety for learning Chinese as a foreign language of Grade 6 students at a Thai government school in Trang, Thailand indicated that students’ shows slightly low language anxiety for learning Chinese as a foreign language and slightly high level of anxiety for using Chinese as a foreign language. From the finding, it can be concluded that the students have more anxiety to use the language than learning the language. Since the students have less confidence in their language ability, they are scared to use that language.

5.3. Research Objective 3

The finding of this research objective 3, to identify the level of Chinese academic achievement for learning Chinese as a foreign language of Grade 6 students at a Thai government school in Trang, Thailand indicated that Grade
6 students’ shows high and excellent Chinese academic achievement scores for learning Chinese as a foreign language. From the finding, it can conclude that the students trying so hard to learn the language so that their achievement scores are high and excellent.

5.4. Research Objective 4

The finding of the last research objective, to identify whether there is a significant relationship between Grade 6 students’ motivation and their language anxiety for learning Chinese as a foreign language with Chinese academic achievement at a Thai government school in Trang indicated that, there was very weak relationship between Grade 6 students’ motivation and their language anxiety for learning Chinese as a foreign language with Chinese academic achievement at a Thai government school in Trang. From the finding, it can conclude that the students do not have high level of motivation and also have low level of anxiety, but their achievement scores are high. The students’ motivation and language anxiety for learning Chinese as a foreign language explained 2.3% of the variances with Chinese as a foreign language academic achievement but the rest 97.7% of the variance of Chinese academic achievement is explained by other factors such as students’ attitude toward the language, parental encouragement, students’ attitude toward their teachers or the lessons that are created by the teachers, learning environments, students’ self-belief for learning language. According, it can also be concluded that it is very import for the for the teachers, the students, school administrators and parents to understand the students’ academic achievement can increase by a least 2.3% of students’ motivation and language anxiety for learning Chinese as a foreign language.

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The Long Run Relationship of Major Exchange Rate Return Volatility on Sectoral Stock Market Return Volatility: 
A Case Study of Financial Sectors in Thailand

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Abstract
The main objective of the study is to investigate the relationship of return volatilities of major exchange rates on sectoral stock market return volatilities in Thailand. This study used daily time series data from January 2018 to January 2021. In addition, the study applied the Autoregressive integrated moving average model (ARMA), the Exponential Generalized Autoregressive Conditional Heteroscedasticity (EGARCH), the Threshold Autoregressive Conditional Heteroscedasticity (TARCH), and Granger Causality analysis to measure the long run effect of the volatilities of exchange rates to sectorial stock market indexes. The result of this study shows that the volatility of US Dollar exchange rate has strongly relationship on the volatility of banking sector index. The volatilities of EURO, Japanese Yen have significant relationship on the volatility of banking sector index. The volatility of Finance & Securities sector, and those exchange rate volatilities should be concerned when investors make their investment decisions.

Keywords: exchange rate return volatility, sectorial stock market return volatility, ARMA, EGARCH, TARCH, Granger Causality Test

1. Introduction
1.1 Introduction of research
The finance sector is a sector of the economy comprised of businesses and institutions that provide financial services to businesses. A successful economy has a strong financial sector. The stock market is highly meaningful in analyzing the economic state of any country since higher stock returns generally mean more profit to businesses. Volatility in stock return is generally used as a risk measurement and such volatility in stock return is commonly used in areas of asset pricing and portfolio selection. The volatility of an exchange rate is measurement of its fluctuations. Since volatility means how much the exchange rate will change in each period. It is also used as a risk measurement in foreign exchange market. The exchange rate volatility is possibly an important factor that determines the level of volatility in stock return of companies which usually involve with several transactions through international financial flows. The relationship between exchange rate volatility and stock market volatility has been studied in several periods and become more important because of more concern about risk management of investors and firms. The selected finance sector is also one of the important sectors of the Thai stock market comprising of business and institutions that provide financial services to business. Risk of stocks in financial sector can also reflect the risk in whole business sector and the whole economic condition of the country. The analysis of these business interrelationships will uncover the opportunities for investors to benefit from their stock market investments. Therefore, it is become interesting to search at these financial market interactions and integration.

1.2 Research Objectives
This study aims to study the long run relationship of exchange rate return volatility on sectoral stock market return volatility in Thailand. The research selected exchange rate return volatilities of Euro, Pound sterling, US dollar, Japanese Yen, and Chinese Yuan (against Thai Baht). The selected sectors of the stock market return volatility are Banking, Finance & securities sector, and Insurance sector of the stock exchange of Thailand. The study used daily data
between January 2018 to January 2021 and employed the Autoregressive integrated moving average model (ARMA), Exponential generalized autoregressive conditional heteroscedastic (EGARCH), and Threshold autoregressive conditional heteroscedastic (TARCH) model for volatility estimation. The Granger Causality test was used to test the long run relationship between the volatility of exchange rates and stock market return.

2. Literature Review

Perera (2016) adopted the daily time series data of stock market ASPI returns of the Colombo stock exchange (CSE) and exchange rates from January 2010 to December 2015. The research also applied the General Autoregressive Conditional Heteroscedasticity (GARCH) model to determine the effect of exchange rate volatility on stock market return volatility. The research found that the volatility of the Euro exchange rate significantly and positively affects ASPI return. In general, the study’s findings show that exchange rate volatility is one of the determinants of stock market volatility.

Khan et al. (2016) focused on the volatilities of exchange rate and stock market in India. They applied Phillips Perron (PP) unit root test and GARCH model to measure the volatility of the Bombay Stock Exchange (BSE-100 Index) and exchange rate of Indian Rupee to US Dollar. They used monthly time series data from January 1992 to February 2013 and found that the significant relationship between exchange rate volatility and variability of stock market prices in India from Granger causal analysis.

The study of Kennedy & Nourizad (2016) focused on the impact of the volatility of the US dollar against Euro on the stability of the US stock market while controlling for many drivers of stock volatility. They used GARCH (1,1) model and weekly data from 01 January 1999 to January 25, 2010, and they found that the 9/11 terrorist attack, bear markets, fluctuations in jobless claims, and negative equity market returns increase financial volatility. There are no clear results of the impact from the M2 change or changing in federal funding. Finally, they found that the exchange rate volatility has a positive impact on stock returns volatility when controlling the main drivers of financial instability.

The study of Jimoh & Benjamin (2020) focused on the effect of cryptocurrencies (Bitcoin and Ethereum) return volatility on Nigerian stock price and exchange rate return volatility. This research adopted the data from August 2015 to December 2019, and applied GARCH (1,1), EGARCH (1,1), and Granger Cause method to test the response of exchange rate volatility and stock market volatility from cryptocurrency prices. The result of this research indicates that the stock market price is more affected by the volatility of cryptocurrency values than the exchange rate in Nigeria. The Granger Causality test also shows the one-way effect from both cryptocurrencies to stock market index in Nigeria.

Adjasi et al., (2011) studied the relationship between stock market returns and exchange rate movements in seven African countries. The research used vector autoregressive (VAR) cointegration and impulse response model to test the relationships between stock prices and exchange rates in both long-run and short-run. The Cointegration analysis shows the significant long-run relationship between stock prices and the exchange rate in Tunisia, and the short-run relationship is also confirmed by the error correction model. Impulse response analyses show that the exchange rate shocks could increase stock returns in Egypt and South Africa, but reduce the stock returns in Ghana, Kenya, and Mauritius.

The study of Mishra (2004) tested on the relationship between stock market return, exchange rate return, demand for money, and interest by using Granger Causality test and Vector Autoregression model. From the Granger test, there is no relationship between the exchange rate return and stock return. However, the Vector Autoregressive model shows that stock return, exchange rate return, the demand for money and interest rate are related. In addition, the forecast error variance decomposition evidenced that exchange rate return affects the demand for money, interest rate causes exchange rate to change, and exchange rate affects the stock return.

Exchange rate volatility can also affect the currency policy through the impact on the domestic stock market. Subair & Musa Salihu (2018) found that exchange rate volatility has negative impact to the Nigerian Stock market from the analysis of GARCH and Error Correction model. Lawal & Ijirshar (2013) also examined the relationship between exchange rate volatility and stock market performance in Nigeria and found the negative relationship between them. Lim & Sek (2014) found the relationship between exchange rate volatility and stock return in emerging Asian countries and found bi-directional causality between exchange rate volatility and stock return in Indonesia, Korea, and Thailand.

from the unit root test shows that both exchange rate and the Nifty returns are stationary at the level. The relationship between Nifty returns and exchange rates was found to be negative. The Granger Causality test also found a significant unidirectional relationship between Nifty returns and exchange rate.

3. Research Methodology
3.1 Conceptual Framework

![Figure 1: Conceptual Framework of the study](image)

This study tested the impact from exchange rate return volatilities of USD Dollar, Pound, Euro, Japanese Yen and Chinese Yuan (against Thai Baht) to the return volatilities of financial sector indexes, including Banking sector, Finance & securities sector, and Insurance sector, of the Stock Exchange of Thailand.

3.2 Research Model

The effect of exchange rate volatility on stock market return volatility is empirically tested in this paper. This study uses the daily market values of financial sector indexes and daily exchange rate values of US Dollar, Euro, Pound, Japanese Yen, and Chinese Yuan above 37 months beginning in January 2018 and ending in January 2021. Then the data were tested for stationarity by the unit root test (Augmented Dicky-Fuller test). The research used the Granger Causality test to check the long-run effect of exchange rate return volatility to sectorial stock market return volatility. The test model is showed as follow

\[
VSR_t = \alpha_0 + \beta_1 VEXR_{t-1} + ... + \beta_n VEXR_{t-n} + \alpha_1 VSR_{t-1} + ... + \alpha_n VSR_{t-n} + u_t
\]

where VSR is the volatility of the selected sector stock market return (estimated from GARCH-typed model), VEXR is the volatility of the selected exchange rate return (estimated from GARCH-typed model), t is day t, and n is selected lag day (1 to 5) for the Granger Causality Test.

3.3 Research Hypotheses

For testing the relationship between exchange return volatility and sectorial stock market return volatility from the Granger Causality test model (as show in previous section), the null hypothesis (Ho) represents the condition that every Beta (\(\beta_1\) to \(\beta_n\)) equals to zero, the alternative hypothesis (Ha) is that at least one of the Betas is not equal to zero. There are 3 independent variables (3 stock market sectors) and 5 dependent variables (5 exchange rates) In total, 15 hypotheses were built to test the causality. The following is the example of the test hypothesis.

Ho: Exchange rate return volatility does not have a significant long-run relationship (or Granger Cause) to the sectorial stock market return volatility.

Ha: Exchange rate return volatility has a significant long-run relationship (or Granger Cause) to the sectorial stock market return volatility.

4. Data Source, Data Analysis and Discussion of Results

4.1 Data Sources

The Stock Exchange of Thailand (SET) provided the daily market value of the sectorial stock market indexes, while the daily exchange rate values were obtained from the Bank of Thailand. Return volatilities were estimated by using the most fitted ARMA and GARCH typed models (including EGARCH and TARCH model).

4.2 Data Analysis and Discussion of Results

4.2.1 Unit Root Test Result

The Augmented Dickey-Fuller (ADF) test was used for test the stationary condition of the time serie data. The result from Table 1 shows that all sectorial stock return indexes and exchange rate returns are stationary. They can be used to estimate the return volatilities in the next step.

<table>
<thead>
<tr>
<th>Variable</th>
<th>t-statistic</th>
<th>p-value</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banking</td>
<td>-8.835989</td>
<td>0.0000</td>
<td>Stationary</td>
</tr>
<tr>
<td>Finance &amp; Securities</td>
<td>-28.31155</td>
<td>0.0000</td>
<td>Stationary</td>
</tr>
</tbody>
</table>
4.2.2 Statistical Treatment

After the unit root test, all stock return indexes and exchange rate returns can be used with ARMA and GARCH-typed models to estimate the conditional variances or volatilities. The Box-Jenkins method, which employs autoregressive moving average (ARMA) model, is widely used in many fields of time series forecasting. The research estimated and selected the best ARMA model for each variable and used that model to estimate and find the most fitted GARCH-typed model.

The candidate GARCH-typed model used to estimate the volatility are ARCH (p), GARCH (p,q), TGARCH (p,q) and EGARCH (p,q) models. The best ARMA and GARCH typed model for each variable are reported in Table 2.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Best ARMA model</th>
<th>Best GARCH-typed model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banking Sector Index</td>
<td>MA(5)</td>
<td>EGARCH(4,4)</td>
</tr>
<tr>
<td>Finance &amp; Securities Sector Index</td>
<td>MA(5)</td>
<td>EGARCH(2,1)</td>
</tr>
<tr>
<td>Insurance Sector Index</td>
<td>MA(1)</td>
<td>EGARCH(2,1)</td>
</tr>
<tr>
<td>Exchange Rate Baht/US Dollar</td>
<td>AR(1)</td>
<td>EGARCH(3,1)</td>
</tr>
<tr>
<td>Exchange Rate Baht/EURO</td>
<td>ARMA(1,2)</td>
<td>TARCH(1,1)</td>
</tr>
</tbody>
</table>

Table 2: Statistical Treatment

4.2.3 Results of Granger Causality Test

This study used the Granger Causality test to examine the long-run relationship between the exchange rates and the financial sector market indexes in Thailand from January 2018 to January 2021. This paper applied 5 daily lags to examine the time lag or long-run relationship of exchange rate return volatility on Thai financial sector stock market returns. The levels of significance used in this analysis are 0.05 or 5%. When the significance level (or p-value) of at least one lag test is less than 0.05, the null hypothesis will be rejected, and it means that the independent variable has a significant long-run effect on the dependent variable. Under each testing hypothesis, more significant results of lag relationships refer to stronger relationship between variables. Table 3 shows the result of the Granger Causality test, based on the selected 5 daily lag tests.
The researcher discovered four hypotheses that failed to reject Ho based on the Granger Causality test results. The results show that the return volatility of the Euro, Pound, Japanese Yen, and Chinese Yuan exchange rates has no major log-run relationship with the return volatility of the Insurance sector index of Thailand’s stock exchange. In this study, five currencies have a long-run relationship with the return volatility of the Banking sector index, which is the exchange rate return volatility of the US Dollar, Euro, Pound, Japanese Yen, and Chinese Yuan. On the other hand, the exchange rate return volatility of the US Dollar, Euro, Pound, Japanese Yen and Chinese Yuan has a
significant long-run relationship with the return volatility of the Thai stock exchange’s Finance & Securities market index.

5. Discussion, Conclusion, and Recommendation

Firstly, the Banking sector has significantly relationship with the volatility of the US Dollar, Euro, Chinese Yuan, and Japanese Yen, but weakly affected by the volatility of the Pound exchange rate. Exchange volatility can influence banking sector both directly and indirectly. Because bank usually involves in exchange related activities, exchange rate volatility will have the direct impact on the bank’s performance and its stock price. When the volatility of the exchange rate is changing high rate and the bank sector will also receive high rate. Secondly, the Finance & Securities sector has significantly relationship with the volatility of all exchange rates. The previous research results of Dai et al., (2012) learned that the exchange rate is the significant determinant of the exchange rate risk faced to finance & securities sectors.

Finally, the insurance sector has only relationship with the volatility of the US Dollar exchange rate return, and the relation seems to be weak. Insurance companies may have only small parts of its businesses with the exchange rates. They may involve in some diversified investments that relate to the exchange rate of US Dollar. Therefore, volatilities of US Dollar and other exchange rates didn’t have much impact on the insurance business. The overall result from this research shows that the investors who invest in companies listed in the Banking sector and Finance & Securities sector of the Stock Exchange of Thailand must concern on the volatility or the risk level of the major exchange rates with Thai Baht. Investors who want to invest in the Insurance sector may concern only on the US Dollar exchange rate.

References:


A Comparative Study of Chinese Teachers’ Expectations of Students’ Development Between Selected Public and International Kindergartens

Yingting Cai¹
Orlando González²

Abstract

Purpose: This study was aimed at comparing Kindergarten 3 teachers’ expectations of students’ development between selected public and international kindergartens in Nantong City, Jiangsu Province, China. Research design, data and methodology: Five public kindergartens and five international kindergartens were conveniently chosen for this study, and a total of 198 teachers (113 teachers from public and 85 teachers from international kindergartens) participated in it. Data were collected using the Teachers’ Expectations of Students’ Development Questionnaire (TESDQ), whose design was based on a questionnaire originally developed by Tremblay et al. in 2008. This research followed a comparative research design, and statistical analysis was performed using independent samples t-tests and a multivariate analysis of variance (MANOVA). Results: Significant differences were found between the Kindergarten 3 teachers from the selected public kindergartens and those from the selected international kindergartens, favoring the latter group that was found to have significantly higher levels of teachers’ expectations of overall students’ development, as well as of teachers’ expectations of students’ sociocognitive development, students’ motor development, and students’ literacy and numeracy development. Conclusions: The results obtained by this study indicate that being working in a particular type of kindergarten in Nantong City, Jiangsu Province, China, appears to have a statistical effect on the Kindergarten 3 teachers’ expectations of students’ development.

Keywords: Kindergarten Education; Teachers’ Expectations, Students’ Development, Comparative Study, Chinese Teachers

JEL Classification Code: C12, I20, I21, L33, N35

1. Introduction

In the Chinese education system, the purpose of pre-school education is the acquisition of a body of knowledge and skills by the students, learning with their own characters and being led by their teachers, who must consider students’ development in general (Wang, 2011; Zhang, 2011). Particularly in kindergarten level, teachers should take good care of their students in daily life and must be knowledgeable enough about what constitute indicators of students’ development at a particular age, in order to make sure they adapt to the absence of their parents.

In China, children in Kindergarten 3 (K3) are basically 5 and 6 years old, which is the time for children to consolidate their development of particular sociocognitive, motor, and literacy and numeracy skills (Bigras et al., 2013; Rubie-Davies, 2010; Tremblay et al., 2008). For example, during their time enrolled in K3, Chinese children will consolidate their achievement of sociocognitive developmental skills (e.g., the ability to distinguish between acceptable and unacceptable behaviors, or to count to 5 on their own); of motor developmental skills (e.g., the ability to catch a tennis ball in one hand, or to make a bow with their shoelaces); and of literacy and numeracy developmental skills (e.g., the ability to write their address correctly, or to recite entire Chinese characters; Bigras et al., 2013).

Teachers and responsible caregivers might feel more self-efficacious when they are more familiar with children’s development stage in school (e.g., Rubie-Davies, 2010; Tremblay et al., 2008). A large number of studies (e.g., Piaget, 1973; Rubie-Davies, 2010; Woolfolk & Hoy, 1990) have found that teachers with high self-efficacy are more likely to contribute to help children according to their own development stage in an appropriate way.

According to Vygotsky (1978), teachers should know what knowledge and skills students have developed by certain ages, and then use that knowledge to lead students to learn and take care of themselves through teaching them contents and suitable activities for their development stage. In Jiangsu Province, China, kindergarten teachers working in public kindergartens must take and pass an examination in order to take the job position, and most of them have taught in kindergarten level for several years, so they have a rich teaching experience. On the other hand, kindergarten
teachers working in international kindergartens in Jiangsu Province, China, are not all majored in preschool education, although most of them have teacher certifications and seemingly provide more different activities for their students during the learning process. Based on the similarities and differences observed by the researchers between public and international kindergarten teachers in Jiangsu Province, China, they decided to conveniently choose 10 kindergartens for this study, five public and five international kindergartens, targeting all the teachers who were working full-time at K3 level at these institutions. Then, by collecting information on K3 teachers’ expectations of students’ development, the researchers can know whether the teachers overestimate, underestimate, or accurately estimate the children’s actual abilities at school, in terms of sociocognitive, motor, and literacy and numeracy development (Bigras et al., 2013; Tremblay et al., 2008).

2. Research Objectives

The researchers designed and conducted a comparative study to address the following objectives on the selected kindergartens located in Nantong City, Jiangsu Province, China.

1. To determine the level of Chinese K3 teachers’ expectations of students’ development in selected public kindergartens.
   1.1. To determine the level of Chinese K3 teachers’ expectations of students’ sociocognitive development in selected public kindergartens.
   1.2. To determine the level of Chinese K3 teachers’ expectations of students’ motor development in selected public kindergartens.
   1.3. To determine the level of Chinese K3 teachers’ expectations of students’ literacy and numeracy development in selected public kindergartens.

2. To determine the level of Chinese K3 teachers’ expectations of students’ development in selected international kindergartens.
   2.1. To determine the level of Chinese K3 teachers’ expectations of students’ sociocognitive development in selected international kindergartens.
   2.2. To determine the level of Chinese K3 teachers’ expectations of students’ motor development in selected international kindergartens.

3. To determine whether there is a significant difference in Chinese K3 teachers’ expectations of students’ development between selected public and international kindergartens.

4. To determine whether there is a significant difference in Chinese K3 teachers’ expectations of students’ development (in terms of sociocognitive development, motor development, and literacy and numeracy development) between selected public and international kindergartens.

3. Theoretical Framework

There were two main theories guiding and supporting this research: the cognitive learning theory and the constructivist learning theory.


Piaget’s (1973) cognitive learning theory, also known as cognitive development theory, is a theoretical model that assumes that the foundation of learning for children is the construction and acquisition of knowledge through experiences by relying on cognitive structure, which is given by children’s age and development stage. Piaget (1973) considered that children can do things according to their age and cognitive structure. These cognitive structures will change and be enlarged with age, through the processes of assimilation, accommodation and correction. The present study was about K3 teachers’ expectations of their students’ development, who were children of 5 and 6 years of age. Therefore, this study dealt with the second stage of Piaget’s (1973) theory, preoperational thought (from about 2 to 6-7 years of age), in which children’s symbolic and semiotic functions begin to appear and rapidly develop, through activities that equip children with signs and symbols in the forms of language and mental imagery, such as symbolic play and imitation.

3.2. Constructivist Learning Theory

The constructivist learning theory by Vygotsky (1978), also known as theory of social constructivism, is a theoretical model that assumes that the meaning of reality is formed and reformed through social processes. In this
theory. Vygotsky focused more on learning on social contexts, emphasizing the importance of such contexts for learners’ cognitive development to learn more about culture and concepts. According to this theory, the idea of “zone of proximal development” (ZPD) is fundamental. ZPD refers to the point in an individual’s development stage in which he or she requires the assistance from a teacher or peer in order to reach the next level of learning, knowledge and skills.

According to Vygotsky (1978), children around 7 years old (i.e., like the K3 students whose development the participants of this study expressed their expectations) are able to internalize their culture’s language, rely on inner speech, increasingly think in words, use words to solve problems, and go to teachers and parents for help when they meet something they cannot deal with it by themselves.

4. Conceptual Framework

The conceptual framework of this study is depicted in Figure 1. The independent variable of this study was the type of kindergarten (which had two attributes: public kindergartens and international kindergartens), while the dependent variable was given by the Kindergarten 3 teachers’ expectations of students’ development.

![Figure 1: Conceptual Framework of This Study](image)

5. Research Hypotheses

The researchers designed and conducted a comparative study to address the following hypotheses.

1. There is a significant difference in Chinese K3 teachers’ expectations of students’ development between selected public and international kindergartens, at a significance level of .05.

2. There is a significant difference in Chinese K3 teachers’ expectations of students’ development (in terms of sociocognitive development, motor development, and literacy and numeracy development) between selected public and international kindergartens, at a significance level of .05.

6. Literature Review

In this section, some previous studies related to the research variables addressed in this study are reviewed.

Gill and Reynolds carried out a study in 1999 to assess the influence of parents’ and teachers’ expectations of their children’s development and academic outcomes on the children’s perceptions of those expectations, as well as of their academic outcomes in Grade 6. The participants were a total of 712 Grade 6 children from low-income African American communities in Chicago, United States. The results revealed that when the children perceive that their parents and teachers hold such high expectations on their development and academic outcomes, children tend to set and meet high academic standards for their own education and make efforts toward meeting those high standards. In particular, a direct, strong and significant relation between teachers’ and parents’ expectations and students’ reading and mathematics development and achievement was found.

Benner and Mistry carried out a study in 2007 to examine the independent effects of adult (i.e., teachers and parents) expectations on youth’s development outcomes to explain the relationship between adult expectations and students’ self-perceptions of development. An ethnically diverse sample of 522 American low-income, urban youth, with ages ranging from 9 to 16 years old, participated in this study. From the data analysis, it was found that adults’ expectations had a significant influence on youth’s beliefs in their academic competence and outcomes. In other words, teachers and parents having high expectations on youth’s development outcomes had a significantly positive effect on youth development and directly influenced students’ self-perceptions of achievement and competence, whereas parents and teachers having low expectations on youth’s development outcomes had a negative effect.

Crano and Mellon carried out a study in 1978 on the causal influence between teachers’ expectations and
children’s academic development through a cross-lagged panel analysis. The participants were 4300 British children aged 7, all beginning elementary school, and the study lasted 4 years. The results indicated that teachers’ expectations of children’s social development seemed to exert a greater effect on later academic performance than those teachers’ expectations related specifically to the children’s academic potential. Correlational analyses performed for this research also indicated that teachers’ expectations caused children’s performance to an appreciable extent.

A study carried out by Rubie-Davies in New Zealand, in 2010, compared how teachers with very high or very low expectations for all their students would judge their students’ end-of-year development. The participants of this study were six high expecting teachers and three low expecting teachers. All the teachers participating in this study were asked to rate their students on 15 student characteristics, including students’ cognitive engagement, classroom behavior, relationships with others, and participation in class. It was found that high expecting teachers rated their students significantly higher than low expecting teachers did, in relation to every rating on the scale of 15 student characteristics. Then, high expecting teachers had significantly higher expectations of their students’ development than the low expecting teachers. Also, through class observations, it was confirmed that high expecting teachers were better at communicating with their students, discussing knowledge contents, dealing with problems together, providing feedback in time, and managing behaviors positively than those teachers with low expectations of their students’ development.

A study on parental expectations of their children’s development was carried out by Bigras et al. in 2013, aiming toward validating a questionnaire designed to measure parental expectations of their children’s development, originally designed by Tremblay et al. (2008). The participants of this study were 363 parents living in Montreal and Montérégie, Canada, including 204 mothers and 159 fathers of children aged 4 and 5 years old. The findings of this study indicated that, compared to parents with low expectations of their children’s development, those parents with high expectations could give their children a little bit harder tasks to complete, which improved their children’s abilities and development. Also, when parents had higher expectations of their children’s socio-cognitive, motor, or literacy and numeracy development, it was found that their children had higher scores on the Wechsler Preschool and Primary Scale of Intelligence (WPPSI).

7. Methodology/Procedure

In this section, details on the study’s population, sample and research instruments are provided.

7.1. Population and Sample

There are 30 public and 10 international kindergartens offering Kindergarten 3 in Nantong City, Jiangsu Province, China. From them, and forced by proximity due to COVID-19-related measures, the five public and five international kindergartens with the largest number of K3 teachers were conveniently chosen by the researchers, trying to keep the sample as representative as possible. From this convenience sample of 10 institutions, all the teachers working in K3 were asked to fill in the study questionnaire. The teachers’ population and sample in the targeted schools was distributed as follows: 113 teachers from the target public kindergartens; and 85 teachers from the target international kindergartens.

7.2. Research Instrument

This study was conducted using the Teachers’ Expectations of Students’ Development Questionnaire (TESDQ), based on an instrument originally developed by Tremblay et al. in 2008. The original item wording was revised and adapted when needed for cultural suitability, in order to ensure that the items were appropriate to the Chinese context, and then were translated into Mandarin Chinese by the first author. Then, the Chinese version of the TESDQ was revised, validated and approved by three Chinese professionals on general and pre-school education, in order to ensure the translation validity.

The TESDQ (see Appendix 1) has 39 items distributed in three subscales: sociocognitive development (Items 1-18), motor development (Items 19-31), and literacy and numeracy development (Items 32-39). The target teachers were asked to rate their expectations of the extent to which Kindergarten 3 students were able or unable to engage in certain activities, using a 6-point Likert-type scale (1 = totally unable, 2 = mostly unable, 3 = somewhat unable, 4 = somewhat able, 5 = mostly able, 6 = totally able).

The Cronbach’s alpha reliability test was carried out for the overall and subscales of the TESDQ, for internal consistency reliability analysis. As a result, good internal consistency reliability was found for all the three subscales, with Cronbach’s alphas ranging from .83 to .89, and a Cronbach’s alpha of .92 for the total score (see Table 1).
Table 1: Reliability Coefficients of the TESDQ, Reported by Bigras et al. (2013) and the Current Study

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Bigras et al. (2013)</th>
<th>Current study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sociocognitive development</td>
<td>.90</td>
<td>.89</td>
</tr>
<tr>
<td>Motor development</td>
<td>.82</td>
<td>.83</td>
</tr>
<tr>
<td>Literacy and numeracy development</td>
<td>.83</td>
<td>.85</td>
</tr>
<tr>
<td>Overall</td>
<td>Not reported</td>
<td>.92</td>
</tr>
</tbody>
</table>

Table 2: Mean Scores, Standard Deviations and Interpretations of K3 Teachers’ Expectations of Students’ Development in the Selected Public and International Kindergartens Chosen for This Study

<table>
<thead>
<tr>
<th>Variable</th>
<th>Public</th>
<th>International</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers’ expectations of students’ development</td>
<td>4.38</td>
<td>4.85</td>
</tr>
<tr>
<td>Teachers’ expectations of students’ sociocognitive development</td>
<td>4.76</td>
<td>5.10</td>
</tr>
<tr>
<td>Teachers’ expectations of students’ motor development</td>
<td>4.07</td>
<td>4.57</td>
</tr>
<tr>
<td>Teachers’ expectations of students’ literacy and numeracy development</td>
<td>4.05</td>
<td>4.73</td>
</tr>
</tbody>
</table>

8. Research Findings

From the analysis of the collected data, the following findings were obtained.

8.1. Findings From Research Objective 1

Regarding to this research objective, the following findings were obtained, considering an interpretation scale of 1-6, with higher scores being considered an overestimation of child’s abilities (see Table 2).

- The level of K3 teachers’ expectations of students’ development in selected public kindergartens in Nantong City, Jiangsu Province, China, was somewhat high.
- The level of K3 teachers’ expectations of students’ sociocognitive development in selected public kindergartens in Nantong City, Jiangsu Province, China, was high.
- The level of K3 teachers’ expectations of students’ motor development in selected public kindergartens in Nantong City, Jiangsu Province, China, was somewhat high.
- The level of K3 teachers’ expectations of students’ literacy and numeracy development in selected public kindergartens in Nantong City, Jiangsu Province, China, was somewhat high.

8.2. Findings From Research Objective 2

Regarding to this research objective, the following findings were obtained, considering an interpretation scale of 1-6, with higher scores being considered an overestimation of child’s abilities (see Table 2).

- The level of K3 teachers’ expectations of students’ development in selected international kindergartens in Nantong City, Jiangsu Province, China, was high.
- The level of K3 teachers’ expectations of students’ sociocognitive development in selected international kindergartens in Nantong City, Jiangsu Province, China, was high.
- The level of K3 teachers’ expectations of students’ motor development in selected international kindergartens in Nantong City, Jiangsu Province, China, was high.
international kindergartens in Nantong City, Jiangsu Province, China, was high.
- The level of K3 teachers’ expectations of students’ motor development in selected international kindergartens in Nantong City, Jiangsu Province, China, was high.
- The level of K3 teachers’ expectations of students’ literacy and numeracy development in selected international kindergartens in Nantong City, Jiangsu Province, China, was high.

8.3. Findings From Research Objective 3
The results from the hypothesis testing revealed the following findings, which were obtained from performing an independent samples t-test on the collected data.
- It was found that K3 teachers in selected international kindergartens had significantly higher expectations of their students’ development than their counterparts working in selected public kindergartens in Nantong City, Jiangsu Province, China, \( t(196) = -6.76, p < .001 \).

8.4. Findings From Research Objective 4
The results from the hypothesis testing revealed the following findings, which were obtained from performing a one-way 2 (K3 teachers in public kindergartens and K3 teachers in international kindergartens) × 3 (teachers’ expectations of students’ sociocognitive development, teachers’ expectations of students’ motor development, and teachers’ expectations of students’ literacy and numeracy development) multivariate analysis of variance (MANOVA) on the collected data.
- It was found that the expectations of students’ sociocognitive development of K3 teachers in selected international kindergartens were significantly higher than the ones held by their counterparts working in selected public kindergartens, \( t(196) = -4.39, p < .001 \).
- It was found that the expectations of students’ motor development of K3 teachers in selected international kindergartens were significantly higher than the ones held by their counterparts working in selected public kindergartens, \( t(196) = -5.62, p < .001 \).
- It was found that the expectations of students’ literacy and numeracy development of K3 teachers in selected international kindergartens were significantly higher than the ones held by their counterparts working in selected public kindergartens, \( t(196) = -6.47, p < .001 \).

9. Discussion
In this section, the findings obtained from this study are discussed, placing them in context with previous studies. The discussion is organized by variables.

9.1. K3 Teachers’ Expectations of Students’ Development in Selected Public and International Kindergartens
In this study, it was found that K3 teachers participating in this study, from both kind of kindergarten, had expectations of students’ development (both overall and in terms of students’ sociocognitive development, students’ motor development, and students’ literacy and numeracy development) that were either somewhat high or high. According to a previous study by Benner and Mistry (2007), teachers’ and parents’ expectations on youth’s development outcomes were also reported to be high, similar to the findings of the current study. In addition, a study by Crano and Mellon (1978) in the Great Britain also reported results showing that teachers’ expectations of children’s development significantly exceeded children’s performance, which was similar to the findings of the current study. Other researchers (e.g., Benner & Mistry, 2007; Gill & Reynolds, 1999; Rubie-Davies, 2010), reported that in the educational practice, teachers have different expectations for children, and those will influence children in corresponding attitudes and ways, intentionally or unintentionally, so as to produce different educational effects on children, which was in line with the results obtained by this study. The results of this study are also aligned with the findings of Weinstein et al. (2004), who conducted a study on teachers’ behaviors and found that teachers often provided negative emotional information to poor students, and students were usually aware of this communication, but teachers generally did not notice that they were doing so. Thus, if K3 teachers could give positive information to their students and explicitly show that they believe in them, students would behave and develop better as their teachers’ expectations.

According to the data, it can be seen that K3 teachers had high expectations of their students’ development in the selected public and international kindergartens. In general, most of K3 teachers seemed have more expectations on students’ learning and accumulation of knowledge (Wang, 2011). These results are in line with one of the previous studies by Rosenthal and Jacobson
(1998), who also analyzed that the treatment of deep expectations and assumptions provided to be the experimental group resulted in a significant improvement in their intelligence compared to the comparison group. Similarly, the result in this study aligns with Zhang (2011), who indicated that international teachers’ professional development is the key factor affecting children’s development and must master the law of children development and children’s age characteristics to help them grow up. As a whole, in different types of kindergartens, K3 teachers’ expectations of their students’ development were significantly different.

9.2. K3 Teachers’ Expectations of Students’ Sociocognitive Development in Selected Public and International Kindergartens

In this study, the overall of K3 teachers had high expectations in selected public and international kindergartens of their students’ sociocognitive development in Nantong City, Jiangsu Province, China. The result showed that K3 teachers’ expectations of students’ sociocognitive development in selected public and international kindergartens were high. The researchers think that the reasons why K3 teachers had high expectations of their students’ sociocognitive development in selected public and international kindergartens might because of high expectations teachers communicated better with their students with discussing knowledge contents, dealing with problems together, having feedbacks in time and managing behaviors positively (Rubie-Davies, 2007).

9.3. K3 Teachers’ Expectations of Students’ Motor Development in Selected Public and International Kindergartens

In this study, the overall of K3 teachers had higher expectations in selected international kindergartens of students’ motor development than those in selected public kindergartens. A study carried out by Bigras et al. (2013) aiming toward validating a questionnaire to measure parental expectations of their children’s development, stated that parents with high expectations could give their children a little bit harder tasks to complete with improve children’s abilities and development. This result aligns with the one obtained by the current study.

9.4. K3 Teachers’ Expectations of Students’ Literacy and Numeracy Development in Selected Public and International Kindergartens

In this study, K3 teachers in selected international kindergartens had higher expectations of their students' literacy and numeracy development than the ones in selected public kindergartens in Nantong City, Jiangsu Province, China. A study by Hu and Song (2013) conducted on 1174 K3 teachers from Eastern, Central and Western provinces in China, obtained similar results to this study. Hu and Song (2013) found that teachers from Central provinces in China had higher expectations of students’ literacy and numeracy development than those in Eastern and Western provinces. A study by Gill and Reynolds (1999) stated that parents’ and teachers’ educational expectations for students’ development only partly affected to perceptions of six-grade reading and mathematics outcomes. This result is in line with the one obtained by this study.

10. Recommendations

Based on the study findings, the following recommendations are provided for students, teachers, school administrators and future researchers.

10.1. Recommendations for K3 Students

K3 students in selected public and international kindergartens in Nantong City, Jiangsu Province, China, were burdened with many expectations from their teachers. The findings of the study would lead the students to understand and recognize teachers’ expectations of them. K3 students should internalize the teachers’ expectations for them, in harmony with the teacher, and hence accept the positive impact of the teachers’ expectations, so as they play a positive role in their holistic development.

10.2. Recommendations for K3 Teachers

K3 teachers should have the right expectations of their students’ development, and avoid to overestimate children’s abilities. If K3 teachers’ expectations are too high, exceeding the potential belief of students’ development and their abilities to bear would cause antipathy of students. At the same time, if students have such high expectations and make the efforts that hardly to reach the goal, they tend to be prone to frustration, which is not conductive to students’ physical and mental development. Therefore, K3 teachers should be patient to the development of students, to give students positive
expectations, not to exaggerate the role of teachers’ expectations, but to combine with other educational means, to obtain the best educational results.

10.3. Recommendations for K3 Students’ Parents

According to the research instruments used by the researchers in this study and the results of K3 teachers’ expectations of students’ development, the researchers believe that students should have help and guidance not only from teachers, but also from active cooperation of their own parents. Parents’ words and behaviors sometimes virtually affect the development of students in many aspects. K3 students’ parents should know how their own child develop currently and work with teachers to promote their own child’s development to achieve a good home and school cooperation.

10.4. Recommendations for School Administrators

School administrators should convey more interesting and fun activities, and effective various teaching strategies that contribute with their students’ development (overall and in terms of students’ sociocognitive development, students’ motor development, and students’ literacy and numeracy development). The school administrators can provide constantly professional development programs to upgrade the instructional and teaching methods and to keep abreast of techniques, ideas, or equipment to enrich teachers’ teaching methods.

10.5. Recommendations for Future Researchers

Future researchers could try to collect data from more kindergartens and a larger sample size of kindergarten teachers, in order to conduct similar studies in a wide-reaching scale that may have more generalizable and representative results. Future researchers can consider the other factors and items of students’ development (e.g., regional difference, gender, personalities, beauty-appreciation and parental encouragement) that could influence the expectations of students’ development held by K3 teachers, so as to get more data of interest and uncover more valuable information on this topic of teachers’ expectations of students’ development.

References


after Brown v. Board of Education. American Psychologist, 59(6), 511-520.


Factors Affecting Consideration to Switching from Condominium to Townhome for High-Class Market in Bangkok Area During COVID-19 Pandemic

Bavornvit Bangthamai¹, Pongthon Duangoubpama², Nuttawan Rukkachantarakul³, Rawin Vongurai¹, Piya Hirunwat⁵

Abstract

Purpose: Housing estates such as detached houses, townhouses, and townhomes have become more marketable lately, and the popularity of condominiums has declined from the COVID-19 pandemic. In this situation, the keys to the success of both townhomes and condominiums are attracting new consumers and retaining the existing ones. The main purpose of this study is to inspect three categories of antecedents for condominiums consumers’ switching intention: push (i.e., satiation), pull (i.e., perceived value), and mooring (i.e., subjective environmental characteristics) factors using push-pull–mooring (PPM) model. Design/Methodology/Approach: High-class townhomes have been selected as the research context. An online survey was proceeded to inspect the proposed research model and hypotheses. The data were collected from 478 respondents living and/or working in Bangkok, who have a monthly family income of 150,000 Thai Baht and above using convenience sampling and snowball sampling methods. This study applied the Structural Equation Model (SEM) and Confirmatory Factor Analysis (CFA) to certify the goodness-of-fit of the model and hypothesis testing. Findings: The outcomes revealed that satiation with amenity has the most significant impact on subjective environmental characteristics, followed by satiation with decoration among the push factors. While among pull factors, hedonic value has the highest significant impact on subjective environmental characteristics, followed by perceived privacy and security. Subjective environmental characteristics also significantly impact switching intention. Originality/Value: The researcher used the PPM model to construct the research framework to understand consumers’ switching intentions comprehensively. This study enhances the understanding of consumers’ switching intention by locating the push and pull factors based on the differences between condominiums and townhomes in correspondence to subjective environmental characteristics.

Keywords: Switching Intention, High-Class Townhome, Real Estate, COVID-19, Bangkok

JEL Classification Code: H2, H21, J54, Q13

1. Introduction

In the past year, the COVID-19 outbreak has completely changed people’s way of living worldwide. Every business segment, including Thailand real estate market, need to adapt to the “New Normal” to support the changing behaviors and needs of a new type of consumer. (Knight Frank Thailand, 2020). The popularity of home buying among Thai people began to change again after nine years before the Thailand Floods in the second half of 2011. Many Thais chose to sell detached houses, townhouses, and townhomes to be moved to condominiums or highlands areas to avoid the flood, making condominium sales rise and become popular. Recently, the situation has changed. When the COVID-19 pandemic occurs, Thais have started to turn back to housing estates for social distancing to lower the risk of COVID-19 Infection from living with many people in the condominium.

Given that new houses in the suburbs are increasing in popularity, the housing transfers in the first quarter of 2020 show that the condominiums dropped to 28,107 units, or minus 1.9%, while housing sales went up 4.7% with 60,917 units. (REIC, 2020).

Since early 2020, the demand for housing products has increased despite the severe economic crisis, especially from April to May 2020, as evidenced by the number of visitors to the residential project on the website. (www.home.co.th). From January to May 2020, the increase was 10% from the same period of the previous year. The search log indicated that houses of the cost 10-20 Million Thai Baht range had the total number of visitors increased by 25% during this five-month window from 86,696 people to 116,264 people. (home.co.th, 2020). In 2020 Thailand’s real estate market segmentation was shifting; for example, the townhome & home office segment price ranged between 7 - 15 Million Thai Baht, classified as “High Class” (thinkofliving, 2020). If calculating the approximate house installment, it will be 7,000 Thai baht per month for a house that cost 1,000,000 Thai baht; therefore, for the houses that
cost between 7 - 15 Million Thai Baht, The monthly house payment rate will be from 49,000 baht to 105,000 baht (DDproperty, 2020).

Target groups of these high-priced products If not the business owner, it must be the organization’s top executive. These people are considered to be in a stable financial status and have savings in the bank, so in an economic crisis, they have little effect and the unique characteristics of the high-class housing projects located in a good location. However, when location potentially changes, these houses will become more and more expensive as the value of the land increases. Therefore, these assets are considered safe investments because they could be sold for a remarkable profit (home.co.th, 2020).

The main purpose of this research is to study and indicate the importance of factors that affecting consumers’ consideration to switching from condominiums to townhomes, including the consumers’ who are looking for housing in the high-class market in the Bangkok area, to help the real estate developers in planning and development of their future projects to meet consumer needs.

The researcher did not include foreigners as respondents because Thai laws prohibit foreigners from owning land under their names. The possible option for foreigners is to set up a Thai Limited Company, which foreigners can own not exceeding 49% to own the land or enter into a long-term leasehold with the Landowner (thaiembassy.com, 2020).

2. Literature Review and Research Framework

2.1. Literature Review

2.1.1. Push-Pull-Mooring Theory of Migration

The push-pull-mooring theory of migration (PPM) model originated from the “Laws of Migration” (Ravenstein, 1889), which describes the factors that affect migration. That later becomes the foundation for the push-pull model applied in many human migration types of research as the “dominant paradigm in migration research” (Bansal et al., 2005). Afterward, the concept of mooring elements that could support or obstruct the effect on population migration behavior in terms of personal or social factors is also added to fill in the gap that the push-pull model was not enough to estimate its complicated characteristics.

PPM model was first debuted in ‘Migrating’ to new service providers: towards a unifying framework of consumers’ switching behaviors (Bansal et al., 2005), which study about switching behavior betwixt service providers with three ingredients structure: push, pull, and mooring factors.

Push factors are defined as negative elements which shove individuals to abandon their current places. On the other hand, pull factors have been defined as positive elements drawing individuals to destinations, and mooring factors are personal and social factors that support or obstruct switching intention (Bansal et al., 2005). Therefore, the PPM model is considered a clear framework for researchers to inspect switching behavior through only three ingredients. PPM model is further of a comprehensive framework without a designated push, pull, or mooring factors. This framework requires interpreting research conditions to additional designated push, pull, and mooring factors (Xu et al., 2014).

Dissimilar to other theories that deal with particular variables, for instance, the tenet of deliberated behavior contains attitude, behavioral intention, perceived behavioral control, and subjective standards.

Several scholars use the PPM model to prove user switching behavior in several conditions, for instance, (Bansal et al., 2005)'s switching towards offline service, switching behavior in the airline market (Jung et al., 2017), and shopping behavior in a various channel (Chou et al., 2016). Moreover, in terms of marketing and information systems, the PPM model was utilized in numerous research to study switching behavior in the IT services market; examples include “mobile instant messaging” (Sun et al., 2017), “e-commerce and social commerce” (Li & Ku, 2017), “business applications” (Bhattacherjee & Park, 2014), “social networking sites” (Chang et al., 2014; Xu et al., 2014), “technology standards” (Lin & Huang, 2014), and “blogs” (Zhang et al., 2012), which refers that push, pull and mooring components from PPM model are very useful for study contexts.

The PPM model offers an effective theoretical framework to describe individuals’ switching behaviors, which helps the marketers pinpoint the matching potencies that influence their consumer base’s action (Bansal et al., 2005). However, even though the studies on marketing and information systems have delivered helpful information towards the spectacle of switching behavior, only a few pieces of research are concerned about consumers’ switching intention from hotels to P2P accommodation. Therefore, a prior PPM study inspected outstanding PPM factors such as discontent with the current service, attraction
of substitutes, and switching cost (Bansal et al., 2005; Bhattacherjee & Park, 2014; Lin & Huang, 2014) as these researches gave essential contribution in defining switching behavior in numerous research contexts, according to “P2P accommodation context” (Li & Ku, 2017). mentioned to investigate more context-specific factors. According to this perspective, this research considers significant distinctions between condominiums and townhomes. The researcher indicated context-specific factors to measure push (i.e., satiation) and pull effects (i.e., benefit) to improve the understanding of consumer switching from condominiums to townhomes.

In summary, the researcher assumed that it is necessary to use the PPM model to study the elements that affect consumers’ switching intention in terms of theory and practice. The outcomes obtained from this study will help real estate developers understand the trends and consumer demand and plan for improving and designing the products that meet the needs of consumers.

### 2.1.2. Moderation Role of Mooring Factor

Many migration studies from the past represented mooring elements to play a major role between push and pull elements as the moderator in the relationships and migration behavior (Bansal et al., 2005). Different optimal stimulation levels (OSL) on people tend to react to external stimuli in various ways (Ha & Jang, 2013a). Compared to consumers with weak OSL to consumers with strong OSL, the second one has lower risk recognitions concerning new products or services (Sharma et al., 2014). However, consumers with strong OSL tend to seek new and variant activities, while consumers with weak OSL tend to feel at ease with conversant situations and stimuli (Raju, 1980). Consequently, even though switching intention is directly influenced by push and pull factors, there are possibilities that the effects may vary depending on consumers’ OSL level.

Various researches have studied the moderation role of OSL. For instance, (Ruihe et al. 2019) revealed in the studies on consumers’ intention to switch from hotels to peer-to-peer accommodation. OSL has a positive moderation impact on the relationship between pull elements and switching intention of consumers. (Richard & Chebat, 2016) showed that between informativeness and purchase intentions, there is an OSL performed a moderating role. (Ha and Jang, 2013) indicated that OSL reinforces the bond betwixt wearied with restaurant compositions (i.e., food, restaurant environment, and service) and variety-seeking intentions and moderates the bond betwixt demanded consumption value (i.e., hedonic and utilitarian value), and diversity-seeking intentions.

### 2.1.3. Push Factors

Push factors have been indicated by (Ruihe et al. 2019) as customers’ negative emotional response as satiation on hotels services, decorations, and amenities. On the other hand, it has optimistic effects on customers’ switching intention to P2P accommodation. For this research in the real estate industry, given the high monotonous decoration and crowed amenity of condominium attributes, that might result in consumers starting to form a negative emotional attitude towards condominiums in the form of satiation or boredom. After consumers perceive weariness regarding condominiums, their intentions for switching to substitutes such as townhomes might increase.

Previous researches have studied the relatedness between satiation and investigating consumer behaviors. For example, (Ha & Jang, 2013b) marked monotonous with restaurant compositions (i.e., service-related, restaurant environment-related, and food-related attributes), causing more intentions in diversity-seeking. Likewise, (Park and Jang, 2014a) suggested that satiation has positive effects on switching intention. Which switching intention may be considered a form of exploratory behavior (Steenkamp & Baumgartner, 1992). Therefore it is a belief to estimate that wearied with condominiums’ decoration and amenity will bring on switching intention of the consumer to the townhome. The researcher proposes the following hypothesis:

**H1:** Satiation: Decoration has a significant impact on Subjective Environmental Characteristics.

**H2:** Satiation: Amenity has a significant impact on Subjective Environmental Characteristics.

### 2.1.4. Pull Factors

The researcher referred to pull factors as the elements of a townhome that attract potential consumers. As mentioned in the PPM model, consumers will show switching action when they perceive they could earn more benefits from a substitute product or service than the current product or service (Bansal et al., 2005). Thus, townhomes...
stimulate consumers to perceive numerous benefits, such as economic value, social benefit, hedonic value, privacy, and security, which are speculated to present the pull effects and cause consumers to switch to townhomes.

The conceptual framework for this study has been adapted from “Switching from hotels to peer-to-peer accommodation: an empirical study” (Ruihe et al., 2019), which endeavors to realize consumers’ inspirations to engage in this factor. For example, a previous study (Guttentag & Smith, 2017) proved that P2P accommodation is somewhat inexpensive compared to hotels. Evidence has empirically shown about the social benefit that in comparison to hotels, P2P accommodation might grant more possibilities to make a worthwhile interaction with hosts through online channels (Heo, 2016; Karlsson & Dolnicar, 2016). Social benefit performs as the main driver to provoke consumers to go for P2P accommodation (Tussyadiah & Pesonen, 2016). For hedonic value, it is widely used in defining the behavior of consumers. The prior study pointed out that amusement is a crucial element from experiencing P2P accommodation, and hedonic value tends to impact consumers’ intention for future usage (Tussyadiah, 2016). 1664 ITP 32.6. Lastly, the researcher adapted perceived privacy and security from “Sharing economy and the lodging websites Antecedents and mediators of accommodation purchase intentions” (Tahir et al., 2019) are principle evaluation measurements in services, these two components are certainly involving factors that contained protecting residents in terms of privacy and security. (Geyskens et al., 2006). mentioned that the more privacy and security perceived by consumers’ minds, the fewer risks users acknowledge in making online transactions.

To sum up, the research offers economic value, hedonic value, perceived privacy and security, and social benefit as pull factors for the townhome context. These elements will show a significant association with switching intention. When the consumer recognizes more advantages from a townhome in comparison to condominiums, consumers tend to switch. The following hypotheses are formulated as:

H3: Economic Value has a significant impact on the Subjective Environmental Characteristics.
H4: Social Benefit has a significant impact on the Subjective Environmental Characteristics.
H5: Hedonic Value has a significant impact on the Subjective Environmental Characteristics.
H6: Perceived Privacy and Security has a significant impact on Subjective Environmental Characteristics.

2.1.5. Mooring Factor vs. Switching Intention
Mooring factors have been identified as social or personal elements which support or obstruct switching action (Bansal et al., 2005). Ruihe et al. (2019) represented Optimal Stimulation Level (OSL) as a mooring factor. However, for this study context, the researcher considered replacing OSL with subjective environmental characteristics, which is adapted from “Residential satisfaction among low-income single-mother households: the case of residential welfare facilities in South Korea” (Minjung, 2020) due to the elements that are more appropriate for different business contexts, Subjective environmental characteristics are emphasized to indicate consumers’ preferred components as well as measuring the importance of various components that might have a big impact on forming consumers’ switching behavior such as size, design, and type of components. Therefore, the researcher provided the following hypothesis:

H7: Subjective Environmental Characteristics have a significant impact on consumers’ Switching Intention to the townhome.

2.2. Research Framework
For this research framework, the researcher has adapted from “Switching from hotels to peer-to-peer accommodation: an empirical study” (Ruihe et al., 2019). the theoretical frameworks, which is similar to this research. With one variable from “Residential satisfaction among low-income single-mother households: the case of residential welfare facilities in South Korea” (Minjung, 2020) and one variable from “Sharing economy and the lodging websites Antecedents and mediators of accommodation purchase intentions” (Tahir et al., 2019). According to the variables mentioned in the literature review, the researcher proposed a research model by integrating push, pull, and mooring factors to indicate the importance of consumers’ switching intention. The conceptual model is illustrated in Figure 1.
3. Methodology

In this study, the researcher has used the quantitative method, with convenience sampling and snowball sampling methods. The developed questionnaire was based on previous theories and empirical researches. It was distributed online via LINE, Facebook, WeChat, and Telegram. Followed by offline channels as well. The target population of Thais living or working in Bangkok with a monthly family income of 150,000 Thai Baht and above who can afford the high-class townhome that costs between 7 - 15 Million Thai Baht, the monthly house payment rate is between 49,000 baht to 105,000 baht is required. The questionnaire consisted of six parts. The first part begins with the screening questions to identify the target respondents. The second part is demographic questions to profile the respondent’s gender, age group, place of origin, education, and personal income. The third part is a five-point Likert scale question used to measure two variables from push factors, with differences ranging from strongly disagree (1) to strongly agree (5) to analyze all hypotheses. The fourth part is similar to the previous part but used to measure only one variable from the mooring factor, with asked about the importance of various elements of the project from the respondent’s perspective with differences ranging from not at all important (1) to extremely important (5) for the analysis of all hypotheses. The fifth part also represented a five-point Likert scale question used to measure four variables from pull factors, with differences ranging from strongly disagree (1) to strongly agree (5) to analyze all hypotheses. The last part is similar to the previous part, which is used to measure switching intentions.

3.1. Population and Sample Size

The population used in this research comprises Thais living or working in Bangkok and perimeter areas, with a family income of 150,000 Thai Baht and above per month. A-priori Sample Size Calculator for Structural Equation Models (SEM) from danielsoper’s website was calculated from 8 latent variables and 35 observed variables with a probability level of 0.05.

Based on the calculation, the appropriate minimum sample size must be 444 respondents. The actual survey was distributed to 512 respondents, whereas the actual responses were 478, adequate for further use in this study.

3.2. Sampling Technique

Non-probability sampling technique was used in this research with convenience and snowball sampling to gather data from 512 target respondents. The data were collected through online social networks via LINE, Facebook, WeChat, and Telegram randomly, and respondents also sent the URL link of the questionnaire to their friend contacts who also meet the criteria, including offline channels. The survey was conducted between August to November 2020.

3.3. Pilot Testing

After the research elements were wholly developed from prior theories and empirical research, Cronbach’s Alpha coefficients analysis was used to inspect the reliability of questions on each variable in the questionnaire. The researcher performed the pilot testing by collecting 46 responded questionnaires and analyzed them to test the reliability using SPSS AMOS version 26. As shown in Table 1, all variables display the Cronbach’s Alpha with a greater than or equal to 0.7. The Cronbach’s Alpha Coefficient is in the range of 0.791 to 0.883. Consequently, this means the questions for each variable passed the acceptability range of the reliability test (Tavakol & Dennish, 2011).
## Table 1: Reliability Test (Consistency of the scales test N=46)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Source of Questionnaire</th>
<th>Number of Items</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satiation: Decoration (SD)</td>
<td>Ha &amp; Jang (2013b)</td>
<td>4</td>
<td>0.843</td>
</tr>
<tr>
<td>Satiation: Amenity (SA)</td>
<td>Ruhe et al. (2018)</td>
<td>3</td>
<td>0.883</td>
</tr>
<tr>
<td>Subjective Environmental Characteristic (SEC)</td>
<td>Minjung (2020)</td>
<td>10</td>
<td>0.791</td>
</tr>
<tr>
<td>Economic Value (EV)</td>
<td>Tussyadiah (2016)</td>
<td>3</td>
<td>0.815</td>
</tr>
<tr>
<td>Social Benefit (SB)</td>
<td>Tussyadiah (2016)</td>
<td>3</td>
<td>0.871</td>
</tr>
<tr>
<td>Hedonic Value (HV)</td>
<td>Tussyadiah (2016)</td>
<td>3</td>
<td>0.838</td>
</tr>
<tr>
<td>Perceived Privacy and Security (PS)</td>
<td>Bart et al. (2005), Suh &amp; Han (2003), Steenkamp &amp; Geyskens (2006), Ponte et al. (2015)</td>
<td>5</td>
<td>0.796</td>
</tr>
<tr>
<td>Switching Intention (SI)</td>
<td>Chang et al. (2014)</td>
<td>4</td>
<td>0.882</td>
</tr>
</tbody>
</table>

4. Results and Discussions

4.1. Demographic Factors

The demographic profile of the target audience of 478 respondents living or working in Bangkok and perimeter areas, the Family income of 150,000 Thai Baht and above per month. The majority of the gender respondents were 53.7% of respondents representing female while 43.5% of respondents were male and 2.2% representing other 0.5% the remaining prefer not to say. The majority age range of respondents in this study was 55.1% age between 25-34 years old, followed by age between 35-44 years old at 30.6%, 45-54 years old at 5.4%, 55-64 years old at 4.1%, Under 24 years old 2.8% and Over 65 years old 2% Majority of the place of origin was 90.5% from Bangkok and perimeter area followed by 3.3% from Southern region, 2% from Eastern region, 1.7% from Northern region, 1.4% from Central region and 1.1% from North-eastern region respectively. A majority of the respondent’s education was Master’s degree graduated at 55.8% followed by Bachelor’s degree, High school or equivalent, and Doctorate graduated with a percentage of 42.2%, 1.4%, and 0.7% respectively. For employment status, most respondents were employed, representing 48.4%, followed by Self-employed at 45.6%, Student at 2.3%, Retired at 2%, and Unemployed at 1.7%. In terms of the personal monthly income range of the respondents, the majority were 50,001-150,000 THB with 36.7%, followed by 15,001-50,000 THB with 31.3%, More than 150,000 THB with 27.9% Less than 15,000 THB with 4.1% As shown in Table 2.

## Table 2: Demographic Information

<table>
<thead>
<tr>
<th>Demographic Factors</th>
<th>Characteristics (N=478)</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Female</td>
<td>257</td>
<td>53.7%</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>208</td>
<td>43.5%</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>11</td>
<td>2.2%</td>
</tr>
<tr>
<td></td>
<td>Prefer not to say</td>
<td>2</td>
<td>0.5%</td>
</tr>
<tr>
<td>Age</td>
<td>Under 24 years old</td>
<td>13</td>
<td>2.8%</td>
</tr>
<tr>
<td></td>
<td>25-34 years old</td>
<td>263</td>
<td>55.1%</td>
</tr>
<tr>
<td></td>
<td>35-44 years old</td>
<td>146</td>
<td>30.6%</td>
</tr>
<tr>
<td></td>
<td>45-54 years old</td>
<td>20</td>
<td>4.1%</td>
</tr>
<tr>
<td></td>
<td>55-64 years old</td>
<td>10</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>Over 65 years old</td>
<td>10</td>
<td>.3%</td>
</tr>
<tr>
<td>Hometown</td>
<td>Bangkok and Perimeter area</td>
<td>433</td>
<td>90.5%</td>
</tr>
<tr>
<td></td>
<td>Central Region of Thailand</td>
<td>7</td>
<td>1.4%</td>
</tr>
<tr>
<td></td>
<td>Northern Region of Thailand</td>
<td>8</td>
<td>1.7%</td>
</tr>
<tr>
<td></td>
<td>Eastern Region of Thailand</td>
<td>9</td>
<td>2%</td>
</tr>
<tr>
<td></td>
<td>North-eastern region of Thailand</td>
<td>5</td>
<td>1.1%</td>
</tr>
<tr>
<td></td>
<td>Southern Region of Thailand</td>
<td>16</td>
<td>.3%</td>
</tr>
<tr>
<td>Education</td>
<td>High School or equivalent</td>
<td>6</td>
<td>1.4%</td>
</tr>
<tr>
<td></td>
<td>Bachelor’s Degree</td>
<td>202</td>
<td>42.2%</td>
</tr>
<tr>
<td></td>
<td>Master’s Degree</td>
<td>267</td>
<td>55.8%</td>
</tr>
<tr>
<td></td>
<td>Doctorate Degree</td>
<td>3</td>
<td>0.7%</td>
</tr>
<tr>
<td>Employment Status</td>
<td>Employed</td>
<td>231</td>
<td>48.4%</td>
</tr>
<tr>
<td></td>
<td>Self-employed</td>
<td>218</td>
<td>45.6%</td>
</tr>
<tr>
<td></td>
<td>Unemployed</td>
<td>8</td>
<td>1.7%</td>
</tr>
<tr>
<td></td>
<td>Student</td>
<td>11</td>
<td>2.3%</td>
</tr>
<tr>
<td></td>
<td>Retired</td>
<td>10</td>
<td>2%</td>
</tr>
<tr>
<td>Personal Monthly Income</td>
<td>Less than 15,000 THB</td>
<td>20</td>
<td>4.1%</td>
</tr>
<tr>
<td></td>
<td>15,001-50,000 THB</td>
<td>150</td>
<td>31.3%</td>
</tr>
<tr>
<td></td>
<td>50,001-150,000 THB</td>
<td>175</td>
<td>36.7%</td>
</tr>
<tr>
<td></td>
<td>More than 150,000 THB</td>
<td>133</td>
<td>27.9%</td>
</tr>
</tbody>
</table>

4.2. Confirmatory Factor Analysis (CFA)

Confirmatory Factor Analysis (CFA) is a statistical technique that generates testing for data validation consistent with conceptual models applied before analyzing this study’s measurement model. The result measured that
every item in each variable is significant and specified factor loading value to prove discriminant validity. The results of the factor loadings, the Composite Reliability (CR), and the Average Variance Extracted (AVE) could be inspected by CFA, and all values should be criterion with the theory. Factor loading is greater than 0.50 and p-value of lower than 0.05. Hair, Black, Babin, Anderson, and Tatham (2006) recommended defining the significance of factor loading for each item and defining the goodness of fit as acceptable. For CR, the result is considered acceptable when CR ≥ 0.6 (Fornell & Larcker., 1981) since the reliability was estimated by the CR and standardized Cronbach’s coefficient alpha (α). Next, the AVE was used to assess the convergent validity, and acceptable values of AVE > 0.4 (Lam, L. W., 2012) were defined for the factor’s convergent validity, as shown in Table 3. The square root of AVE in Table 4 specified that all the correlations are higher than the corresponding correlation values for each variable. Apart from that, applying GFI, AGFI, CFI, NFI, and RMSEA indicates a good model fit in CFA testing, as mentioned in Table 5.

Table 3: Confirmatory Factor Analysis (CFA), Composite Reliability (CR), and Average Variance Extracted (AVE) Results

<table>
<thead>
<tr>
<th>Variables</th>
<th>Factor Loading</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satiation: Decoration (SD)</td>
<td>0.624 - 0.888</td>
<td>0.871</td>
<td>0.632</td>
</tr>
<tr>
<td>Satiation: Amenity (SA)</td>
<td>0.722 - 0.766</td>
<td>0.786</td>
<td>0.550</td>
</tr>
<tr>
<td>Subjective Environmental Characteristics (SEC)</td>
<td>0.587 - 0.714</td>
<td>0.887</td>
<td>0.441</td>
</tr>
<tr>
<td>Economic Value (EV)</td>
<td>0.666 - 0.742</td>
<td>0.750</td>
<td>0.501</td>
</tr>
<tr>
<td>Social Benefit (SB)</td>
<td>0.605 - 0.706</td>
<td>0.687</td>
<td>0.424</td>
</tr>
<tr>
<td>Hedonic Value (HV)</td>
<td>0.675 - 0.793</td>
<td>0.768</td>
<td>0.526</td>
</tr>
<tr>
<td>Perceived Privacy and Security (PS)</td>
<td>0.586 - 0.775</td>
<td>0.801</td>
<td>0.449</td>
</tr>
<tr>
<td>Switching Intention (SI)</td>
<td>0.829 - 0.869</td>
<td>0.912</td>
<td>0.722</td>
</tr>
</tbody>
</table>

CR = Composite Reliability, AVE = Average Variance Extracted
*** = Significant at the 0.05 significant levels (p<0.05)

Table 4: Discriminant Validity

<table>
<thead>
<tr>
<th></th>
<th>SD</th>
<th>SA</th>
<th>SEC</th>
<th>EV</th>
<th>SB</th>
<th>HV</th>
<th>PS</th>
<th>SI</th>
</tr>
</thead>
<tbody>
<tr>
<td>SD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SEC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 5: Goodness of Fit

<table>
<thead>
<tr>
<th>Goodness-of-Fit Indices</th>
<th>Criterion</th>
<th>Results of this Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-Square (CMIN)</td>
<td>&lt;3.00 (Hair, Black, Babin, Anderson, &amp; Tatham, 2006)</td>
<td>2.521</td>
</tr>
<tr>
<td>Goodness-of-Fit Index (GFI)</td>
<td>&gt; 0.80 (Forza &amp; Filippini (1998), Greenspoon &amp; Saklofske (1998)</td>
<td>0.856</td>
</tr>
<tr>
<td>Adjusted Goodness of Fit Index (AGFI)</td>
<td>&gt; 0.80 (Forza &amp; Filippini (1998), Greenspoon &amp; Saklofske (1998)</td>
<td>0.826</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>&gt; 0.80 (Forza &amp; Filippini (1998), Greenspoon &amp; Saklofske (1998)</td>
<td>0.874</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>&gt; 0.90 (Bentler, 1990)</td>
<td>0.919</td>
</tr>
<tr>
<td>Turker Lewis Index (TLI)</td>
<td>&gt; 0.90 (Bentler &amp; Bonett, 1980)</td>
<td>0.908</td>
</tr>
<tr>
<td>Root Mean Square Error of Approximation (RMSEA)</td>
<td>&lt; 0.08 (MacCallum, Browne &amp; Sugawara, 1996)</td>
<td>0.056</td>
</tr>
<tr>
<td>Root Mean Square Residual (RMR)</td>
<td>&lt; 0.05 (Hair et al., 2006)</td>
<td>0.036</td>
</tr>
</tbody>
</table>

CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = goodness-of-fit index, AGFI = adjusted goodness-of-fit index, NFI = normalised fit index, TLI = Tucker-Lewis index, CFI = comparative fit index, RMSEA = root mean square error of approximation, and RMR = rootmean square residual
4.3 Structural Equation Model (SEM)

Researcher applied structural equation modeling (SEM) a statistical technique which combines instruments in tradition multivariate models Posterior of the procedure in SEMs and adjusting the model, the outcomes showed the whole model fit index as (CMIN/DF = 2.521, GFI = 0.856, AGFI = 0.826. NFI = 0.874, CFI = 0.919, TLI = 0.908, RMSEA = 0.056, RMR = 0.036) as shown in Table 5.

4.4 Research Hypothesis Testing

The results of hypotheses testing represented that hypotheses H1, H2, H5, H6, and H7 were supported with a significance at p = 0.05. While H3 and H4 were not supported.

Among push factors Satiation with Amenity has the highest significant impact on Subjective Environmental Characteristics (β = 0.472), followed by Satiation with Decoration (β = 0.116).

Among pull factors, Hedonic Value has the highest significant impact on Subjective Environmental Characteristics (β = 0.198) followed by Perceived Privacy and Security (β = 0.201).

In terms of mooring factors, Subjective Environmental Characteristics significantly impact Switching Intention (β = 0.612), as illustrated in Figure 2.

Table 6: Hypothesis Result of the Structural Model

<table>
<thead>
<tr>
<th>Paths</th>
<th>Standardized Path Coefficients (β)</th>
<th>SE.</th>
<th>T-Value</th>
<th>Tests Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1 SEC &lt;= SD</td>
<td>0.116</td>
<td>0.068</td>
<td>2.137*</td>
<td>Supported</td>
</tr>
<tr>
<td>H2 SEC &lt;= SA</td>
<td>0.472</td>
<td>0.122</td>
<td>3.818*</td>
<td>Supported</td>
</tr>
<tr>
<td>H3 SEC &lt;= EV</td>
<td>-0.134</td>
<td>0.117</td>
<td>-1.005</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H4 SEC &lt;= SB</td>
<td>0.216</td>
<td>0.146</td>
<td>1.556</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H5 SEC &lt;= HV</td>
<td>0.198</td>
<td>0.076</td>
<td>2.880*</td>
<td>Supported</td>
</tr>
<tr>
<td>H6 SEC &lt;= PS</td>
<td>0.201</td>
<td>0.066</td>
<td>2.729*</td>
<td>Supported</td>
</tr>
<tr>
<td>H7 SI &lt;= SEC</td>
<td>0.612</td>
<td>0.000</td>
<td>11.529*</td>
<td>Supported</td>
</tr>
</tbody>
</table>

Remark: *p<0.05

5. Conclusion, Recommendation, and Limitation

5.1. Conclusion

In this study, the researcher intended to study and indicate the importance of factors affecting consumers' consideration of switching from condominium to townhome for the high-class market in Bangkok, Thailand. A total of 512 questionnaires were distributed in Bangkok to Thais living or working in Bangkok and perimeter area, Family income 150,000 Thai Baht and above per month. The conceptual framework was adapted from theory and statistics, including Satiation with Amenity, Satiation with Decoration, Economic Value, Social Benefit, Hedonic Value, Perceived Privacy and Security, Subjective Environmental Characteristics, and Switching Intention for investigating every hypothesis. The consequence of this study was justified to assure reliability by applying Confirmatory Factor Analysis (CFA) and the Structural Equation Model (SEM) to verify the influence of measuring variables and assemble a conclusion of this study.

The study explicated the following findings. Firstly, in terms of push factors, either Satiation with Amenity or Satiation with Decoration significantly impact Subjective Environmental Characteristics. Secondy, in terms of pull factors, Hedonic Value and Perceived Privacy and Security significantly impact Subjective Environmental Characteristics. Lastly, the mooring factor Subjective Environmental Characteristics has a significant impact on Switching Intention; this means most of the findings from this research are quite similar to the theoretical frameworks “Switching from hotels to peer-to-peer accommodation: an empirical study” (Ruihe et al., 2019).
5.2. Recommendation

The outcome of this research identifies factors that real estate developers should consider to emphasize to attract consumers. The most crucial factors are using the obtained information to help decide to adjust projects elements to fit customer needs such as bedroom size which most of respondents score more important than the size of living room, kitchen/dining room, and bathroom, including adding in more creatively and differently amenities to attract the target audience. Moreover, use marketing strategies that create emotional value and position products to represent the success and pride to attract the target audience.

5.3. Limitation and Further Study

The limitation of this study is that even though many consumers switch their intention from purchasing condominiums, there are many substitute products with a different price range and product type in the market that respondents might be interested in but not available in this research. Moreover, there are location factors such as workplace and distance from other family members’ houses, including consumer’s personal needs, that might impact consumer decisions, which should be investigated in further research. Moreover, there is a possibility of surveying on the same topic in the future after the COVID-19 pandemic. Therefore, the results might differ from the outcome of this research due to the fear that causes people to have social distancing gone.

This research objective is consumers’ intention to switch from condominiums to townhomes during the COVID-19 pandemic. However, it is essential to mention that condominiums might have certain advantages like location and more amenities. Therefore, in the future, when the COVID-19 pandemic ends, the researcher suggested conducting further research to investigate consumers’ behavior that might differ from now.

References


Students’ Perceptions of Online Learning During the COVID-19 Pandemic: A Study of Undergraduate Students from an International University, Thailand

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Abstract
The outbreak of COVID-19 had an impact on educational systems worldwide. This study aimed to investigate the perceptions of students towards online learning during the COVID-19 pandemic. Two hundred fifty-five undergraduate students from a private international university in Thailand participated in this study. Data were collected by this researcher using the adapted version of Students’ Perception Questionnaire (SPQ) items from Bączek et al. through a Google Forms online survey. The research objective was examined by basic descriptive statistics (percentage, means and standard deviations). Results showed that student participants prefer both online and onsite learning. The strongest advantage of online learning is allowing participants to stay at home (72.15%) whereas the participants chose technical problems (73.33%) and lack of interactions with friends (71.37%) as the major disadvantages. The participants perceived that online learning was effective that helped increase knowledge (35.29%), active classroom activities (33.33%) and enjoyable (30.2%). Based on the research findings, suggestions, and recommendations to improve the higher education online learning in the future and pedagogical implications are provided.

Keywords: COVID-19, online learning, students’ perceptions, undergraduate students, Thai private international university

JEL Classification Code (up to 3-5): E44, F31, F37, G15

1. Introduction
In 2019, an infectious respiratory disease known as coronavirus disease (COVID-19) firstly emerged in Wuhan, China and has an impact on every corner of the world up till now (World Health Organization [WHO], 2021). In Thailand, the prime minister on March 24, 2020 declared a nation-wide state of emergency to fight coronavirus outbreak (Bangkok Post, 2020). According to OECD report (2020), the coronavirus disease outbreak has affected education as it has forced the school and university closure in nearly all countries. Teaching and learning process has been changed from physical to virtual classroom mode. The Ministry of Higher Education, Science, Research and Innovation (MHESRI), a Thai government body, has overseen and monitored closely on higher education teaching and learning activities and issues during this critical situation. With the current situation for the university context that the researcher conducted this study, it was reported in the University’s Self-Assessment Report 2020 that the COVID-19 outbreak greatly impacted the university operations and student services. Many activities, events and projects were cancelled and were organized virtually. From April 2020- October 2021, the Office of Academic Affairs announced that all teaching-learning activities were to be performed via the online teaching mode. The online learning has been conducted in this university by this researcher for one and a half year. Not only teachers but also students are bound to face with challenges of the disruption and setback of the unceasing widespread of this disease. This study aims to examine the undergraduate students’ perceptions towards online learning.

2. Literature Review
2.1. Online Education/Online Learning
Online education is defined as “a flexible instructional delivery system that encompasses any kind of learning that takes place via the Internet” (encyclopedia.com). This term can be used interchangeably with distance education, distance learning, e-learning, remote learning and virtual learning. Perveen (2016) stated that online learning environments can be classified into a triad of asynchronous, synchronous and hybrid learning environments. Asynchronous online learning environments involve learning occurring both in different locations and
times, such as Learning Management System (LMS), Massively Open Online Courses (MOOCs) or other modes of the sort. Whereas synchronous online learning environments deal with learning that takes place at the same time, yet not in the same place. For instance, educational video conferences, interactive webinars, chat-based online discussions, and online lectures via different online teaching platforms such as Zoom, Microsoft Teams, Google Hangouts Meet, Skype, TeamViewer, etc. The last type of online learning environments is blended or hybrid as it applies both synchronous and asynchronous modes when teaching.

2.2. Previous studies on students’ perception towards online learning during COVID-19 pandemic

The term “perception” refers to the act of perceiving, or understanding by means of the senses or of the mind (dictionary.com). In other words, the word ‘perception’ is synonymous to the word “attitude” which is a fixed way of feeling or thinking about someone or something. A number of literatures on various perspectives of online learning can be found since it was first introduced in the 1990s along with the internet creation. However, during these two years (2020-2021), studies on students’ online learning perceptions during coronavirus pandemic were increased and conducted in different educational settings of various countries. For example, research on students’ perceptions on online learning in Bangladesh (Sakar et al., 2021), India (Agarwal & Kaushik, 2020; Bast, 2021), Japan (Ishimaru et al., 2021), Poland (Bączek et al., 2020), and Slovenia (Gosak et al., 2021). Bast (2021) conducted a comprehensive study in this area by investigating 1,318 Indian students’ perceptions towards online learning focusing on eight variables: age, educational institution, electronic device used, gender, religiosity, socio-economic background, and technology-receptiveness. Findings revealed several facets of students’ perceptions towards online learning. Another study on online learning perceptions of both faculty and students was carried out by Zrkyai et al. in 2021 exploring the advantages, effectiveness, and challenges of online learning in Jordan. To the best of the researcher’s knowledge, there was only one study conducting about online learning during COVID-19 situation in Thai public university context. Imsa-ard (2020) examined 310 Thai public university students by using mixed method. Findings showed that most students preferred onsite to online learning and they also do not want to learn online in the future.

3. Research Methods and Materials

This research used a quantitative research approach. A random sampling of a total of 255 participants (24.71% male and 75.29% female) in this study were undergraduate students of different years of study (1st-4th) at a private international university in Thailand. They were asked to answer a three-part Google Forms online survey consisting of demographic information, two closed-ended questions, three Likert-scale question items, and an open-ended question. The online questionnaire was administered by the researcher online on September 29, 2021 after 15 weeks of online learning in semester 1/2021 (June 7-September 29, 2021). All participants were informed about the aims of the study and agreed to attend this study on the voluntarily basis. They are allowed to do the questionnaire once. To assure the quality of research instruments, the Index of Item-Objective Congruence (IOC) was utilized so as to confirm the content validity. In this process, the questionnaire was checked by three experts. All questionnaire items that had scores higher than 0.5. Also, the no. 3-5 question item in Likert-scale (Part II) were analyzed and calculated Cronbach’s Alpha Coefficient to confirm the reliability of a survey. The Cronbach’s Alpha value was 0.862. The research instruments consisted of three parts. First, Part I was the general information of the participants. Second, Part II was the Students’ Perception Questionnaire (SPQ) adapted from Bączek et al. (2021) which consist of five questions asking about students’ perceptions towards online learning in terms of its advantages, disadvantages, comparison between onsite and online learning in terms of ability to acquire knowledge, description of class activities during online learning, and rate of enjoyment towards online classes during pandemic. The sub-questions no. 3-5 were Likert scale; the Lastly, Part III was suggestions and recommendations to improve online learning. The collected data were analyzed using descriptive statistics.

4. Results and Discussion

In this part, the findings are discussed based on 3 major parts of the questionnaire: General information, Students’ perceptions towards online learning, and Student’s suggestions and recommendations to improve online learning.
4.1 Findings of Part I: General Information

<table>
<thead>
<tr>
<th>General Information</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>1</td>
<td>39.39%</td>
</tr>
<tr>
<td>19</td>
<td>31</td>
<td>12.16%</td>
</tr>
<tr>
<td>20</td>
<td>46</td>
<td>18.04%</td>
</tr>
<tr>
<td>21</td>
<td>78</td>
<td>30.59%</td>
</tr>
<tr>
<td>22</td>
<td>31</td>
<td>12.16%</td>
</tr>
<tr>
<td>23</td>
<td>31</td>
<td>12.16%</td>
</tr>
<tr>
<td>24</td>
<td>24</td>
<td>9.41%</td>
</tr>
<tr>
<td>25</td>
<td>6</td>
<td>2.35%</td>
</tr>
<tr>
<td>26</td>
<td>6</td>
<td>2.35%</td>
</tr>
<tr>
<td>27</td>
<td>1</td>
<td>39%</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>63</td>
<td>24.71%</td>
</tr>
<tr>
<td>Female</td>
<td>192</td>
<td>75.29%</td>
</tr>
<tr>
<td>Year of Study</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 1</td>
<td>3</td>
<td>1.18%</td>
</tr>
<tr>
<td>Year 2</td>
<td>49</td>
<td>19.22%</td>
</tr>
<tr>
<td>Year 3</td>
<td>78</td>
<td>30.59%</td>
</tr>
<tr>
<td>Year 4</td>
<td>84</td>
<td>32.94%</td>
</tr>
<tr>
<td>Other</td>
<td>41</td>
<td>16.08%</td>
</tr>
</tbody>
</table>

As shown in Table 1, most participants were 21 years old (30.59%) while only one student was 18 and 27 years old (0.39%). Most of them were female (63%) whereas there were 25.71% male students. Concerning the study level, more than half were in the fourth year (32.94%) and the third year (30.59%) while the rest studied in the second year (19.22%), above the fourth year (32.94%), and the first year (1.18) respectively.

4.2 Findings of Part II: Students’ Perceptions on Online Learning

4.2.1 Advantages of Online Learning

Figure 1 below depicts the major benefits of online learning.

As shown in Figure 1, the most common advantages of online learning selected by participants were the ability to stay at home (72.15%), ability to record a meeting (66.2%), learning on your own pace (53.33%), access to online materials (52.15%), comfortable surrounding (46.2%), and classes interactivity (9.41%).

4.2.2 Disadvantages of Online Learning

As seen from Figure 2, the respondents selected technical problems (73.33%) and lack of interactions with friends (71.37%) as the key disadvantages followed by social isolation (51.37%), reduced interaction with the teacher (47.84%), poor learning conditions at home (42.7%), and lack of self-discipline or responsibility (40%).

4.2.3 Online Learning in terms of Ability to Acquire Knowledge

This questionnaire item was to determine the ability of participants to acquire language via online learning. Table 2 depicts the mean score, standard deviation, number of respondents, and percent of respondents.

<table>
<thead>
<tr>
<th>Ability to Acquire Knowledge via Online Learning</th>
<th>Extremely ineffective</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Extremely effective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of students responded</td>
<td>7</td>
<td>24</td>
<td>79</td>
<td>90</td>
<td>55</td>
</tr>
<tr>
<td>Percent of students responded</td>
<td>2.75</td>
<td>9.41</td>
<td>30.98</td>
<td>35.29</td>
<td>21.57</td>
</tr>
</tbody>
</table>

Table 2 Perceptions Towards Online Learning in terms of Ability to Acquire Knowledge
As indicated in Table 2, most of participants (35.29%) perceived that online learning mode can be considered effectively to increase knowledge. Only 2.75% of student participants felt that online learning is extremely ineffective. The overall mean score of this item was M = 3.64, which is interpreted by the researcher as being effective. Thus, it can be said that undergraduate students in this international university are effectively able to acquire knowledge via online learning.

4.2.4 Class Activities During Online Learning

This item was to explore the participants’ attitudes towards classroom activities during online learning. Table 3 displays the results of the mean score, standard deviation, number of respondents, and percent of respondents of their perceptions on class activities via online learning.

<table>
<thead>
<tr>
<th>Description your Class Activities During Online Learning</th>
<th>Extremely inactive</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Extremely active</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of students responded</td>
<td>5</td>
<td>42</td>
<td>71</td>
<td>85</td>
<td>52</td>
</tr>
<tr>
<td>Percent of students responded</td>
<td>1.97</td>
<td>16.47</td>
<td>27.84</td>
<td>33.33</td>
<td>20.39</td>
</tr>
</tbody>
</table>

Table 3 Perceptions on Class Activities During Online Learning

4.2.5 Level of Acceptance Towards Online Class

For this questionnaire item, it was to determine the participants’ level of acceptance of online class. Table 4 below illustrates the mean score, standard deviation, number of respondents, and percent of student responded about the acceptance of e-learning class.

<table>
<thead>
<tr>
<th>Level of Acceptance Towards Online Classes During the Pandemic</th>
<th>Extremely unenjoyable</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Extremely enjoyable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of students responded</td>
<td>23</td>
<td>23</td>
<td>77</td>
<td>72</td>
<td>60</td>
</tr>
<tr>
<td>Percent of students responded</td>
<td>9.02</td>
<td>9.02</td>
<td>30.2</td>
<td>28.24</td>
<td>23.32</td>
</tr>
</tbody>
</table>

Table 4 Level of Acceptance Towards Online Classes During the Pandemic

As reported in Table 4, a total of 77 (30.2 %) of respondents assessed online learning as somewhat enjoyable. Among these, 72 (28.24%) found it very enjoyable, 60 (23.52%) found it extremely enjoyable, and 23 (9.02%) found it very unenjoyable. A total of 23 (9.02%) students did not enjoy online class.

4.3 Findings of Part III: Suggestions and Recommendations to Improve Online Learning

The findings of an open-ended question item concerned students’ voices and reflections. These could be used to improve online learning. Most of student participants suggested that they felt burnout, overwhelmed, and unmotivated due to overloaded assignments and sitting in front of the computer screen for a long period. Some student participants said that they learn better in face-to-face than online mode. Sometimes, they could not understand the instructions and content knowledge of the subjects. The participants also felt that the teachers should be more considerate and empathized more with students. Technical problem was another critical issue that impede online learning such as poor or unstable internet connections.

The following is the verbatim (the exact same words from the original source) of one of student participants in this study which can be considered as one of the insightful feedback to improve the quality of virtual classes:

“All teachers must understand that the onsite materials and assignments are not appropriate for online teaching and learning. As a student, it is true that we can contact via social media at any time, but it doesn't mean we can gather and brainstorm efficiently. Some members are shy or lazy to answer things from the phone. Unlike onsite studying, we can have face-to-face meeting, give and take reaction on time. Therefore, since we are studying alone, accomplishing tasks by ourselves is much better. Apart from types of assignments, quantity of them is a problem as well. Many teachers give more assignments as we are learning at home and don't have to take time go anywhere. But don’t forget we still need time to rest and prevent ourselves from stress. Thank you for consideration.”

Discussion

This study investigated Thai undergraduate students at an international university in Thailand on their perceptions and attitudes towards e-learning or online
learning during pandemic. The strongest advantage of online learning among participants in this study was the ability to stay at home. The finding was aligned by the researcher with those of the previous study by Bączek et al. (2021). Most participants did not want to commute to the university. Some also mentioned that they can save transportation cost and other cost of living during online classes. Other advantages of online learning involved the ability to stay at home, to record a lesson, and download class materials. It is more flexible and self-paced learning. This point can be supported by the work of Mukhtar et al. (2020) which found the remote learning advantages in terms of comfort and accessibility.

Regarding its disadvantages of online learning, technical problems were the strongest disadvantage in this research. Even though Thailand was ranked no. 5 for fixed broadband speed (221 Mbps) and no. 50 for mobile broadband speed from around the world according to the monthly report by the Speedtest Global Index on August 2021, some participants still faced these technical issues due to the low bandwidth or weak internet connection during online courses. Other major pitfalls were related to the lack of face-to-face interactions with friends and teachers, Students found difficulties to work with other students in group work. It was reported that most of time misunderstandings among friends always occur. Furthermore, more than half of participants revealed that they felt isolated and could not cope with stress and anxiety after the prolonged time facing with computer screens. Recent findings on by Mhdeily et al. (2020) suggested stress and burnout coping strategies to alleviate the tele-burdens of pandemic. Participants also voiced their diverse opinions to enhance the online learning quality.

Limitations were also found by the researcher in this study including time constraint and the number of respondents participating in the survey.

5. Conclusions
To sum up, this study on perceptions of students towards online learning during the coronavirus pandemic has shed the light on how education has changed dramatically. Online education which has both advantages and drawbacks has become the ‘new normal’ and ‘now normal’ in Thai educational context. As the educators, we should be well-prepared for the post-pandemic education or the ‘next normal’ and what the classroom of the future will look like. When it comes to integrating technology in the classroom, it is believed that teachers should consider students’ perspectives on how they learn best. Thereby, the teacher, as a learning designer, has to devise the best approach and style for delivering learning.

References


Speedtest Global Index (August 2021). Ranking mobile and fixed broadband speeds from around the world on a monthly basis. https://www.speedtest.net/global-index

