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สถาบันบัณฑิตพัฒนบริหารศาสตร์

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Aims and Scope Aims and Scope

The NIDA Development Journal (NDJ) publishes manuscripts that describe or synthesize research of direct relevance to development administration. Its main objective is to publish high quality, double blind peer-review papers using at least three referees that have not previously been published and that reflect the latest research in the area of policy, administration and development. The editors welcome a wide range of academic papers, including research articles, review articles, and book reviews.

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Message from the Editor

Greetings to our esteemed readers,

It is with great pleasure that we present *Volume 60, Number 3-4 (July-December 2020)* of the NIDA Development Journal. In line with our commitment to offering diverse and insightful research, this edition encompasses a compelling array of articles covering a broad spectrum of subjects and themes.

Our first article, **"Obstacles to Implementing Inclusive Primary Education Policy at Municipal Schools in Thailand"** by Theeraphong Bualer from the Department of Public Administration, the Faculty of Political Science and Law at Burapha University, sheds light on the challenges hindering the implementation of inclusive education policies. The study emphasizes the importance of mayoral involvement in allocating resources to foster positive attitudes and increase parental engagement at municipal primary schools.

Thianchai Phatet's and Sutep Tongngam's article, **"Motivation to Use Twitter in the Male Population in Thailand"** from the School of Applied Statistics at the National Institute of Development Administration, delves into the motivations driving Twitter use among the male population. This research, employing linear regression and structural equation modeling, provides valuable insights for businesses and developers seeking to enhance user engagement and application effectiveness.

Kiarttiphorn Umpai's contribution, **"International Principles and Obligations Concerning the Right to Access and Use Contracts for the Use of Vehicles in International Traffic Under the International Rail Transport Legal System"** from the School of Law at the National Institute of Development Administration, explores the principles guiding rail transport operations in Thailand. The findings underscore the need for legal frameworks aligned with international standards to support sustainable economic development.

"Types of Infographic Advertising Design with Influence on Consumers: Case Study-Queen Crab Box" by Chanakan Kansang and Sutep Tongngam from the School of Applied Statistics at the National Institute of Development Administration is a captivating exploration of how different types of infographics influence consumer responses. The study, using Queen Crab Box as a case study, provides valuable insights for marketing designers, digital content creators, and business owners.

Wanthida Tiwari's and Worawan Ongkrutraksa's article, **"Online Influence of Consumers' Purchase Intention Towards Products Endorsed by Korean Boy Bands on YouTube"** from the Faculty of Communications Arts at Chulalongkorn University, investigates the impact of advertisement format and platform engagement on purchase intentions. The findings emphasize the significance of in-content product placement and engagement metrics for effective targeting.

Jiaoying Li's research, conducted at the International College of the National Institute of Development Administration, titled **"The Influence of Online Store Attributes on Consumers' Purchase Intention Towards Online Marketplace Sellers"** explores the factors that shape consumers' purchase intentions in the online marketplace. Sellers are advised to focus on appearance design and consumer reviews to stand out in the competitive e-commerce landscape.

Hui Bai and Zhongwu Li's study, **"Research on the Motivation of Users' Participation in Online Reviews on Catering O2O Platform"** from the International College of the National Institute of Development Administration, delves into the motivations behind users' participation in online reviews. The findings highlight the dynamics of user engagement in the context of online reviews and food delivery platforms.

Lastly, Jian Li's article, **"A Survey on the Satisfaction of College General Education Network Courses"** from the International College at the National Institute of Development Administration, investigates the satisfaction of college general education network courses. The findings offer valuable insights for enhancing the effectiveness of online education in meeting the diverse needs of college students.

We trust that the wealth of knowledge and diverse perspectives presented in these articles will not only capture your interest but also inspire further exploration and discussion in the academic community.

Patthareeya Lakpetch

Editor

NIDA Development Journal
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WISDOM *for* Sustainable Development

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Research Articles:

Obstacles to Implementing Inclusive Primary Education Policy at Municipal Schools in Thailand

Theeraphong Bualar*

Received: May 5, 2023 *Revised: July 18, 2023* *Accepted: July 24, 2023*

Abstract

This article presents a qualitative study for analyzing barriers to inclusive education policy implementation for students with learning disabilities at municipal primary schools in Thailand. Findings from face-to-face interviews with key informants and parents show that misunderstandings of school inclusion, negative attitudes of teachers, and little parental engagement limit the active learning opportunities of such students. The author recommends that mayors undertake a leading role in allocating sufficient resources to promote positive attitudes toward inclusive education at municipal primary schools, and explore alternative ways to increase parental involvement.

Keywords: Inclusive Education Policy, Disability Empowerment Policy, Local Governments and Disability

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อุปสรรคการนำนโยบายการศึกษาร่วมระดับประถมศึกษาไปสู่การปฏิบัติในโรงเรียนเทศบาลในประเทศไทย

ธีรพงษ์ บัวหล้า*

รับวันที่ 5 พฤษภาคม 2566 *ส่งแก้ไขวันที่ 18 กรกฎาคม 2566* *ตอบรับตีพิมพ์วันที่ 24 กรกฎาคม 2566*

บทคัดย่อ

บทความนี้นำเสนอผลงานวิจัยเชิงคุณภาพที่วิเคราะห์อุปสรรคที่มีต่อการนำนโยบายการศึกษาร่วมไปสู่การปฏิบัติสำหรับนักเรียนที่มีความบกพร่องในการเรียนรู้ในโรงเรียนเทศบาล ในประเทศไทย ผลการศึกษาได้มาจากการสัมภาษณ์ตัวต่อตัวกับผู้ให้ข้อมูลหลักและผู้ปกครองชี้ให้เห็นว่าความเข้าใจที่คลาดเคลื่อนต่อระบบการศึกษาร่วมในโรงเรียน ทัศนคติด้านลบของครู และการมีส่วนร่วมของผู้ปกครองที่น้อยเกินไปเป็นอุปสรรคที่จำกัดโอกาสในเรียนรู้ของนักเรียนกลุ่มดังกล่าว นักวิจัยเสนอแนะให้นายกเทศมนตรีแสดงบทบาทผู้นำในการจัดสรรทรัพยากรที่เพียงพอเพื่อส่งเสริมทัศนคติทางบวกต่อการศึกษาร่วมในระดับโรงเรียนประถมศึกษาในสังกัด และสำรวจแนวทางเลือกอื่น ๆ เพื่อส่งเสริมการมีส่วนร่วมของผู้ปกครองให้มากขึ้น

คำสำคัญ: นโยบายการศึกษาร่วม นโยบายส่งเสริมสถานภาพคนพิการ องค์กรปกครองส่วนท้องถิ่นและความพิการ

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Introduction

Inclusive education is one of the most important tools to empower school-age children with disabilities (UNESCO, 2017/8). This article, therefore, aims to investigate the interaction between municipalities and inclusive education policy, as well as analyzing causes that affect the quality of inclusive education management at local levels. In doing so, the author casts light on municipal primary schools in Thailand and focuses on their current inclusive education management.

Accessibility to appropriate inclusive education is one of the most important tools in enabling people with disabilities to participate in wider communities. The right to education not only improves the self-esteem of people with disabilities, but also enhances their right to meaningful employment. Education for people with disabilities dates back to December 10, 1948 when the Universal Declaration of Human Rights (UDHR) was adopted by the United Nations. Since then, the right to education for people with disabilities has gained increasing importance (World Health Organization, 2011).

With the growing influence of the Declaration, much legal framework has been established in support of the empowerment of persons with disabilities through satisfactory education, e.g., the 1960 Convention against Discrimination in Education, the 1989 Convention on the Rights of the Child, the 1990 World Declaration of Education for All, the 1994 Salamanca Declaration, and the 2000 World Education Forum. Such international legal frameworks recognize the right of everyone to at least primary education, but none provides a clear statement on the right to inclusive education (de Beco, 2014).

UNICEF (2017) and UNESCO (2017/8) confirmed that inclusive education was a relevant socio-economic justification because it widened opportunities for students with disabilities to be included socially. A significant amount of research has also demonstrated that inclusive education helped those students become accustomed to participating in the wider community (Lindsay, 2007; Florian, 2015; Sailor, 2016).

The inclusive education concept stems from the World Declaration of Education for All in 1990 and the UNESCO Salamanca Statement in 1994. This concept introduced educational rights in schools, aiming to place children with disabilities into classrooms seamlessly. It seems, however, that these documents provided a broad framework on how to achieve inclusive education goals but possessed little guidance concerning discrimination clauses (de Beco, 2014).

Because the prior international legal framework of disability rights did not provide any instruments or detailed guidance to protect the inclusive education rights of school-aged children with disabilities, the 2006 UN Convention on the Rights of Persons with Disabilities (UNCRPD) and the 2015 Sustainable Development Goals (SDGs) are, therefore, education rights treaties that fill the large gap in the international education rights of people with disabilities. UNCRPD article 24 proclaimed inclusive education rights, stating that:

> *States Parties recognize the right of persons with disabilities to education. With a view to realizing this right without discrimination and on the basis of equal opportunity, States Parties shall ensure an inclusive education system at all levels and lifelong learning ...*

Article 24 of the UNCRPD accentuates the right of persons with disabilities to inclusive education. In realizing this right, signatories to the document shall ensure full inclusive education participation at all education levels, with reasonable accommodation and effective individualized support that maximizes full inclusion. Inclusive education, according to Article 24, provides opportunities for children with disabilities and those without to learn the value of an inclusive society and diversity through mainstream classrooms (Slee, 2011; Mitchell, 2014; Terzi, 2014).

In 2015, Article 24 of the UNCRPD was reaffirmed by Sustainable Development Goals (SDGs: Goal 4). Sustainable Development Goal 4 ensures *'inclusive and equitable quality education and promotes life-long learning opportunities for all,'* and includes a set of associated targets. It is, therefore, best argued that inclusive education is seen as an integral element of full socio-economic inclusion of students with disabilities. (UNICEF, 2016; Ruijs, 2017).

Inclusive education itself, however, has multiple meanings. Slee (2011) argued that inclusive education showed signs of confusion among practitioners and had been implemented in different ways. In 2013, the Committee on the Rights of Persons with Disabilities confirmed that there was some confusion between inclusive education and integrated education in States Parties (United Nations, 2007). If they considered inclusive education for students with disabilities as a place to be accepted as full members, then students taught in mainstream classrooms might have less access to appropriate accommodation which might result in self-devaluation (Haug, 2010). The OECD (1999: 22) underlined the notion of inclusion:

> *Inclusion goes beyond the integrative idea of assimilating children with disabilities into the existing ordinary school system but it requires instead changes to the school system itself ...*

Haug (2017) articulated that inclusive education practitioners such as policy shapers, school principals and school teachers might view inclusive education from two different perspectives-one as a place where students with disabilities could be full members in mainstream classes (integration), and another as the optimum place for learning with classmates (inclusion). He further explained that inclusive education practitioners should bring the two different perspectives together and give priority to locations where students with disabilities experienced the most appropriate environment for learning in line with a sense of belonging and well-being.

Inclusive education has led to divergent views when it comes to implementation. The success of education for children with disabilities, therefore, depends heavily on the knowledge of inclusive education and public awareness of rights to such education for persons with disabilities. Without comprehensive knowledge of inclusion, education policy shapers may introduce 'integration' in the guise of *'inclusion'* (Ainscow et al., 2000; Norwich, 2014).

Despite growing international recognition of education rights for people with disabilities, realizing inclusive education as indicated in Article 24 of the UNCRPD and Sustainable Development Goal 4 is still difficult. Some countries in Asia have put a great emphasis on inclusive education; their efforts, however, have not been as productive as expected due to negative attitudes of teachers toward students with disabilities and insufficient staff support from policy-level personnel (Sharma et al., 2008; Deng & Poon-MacBrayer, 2012; Bentley-Williams & Morgan, 2013; MacFarlane & Woolfson, 2013; Ruijs, 2017).

In Thailand, the Thai government since 2008 has undertaken significant educational reforms and the Ministry of Education remains highly committed to inclusive education. Recognizing the strong influence of UNCRPD and SDGs, the government has substantially revised laws concerning education for children with disabilities.

One of the most significant acts of disability legislation is the Empowerment for Persons with Disabilities Act (2007). This law is the supporting framework for other organic laws concerning disability rights. In 2008, to facilitate inclusive education, the Ministry of Education promulgated the Education for Persons with Disabilities Act which provided technical support and budgets to implement an inclusive education policy. According to the Act, the government established the National Education for Persons with Disabilities Committee to supervise the Act's implementation and lay down practical guidelines for schools concerning effective implementation of inclusive education. Because of growing demand across the country, the central government devolved its inclusive primary education functions to local governments through the 1999 Decentralization Law, authorizing municipal primary schools to implement inclusive education in local communities. At local levels, translating inclusive education policy into practice has not been an easy task in Thailand. Adequate resource allocation together with appropriate training for disability policy makers, school principals, school teachers and parents is a key factor necessary for successful inclusive education (Kantavong et.al. 2012; Sukbunpant et.al, 2013; Vorapanya & Dunlap, 2014; Kantavong, 2018).

In Thailand, there is scant literature concerning the role of local municipal primary schools in promoting inclusive education rights of young students with learning disabilities. It is therefore important for disability scholars to study local context-based inclusive education in municipal communities, and share their findings with international researchers in order to promote appropriate educational access for children with learning disabilities.

Without thorough studies, inclusive educational practices at municipal primary schools cannot be substantially or effectively modified. Hence, the aim of this article is to discuss current findings to understand inclusive education in the local context of Thailand from the perspectives of mayors, school principals, teachers, and parents.

Explaining methodology

The research reported in this article had two objectives. The first was to identify the attitudes of the four groups indicated above toward inclusive education at municipal primary schools in Thailand. The second was to investigate inclusive education practices at the school level with emphasis on how these four groups had responded to inclusive education.

Based on a qualitative approach, this article was derived from field research conducted from April 2017 to March 2019 in Thailand. It focused on municipal primary schools in three municipalities in the north, northeast, and south: Chiang Mai, Khon Kaen, and Songkhla, respectively. Since primary education is the first step of schooling and a preparatory stage for young students with disabilities to pursue their inclusive experience at higher levels, the author selected municipal primary schools in the communities where they lived that suited research objectives. It should be noted that the schools in this study admitted students with learning disabilities only; children with other types of disability were sent to specific schools that can offer the relevant assistance (ramps for wheelchairs, etc.).

In this research, phenomenology was introduced to help the author delve into an individual's experience in inclusive education. Phenomenology is a philosophical inquiry launched by Edmund Husserl in 1900, explaining it as a novel way to describe the meaning of what was experienced and how it worked (Giorgi, et al, 2017). To date, it has been well-received among qualitative researchers who like to address the meaning of the interaction between an individual and things in the world (Laverty, 2003; Vagle, 2018). A phenomenological approach was thus used to fulfill the research objectives.

After reviewing key scholars in phenomenological approach, the author followed Moustakas (1994) and Creswell (2007) to reveal the live experiences of respondents in inclusive education. Their approach best suited the school inclusion experience among respondents. Using this approach, the author described attitudes that hindered inclusive education policy implementation at the municipal school level and looked into the involvement of parents of students with learning disabilities. In order to generate raw data, a semi-structured interview technique was introduced to investigate respondent interactions and elicit appropriate data for analysis.

Ethical Issues

This research was ethically approved by the Institutional Review Board (IRB). Ethical issues in this article included rigorous examination of interview questions by the IRB, informed consent from interviewees, and respect for their privacy. To better facilitate their consent, the purpose of the research, research questions, research process, time commitments, and research materials were explained to the interviewees. In addition, potential risks were explicitly discussed so that each participant could decide whether or not to participate. Subsequently, participants agreed to sign consent forms for the interviews.

Audio recordings, verbatim transcriptions, and other note-taking activities from interviews were stored as electronic files and were password-protected for the author's use only. Data was disassociated from participant names and other identifying information by using a unique numerical identifier. A key that matches participant names to their unique numbers was encrypted and stored separately from consent forms.

Selection of respondents

Municipalities located in large urban cities from the north, northeast, and south of Thailand were purposively selected, and only one municipality was selected from each region. Letters of Permission to Conduct Research approved by the Institutional Review Board (IRB) were sent to mayors of each municipality first. The letter, with consent forms, explained research objectives, data collection, and analysis. Having studied the criteria, the mayors suggested the author contact only one inclusive school in each municipal area. As a result, only three municipal schools at primary education level participated in this study. Again, letters were sent to school directors outlining the purpose of the research, participants' criteria, and inviting voluntary participation in the interview process. Since this article attempted to shed light on respondents' firsthand experiences of inclusive education practices at municipal primary schools, members of the four groups were given a chance to express their views through face-to-face interviews. After the author explained the purpose of this study, the selected participants agreed to be interviewed and signed the consent forms.

Each participant from the three municipalities was methodically selected. Criteria for the selection of participants included: (i) mayors currently in office, (ii) school principals who have implemented inclusive education for five years or more, (iii) school teachers who currently teach students with disabilities or those who have taught in inclusive classrooms for the past five years, (iv) parents whose children with disabilities have studied in an inclusive classroom at municipal schools for three years or more, and who have lived in the municipality for three years or more, and (v) those still living in these municipal areas at the time of the interviews.

School principals asked their teachers who met the criteria to offer their views. As students with learning disabilities in this article were at primary education level and below eighteen years of age, the author was prevented by the Child Protection Law from interviewing them directly. Their parents, therefore, were regarded as their sole representing voice.

For parent interviews, school principals selected from a student database the names of those who enrolled their children in inclusive classrooms: six parents from the school in Chiang Mai province, five parents from the school in Khon Kaen province, and eight parents from the school in Songkhla province. Subsequently, school principals invited them to meet with the author. After being informed of the research objectives, eleven parents agreed to give their responses-four each from Chiang Mai and Khon Kaen and three from Songkhla. In order to protect their privacy, biodata and names remain undisclosed.

Data Collection and Analysis

The author interviewed all participants owing to their small number. Interview questions were methodically constructed. A number of disability scholars and professional experts on inclusive education were asked to review the questions. Subsequently, revisions were made and the complete interview checklists were redesigned and classified into four groups: mayors, school principals, teachers, and parents. The revised interview questions were then approved by the Institutional Review Board.

Participants were asked a set of open-ended questions about their inclusive education experience. Each of the participants chose to be individually interviewed. The interviews were conducted twice at the municipal offices and schools. Each interview lasted for 60 minutes. The first interview was for raw data collection while the second was for participants' approval for verbatim transcription. All interviewees agreed with the method of tape recording, but no photographs were taken as they requested anonymity.

To avoid confusion with the local dialect, each interviewee was asked to speak standard Thai. Despite speaking Thai as a first language, the author employed two research assistants in order to avoid language miscommunication. Data and information were recorded by hand and on a recording device. The interviews were later transcribed verbatim for analysis. The transcribed information was coded within a structure of nodes. A rigorous analysis ensured that the key themes were accurately applied to the analysis. The responses were grouped by statements from each interviewee unless otherwise indicated. The results included the views of mayors, school principals, school teachers, and parents concerning inclusive education practices.

Trustworthiness of information

To ensure data accuracy and to eliminate potential research biases, non-participatory classroom observations and academic activities for students with disabilities were introduced to cross-check the data. In order to ensure factual accuracy in the transcription process, the author read the verbatim transcripts while listening to the recordings. In a second visit, the transcripts were given to the interviewees for their responses and approvals. Three parents requested that the author read the transcripts for them.

Results

The author studied the nodes to identify possible themes related by the interviewees. The results demonstrated central themes related to values and practices of inclusive education among participants. First, impressions of inclusive education among mayors were identified as the most meaningful school inclusion policy formulation. Second, it revealed participants' attitudes toward inclusive education values and practices. Third, it showed the influence of parental involvement in promoting school inclusion for their children with disabilities.

Inclusive education practices from mayoral responses

Since the promulgation of the Education for People with Disabilities Act (2008), the Thai government has promoted inclusive education throughout the country. At a local level, financially strong municipalities were tasked with formulating and implementing inclusive education policy in their municipal primary schools. The following are statements reflecting the mayors' differing viewpoints of inclusive education. One mayor said:

> *We understand that students with disabilities need schooling. The municipality is promoting educational rights; so, we welcome everyone, but we don't have a special room for students with disabilities. They must study with their friends.*

In terms of their understanding of inclusive education, it appeared that mayors possessed only an academic achievement mindset when asked about its importance. One mayor said:

> *We have key performance indicators in education achievement at a school level, and we must educate our students with disabilities under a mainstream school environment and make them academically strong. Our education policy is to make sure that every student passes the national tests with satisfactory scores.*

Another mayor added that:

> *The Ministry of Education has introduced strict quality assurance and national tests. Students must demonstrate their strong academic ability, basically above the average national test score. The higher, the better. With that, our schools will be given top scores in quality assessment.*

Their immediate response regarding inclusive education management concerned a lack of resources. One mayor argued that:

> *We are supervising many schools. Funding is our major challenge. In order to make it convenient for us to manage, we adopt only one school to welcome students with learning disabilities. We have a thousand students in total. Unlike disability-specialized schools, we ask general teachers to volunteer for inclusive classrooms because we don't have a large enough budget to hire special education teachers.*

Another mayor added:

> *We don't have any special classrooms for them (students with disabilities) in our schools. Our education budget within a fiscal year is not sufficient to run effective inclusive schools. It is expensive and parents of those children tend to be poor. We just do our best under resource constraints.*

Responses indicated that mayors not only shed light on key performance indicators in academic achievement for students with learning disability, but also strongly argued that existing budget arrangements hindered the process of education for those students.

Inclusive education implementation from principals' perspectives

Because the notion of inclusive education is quite recent at municipalities and schools, neither mayors nor school principals appeared to understand its core concepts. The newness of the concepts has not only led to an erroneous impression of inclusive education management, but also insufficient institutional support for teachers involved with classroom inclusion. One school principal argued:

> *We are not ready yet, but we have to abide by the mayor's directives. Students with disabilities who come to us have learning disabilities and their literacy is very low. We don't have a special class for them and must put them into a mainstream class. That's a problem.*

Another principal added:

> *The mayor has chosen our school to be an inclusive primary school and his administration informally publicized this without asking if we were ready or not. Nobody knows how to run inclusive classrooms, but when it is a policy, we can't say "no" to the mayor and we can't say "no" to parents, either.*

One principal commented candidly on inclusive education:

> *In reality, we don't want to admit these students with learning disabilities because their academic performance can't meet the desired national educational achievement. They just bring our school rank down every year. Their families' financial status is poor and their parents can't help them well at home. They just put their burden on the school. What can we do, then?*

The responses received suggested that many schools were not well-equipped to implement inclusive education. The comments from school principals demonstrated that they had negative or uninformed attitudes toward classroom inclusion. The interviews indicated that there appeared to be no institutional support from mayors, nor have the school principals or teachers been trained to implement inclusive education at a primary school level, even though it is a mayoral policy that school principals must implement. While a number of school principals seemed to have negative attitudes toward school inclusion and/or lack sufficient knowledge of inclusive education, classroom teachers were left alone to face major challenges when teaching students with disabilities in mainstream classrooms.

Opinions of classroom teachers concerning inclusive education practices

In schools, principals asked teachers to voluntarily teach students with learning disabilities in mainstream classrooms. However, very few responded favorably to such requests. One volunteer math teacher argued that:

I am the youngest among math teachers in the school and I was tasked to teach students with learning disabilities. The school principal assigned me to handle classroom inclusion in Grades 4 and Grade 5. I felt ineffective when teaching students with learning disabilities mixed with the non-disabled. I did my degree in math, not special education.

A social studies teacher who teaches grade 6 described her experience in an inclusive classroom. She mentioned that it was difficult to teach in such an environment:

Social studies could possibly spur student interest. Updated teaching and learning materials should have been provided. I think every subject needs new teaching and learning materials for special-needs students. But our school receives very small budgets each year. With those problems, I am reluctant to teach them.

One Thai language teacher of grade 4 argued that teaching students with learning disabilities in mainstream classrooms might have a negative effect on his teaching career. He stated:

Teaching students with learning disabilities is really messy. If the academic achievement in my class is lower than the national standard, my annual salary increase may be frozen because the mayor and the school principal have adopted academic achievement as a major performance indicator for salary increase assessment. In the long run, mixed classes will affect my teaching status.

In contrast, when asked the same questions about inclusive education in practice, two home economics teachers from grade 1 gave different responses. One (female) explained:

I like teaching them to paint on handkerchiefs. They like brushes and color. When painting, they focus on it very well. The picture may not be completely beautiful, but painting makes them stay focused. It would be good if the school principal and the mayor used home economics as a part of key performance indicators.

The other grade 1 teacher (male) taught students with learning disabilities to make silver bowls. He explained that these students knew how to use their physical strength to hammer a silver bowl from a bowl mold. He related:

> *Students with learning disabilities may not be academically strong, but they are doing well in my silver bowl class. Unfortunately, home economics at the primary level is not considered for academic achievement. The National Standardized Test only includes math, language, science, and social studies. It would be better if the school could construct or at least revise a curriculum to correspond to the special-need students.*

Both home economics teachers indicated that they enjoyed working with students with disabilities in their home economics classes. They thought that their class activities helped those students concentrate on the subject at hand longer than in the academic classrooms. Responses from other teachers, however, illustrated that they fostered negative attitudes toward including students with learning disabilities in mainstream classrooms because they did not have the necessary skills for classroom inclusion.

Parental involvement in inclusive education practices

Inclusive education strongly needs the fullest support from family members. However, when asked about their involvement in their children's schooling, the answers from parents were in stark contrast to inclusive education concepts. One parent explained:

> *I am not well-educated and nobody at home knows how to teach my child. What should we do? If teachers don't know how, who does?*

Another parent argued:

> *A teacher wanted me to bring my child to a hospital for medicine. But I don't have enough money for him to see a doctor. I wish I could.*

When asked about teacher-parent meetings held twice in one semester, many parents declined to participate in the discussions about their children with disabilities. The most common answer was that they had limited time during the day. One parent said:

I cannot skip work because I am an hourly-paid employee. Absence from work can result in unemployment and we don't want that situation. I know teachers are well-intentioned, but life is not easy for us and we don't want to risk losing jobs.

From the responses, parental involvement in inclusive education may be insufficient. Low education levels and poverty were the reasons given to avoid discussion with teachers about creating a better learning environment for their children. Results suggested that parents wanted to put their children with disabilities in school every day, but did not appear to have the appropriate awareness concerning their roles in promoting inclusive education.

Discussion

Participants' responses were generally consistent with international literature on inclusive primary education that reflected underlying attitudinal barriers to students with disabilities. According to the findings from this research, problems concerning implementation of inclusive education at municipal primary schools stem from a number of causes: mainly (i) the mistaken impressions toward inclusive education among mayors, (ii) the negative attitudes of school principals and teachers, and (iii) little parental involvement.

The results demonstrate that mayors do not embrace Article 24 of the UNCRPD and SDGs, goal 4.3 and suggest that they are ill-informed concerning inclusive education. Such lack of information may have resulted from a lack of training or prior hands-on experience with inclusive education. This is consistent with earlier international research that revealed a lack of training or little experience with students with disabilities could lead to poor school inclusion preparation (Avramidis & Norwich, 2002; Ainscow, 2006; Deng & Guo, 2007; Brownell et al., 2010; Florian & Linklater, 2010; de Boer et al., 2011; Bentley-Williams & Morgan, 2013).

Previous research on inclusive education in primary schools also confirms results from this article that such poor preparation has given rise to negative mayoral impressions toward inclusive education which has, in turn, impacted the availability of learning opportunities for students with learning disabilities (Vislie, 2003; Lindsay, 2007; Kavale & Forness, 2000; Brownell et al., 2010; Ruijs, 2017). Under the influence of such misapprehension, a number of mayors have translated the concept of school 'inclusion' into school 'integration.'

It is possible that educational policymakers who are more distant from students with disabilities express more positive attitudes to school 'integration' than 'inclusion'. The mayors in these findings saw inclusive education only as the placement of students with learning disabilities into mainstream schools, regardless of their degree of learning participation while they were in the classrooms. Without appropriate learning participation, classroom integration can discourage students with disabilities and increase a school drop-out rate.

Vislie (2003) notes that placing students with disabilities into mainstream schools through the integration perspective only is not sufficient and these students will be seen as having a different status in the classroom. Eventually, those students may develop social alienation which bars them from learning (Ainscow et al., 2000; Kavale & Forness, 2000). The findings from this research illuminate the interplay between the role of educational policy makers and the failure of school inclusion. Literature on school inclusion strongly emphasizes proper understanding of inclusive education in practice among educational policy shapers (Florian, 2015; Hardy & Woodcock, 2015; Haug, 2017). It, however, turns out that the misunderstanding of mayors concerning inclusive education has aggravated inclusiveness at the school level because it causes a number of administrative tensions related to classroom inclusion. Ongoing disputes among mayors, school principals and teachers regarding funding allocation and technical support at the school level may be provoked.

The findings indicate that mayors gave inclusive education implementation at a school level to the strict control of an unprepared bureaucracy in inclusive school budget allocations. Small inclusive school grants from mayors is another major barrier to education for students with learning disabilities, because mayors allocated funds on their own authority without either clear understanding of school inclusion or active involvement of school principals and teachers. Such personnel, therefore, may have concluded that an insufficient funding arrangement was one of the major causes impairing the quality of inclusive education.

Another effect stemming from the misapprehension of mayors (discussed above) is the classroom inclusion and academic achievement dilemma (Florian, 2014). According to the mayors' misunderstanding, student achievement was correlated with satisfactory national standardized test scores. Each municipal primary school was required by its mayor to improve the annual test scores of students and such improvement was a key performance indicator for each teacher. Although international literature on inclusive education emphasizes relationships between teachers' lack of training and classroom inclusion failures (Emam & Farrell, 2009; Brownell et.al., 2010; Forlin & Chamber, 2011; Brentley-Williams & Morgan, 2013; Florian, 2015). Findings from this research revealed a different theme of argument, centering on rigid top-down administrative policy with penalties. Based on findings, teachers volunteer to teach students with disabilities, but they may become demoralized because, according to administrative policy, the number of students who pass the national standardized tests is a major factor influencing their annual salary increases, while a negative outcome can lead to a salary cut and jeopardize their teaching career path. Mayors have imposed academic achievement policies as the most important goal of education in their constituencies. Such a goal contradicts the major aims of education for students with disabilities, i.e., independence, a sense of pride and willingness to actively participate in their communities (Vaughn et al., 1996; Florian, 2014). In effect, the dilemma of implementing inclusive education stems from a number of factors, mainly inappropriate assistance from mayors, teachers' lack of training or belief in disability models, and the classroom subjects themselves.

As noted, because of erroneous impressions concerning inclusive education, mayors paid little attention to the learning opportunities of students with disabilities. Such misimpressions may also have made mayors oblivious to the interplay between adequate financial-technical support and teachers' attitudes toward inclusive classrooms. From the interviews, mayors appeared to have allocated insufficient funds to improve teaching-training materials or to sharpen the pedagogical skills of teachers who worked with students with learning disabilities and those without in the same classroom environment. Although teachers had been tasked to achieve inclusive education results, no further assistance was given because, apparently, inclusive education, according to the mayors, did not require any additional investment cost to accommodate disability at school levels.

Subsequently, teachers did not receive the appropriate skill training prior to teaching inclusive classrooms, forcing them to use their immediate problem-solving skills. Without strong support from management level, the day-to-day problems of an inclusive classroom may appear overwhelming and demoralize school teachers as well as discourage the classroom inclusion of students with learning disabilities. Gradually, school principals and teachers may adopt a negative attitude toward those students and inclusive education (Lindsay, 2007; Sharma et al., 2008; Emam & Farrell, 2009; Brownell et al., 2010; Slee, 2011).

Another correlation between teachers' negative attitudes and inclusive classroom is their belief in disability models (Miles & Singal, 2010; Hardy & Woodcock, 2015; Haug, 2017). Teachers who subscribe to the *'medical model of disability'* believe that such a model centers on a pathological approach requiring interaction between students with disabilities and medical staff, while those who support the *'social model of disability'* perceive that those students must be seen in the context of social interaction. Teachers who follow the social model of disability strongly believe in heterogeneous classrooms to encourage those students with learning disabilities to engage with their classmates (as in the case of the home economics teachers above). In contrast, teachers who embraced a pathological approach declined inclusive classrooms as in the case of language teachers from this research. The inclusive classroom is therefore subject to the teachers' belief in a medical/social model of disability. The findings are generally consistent with previous research that the notion was found to be an important factor influencing the attitudes of teachers toward inclusive education (Kavale & Forness, 2000; Brownell et al., 2010).

Apart from sufficient support and teachers' beliefs in different disability models, findings have provided evidence that the subject taught was another factor influencing teachers' attitudes. Subjects requiring active class engagement are grouped under social life skill improvement, e.g., art and home economics, whereas math, science, language, and social studies are considered academic skills. Findings from this research confirmed previous research that teachers who have never experienced successfully facilitating classroom activities between students with disabilities and those without acquired a negative attitude toward inclusive education (Avramidis & Norwich, 2002; Florian & Linklater, 2010; de Boer et al., 2011; Forlin & Chambers, 2011). Also, it revealed that teachers who taught academic subjects paid very little attention to inclusive classroom interactions between students. Rather, they put their emphasis on the individual student's academic improvement; students with high scores on exams or quizzes were perceived as contributing factors to a successful teaching career.

Because they did not earn a degree in Special Education, nor did they receive enough budgetary support for classroom inclusion management training, school principals and teachers perceived students with learning disabilities as stressful to handle while they were in mainstream classrooms with their classmates. Additionally, academic subject teachers perceived these students as threats to their teaching careers and may explain why they were reluctant to welcome students with learning disabilities to their classrooms. If teachers had received sufficient skill training in successful classroom engagement and embraced a heterogeneous approach to classroom instruction along with sufficient technical support from mayors and school principals, they might have gradually developed more positive attitudes toward students with disabilities and become more likely to promote classroom inclusion (Farrell et al., 2007; Savolainen et al., 2012; Kamenopoulou & Dukpa, 2017; Vasileiadis & Dojkou-Avlidou, 2018).

Apart from the challenges discussed above, research has suggested that parental involvement is one of the major factors influencing the learning outcomes of students with disabilities and lowering their drop-out rates (Fan & Chen, 2001; Christenson, 2003; Hornby & Lafaele, 2011). In the interviews, however, parents did not develop relationships with teachers or the schools. The limited parental involvement resulted from parents' beliefs about inclusive education management and their current life contexts.

Frequent monitoring and supervision at home are strong mechanisms ensuring that students with learning disabilities have wider opportunities to learn more (Clough & Nutbrown, 2004). In the interviews, parents believed that they were not educated enough to monitor and supervise their children while at home. They implicitly argued that this role should be performed by school teachers. This belief discouraged parents' participation in teacher-parent discussions about their children. Consequently, they avoided taking an active role in school engagement for their children's learning opportunities (Christenson, 2003).

The parental beliefs correlated with their current life contexts. Their responses clearly indicated that their household financial restrictions would be an insurmountable barrier to their involvement in inclusive schools. Poverty has forcibly imposed financial restrictions onto the households of students with learning disabilities. Therefore, household expenses always receive first priority over inclusive education. As a result, parents with children with disabilities are increasingly reluctant to make a trade-off between their employment and inclusive school involvement. With a low socio-economic status, parents who have children with disabilities feel economically insecure and such insecurity permeates their daily lives. In addition, the schools do not accommodate parents with alternative ways of involvement. Eventually, these situations are a source of negativity where parental involvement in inclusive education is concerned (Rodriguez et al., 2014).

On the one hand, the findings discussed above have demonstrated that respondents interpreted inclusive education as only integrating children with disabilities into mainstream classrooms. On the other, responses have portrayed differing opinions among interviewees as to whether inclusive education at municipal primary schools is the end itself or part of a process. Mayors, school principals and parents shed light on school attendance, i.e., equal educational opportunity by placing those students into mainstream schools and promoting their academic achievements. Teachers, however, place greater emphasis on the inclusion process, i.e., training in disability-pedagogical teaching skills and appropriate assistance from mayors that involve changes in policy formulation, implementation and incentives. It is therefore argued that interviewees hold divergent views on inclusive education which has resulted in inconsistent practices.

Concluding remarks and recommendations

Based on in-depth interviews, this article identifies the underlying causes of poor quality inclusive education at selected municipal schools. Because of false impressions toward inclusive education among mayors and negative attitudes of teachers, municipal primary schools are barely capable of providing students with learning disabilities with quality learning environments in mainstream classrooms.

Implementing inclusive education at municipal schools does not mean that discrimination is alleviated (OECD, 1999; Ainscow et.al., 2000; Slee, 2011; UNICEF, 2016). Respondents from this study have negative attitudes toward inclusion and they give scant attention to fundamental individual differences among students with learning disabilities in mainstream classrooms. Teachers indicate that mayors and school principals should not simply put students with learning disabilities into mainstream classrooms without providing teachers with appropriate pedagogical teaching skills for children with special needs.

Furthermore, this research suggests that institutional support, e.g., adequate budget allocation, teacher-training materials etc., should have been given before recruiting students with learning disabilities. These hurdles have fostered negative teacher attitudes toward inclusive education. Without a positive attitude and institutional support from mayors, it is a major challenge for school principals and classroom teachers to guarantee the appropriate quality of inclusive education for students with learning disabilities.

Among recommendations derived from this research, it is proposed that mayors undertake a leading role through their capacity-building processes to construct inclusive education frameworks or guidelines that support inclusive schools and arrange external resource support systems, especially professional support teams, to help teachers who request guidance for teaching students in mixed ability classrooms. Another suggested practice is the allocation of funds for teacher training, particularly concerning attitudinal changes and disability-pedagogical skill training.

In addition, mayors and school principals need to allocate sufficient budget resources to support curriculum adaptations, in order to create better learning environments for students with learning disabilities to embrace their individual learning needs. In order to make these suggestions a reality, the Ministry of Education and municipalities should revise their academic achievement policies to create an alternative method of performance evaluation and assessment for students with disabilities and their teachers.

In order to guarantee active parental involvement in inclusive education, school principals and teachers must design an Individualized Education Program (IEP) that suits each student and parent, since IEP can lead to effective communication between parents and teachers. More importantly, mayors and school principals should encourage parents to actively engage in inclusive classrooms through informal organizations, e.g., local communities, local disability NGOs, and other advocacy groups. In order to encourage parents to become involved in inclusive classrooms through informal groups, mayors and school principals need to be more persuasive and available for outreach programs.

These informal groups may also be of help in raising public awareness of students with learning disabilities in local communities. Municipalities and schools need to involve those organizations in inclusive education policy formulation and implementation to make them mindful of the significance of education for children with disabilities. If well-placed, those organizations can be a contributory factor to inclusive education. They can be an assisting factor to parents who need guidelines for inclusive education involvement. They may also be able to help municipalities and schools attain inclusive education goals at local levels.

Despite the insights this study offers on causes that weaken inclusive education at municipal schools, there are a number of limitations. It discussed only subjective viewpoints from mayors, principals, teachers, and parents who were purposively recruited from only three local areas in Thailand. As such, it is inappropriate to generalize from these research findings concerning inclusive education barriers to other disability classifications and higher educational levels. Future research on different aspects of inclusive education using a quantitative approach with inclusive classroom observations and different disability classifications may provide more varied responses, discussions, and recommendations.

Inclusive education needs a healthy dialogue to ensure effective inclusive education at local schools for students with disabilities. Without sufficient institutional support from mayors and positive attitudes from school principals, teachers and parents, attempts to include students with learning disabilities into inclusive classrooms at municipal primary schools will be very difficult. If students with learning disabilities receive appropriate inclusive education in their local communities, they will be able to improve their socio-economic situation in the long run and becoming contributing members of their communities.

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Motivation to Use Twitter in Male Population in Thailand

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Abstract

In order to know the motivation factors to use Twitter in male population in Thailand, this research has been conducted. The research framework, based on a few related theories, was proposed. An online questionnaire was sent to 514 men in Thailand, then their responses were proceeded using linear regression and structural equation modelling.

The results of the study, ranked by the mean values, show that the highest mean score is Trust, followed by Facilitating Condition, Performance Expectancy, Spam and Duplicate, Meeting new people, Online game, Anonymous, Social Influence, and Effort Expectancy, respectively.

When using the Structural Equation Modelling (SEM), the analysis show that the most influencing motivation factor is Trust, followed by Social Influence, Performance Expectancy, Anonymous, Online game, Facilitating Condition, Spam and Duplicate, Meet new people, and Effort Expectancy, respectively.

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With these results in consideration, any Twitter-like business and developers could apply to their business and applications for the purposes of increasing the number of both users and usages.

Keywords: Twitter, Trust, Motivation, Expectancy, Online Social Media

แรงจูงใจต่อการใช้งานทวิตเตอร์ของประชากรชายในประเทศไทย

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บทคัดย่อ

งานวิจัยนี้มีวัตถุประสงค์เพื่อศึกษาแรงจูงใจในการใช้งานทวิตเตอร์ของประชากรชายในประเทศไทย โดยนำเสนอกรอบการวิเคราะห์ตัวแปรที่ได้จากทฤษฎีต่าง ๆ ที่เกี่ยวข้อง มีการใช้แบบสำรวจออนไลน์ จำนวน 514 ตัวอย่าง และประมวลผลแบบสอบถามด้วยการวิเคราะห์การถดถอยเชิงเส้นและแบบสมการโครงสร้าง

เมื่อพิจารณาค่าเฉลี่ยที่ได้จากแบบสอบถาม พบว่า แรงจูงใจสูงที่สุดในการใช้ Twitter ของประชากรชายไทย คือ ความน่าเชื่อถือ ตามมาด้วย ความคาดหวังในการใช้งาน การไม่เปิดเผยตัวตน เกมออนไลน์ สภาพสิ่งอำนวยความสะดวกของระบบ สแปมและข้อความซ้ำ การได้พบปะผู้ใช้งานใหม่ ๆ อิทธิพลทางสังคม และความคาดหวังในความพยายาม ตามลำดับ

เมื่อใช้ตัวแบบสมการโครงสร้างเพื่อวิเคราะห์ปัจจัยที่มีอิทธิพลต่อการใช้งานทวิตเตอร์ พบว่า ปัจจัยที่มีอิทธิพลสูงที่สุดเรียงตามลำดับจากมากไปหาน้อยเป็นดังนี้ ความน่าเชื่อถือ ตามมาด้วย อิทธิพลทางสังคม สภาพสิ่งอำนวยความสะดวกของระบบ ความคาดหวังในการใช้งาน สแปมและข้อความซ้ำ การได้พบปะผู้ใช้งานใหม่ ๆ เกมออนไลน์ การไม่เปิดเผยตัวตน และความคาดหวังในความพยายาม ตามลำดับ

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ทั้งนี้ ธุรกิจที่เหมือนหรือใกล้เคียง รวมทั้งนักพัฒนาระบบดังกล่าว สามารถนำผลไปประยุกต์ใช้เพื่อเพิ่มจำนวนผู้ใช้งานและจำนวนการใช้งานได้

คำสำคัญ: ทวิตเตอร์ ความน่าเชื่อถือ แรงจูงใจ ความคาดหวัง สื่อสังคมออนไลน์

Introduction

Background and Significance of the Problem

Nowadays, internet has an increasingly important role in people's daily lives, including communication, online trade, sharing of information or stories of users, relaxation and recreation, as well as transactions. According to the survey of behavior of internet users in Thailand in 2019 by Electronic Transactions Development Agency, it revealed that in 2018, there were as high as 47.5 million internet users or 71.5% of the total population in Thailand. The Thais also used internet on the average 10 hours and 22 minutes a day which increased from 2018. The online activity that was the most popular was social media. Nowadays, there are numerous platforms of social media. The grouping of the users of each platform creates Online Social Network. The Online Social Network creates online community among people with the same interests, common activities, similar background, or friendly relationship. Most Online Social Networks function on website by allowing users to be able to create personal information and interact with other users (Schneider, 2009). Many platforms can also be selected for usage according to appropriateness and satisfaction of usage.

Based on the report of the website www.datareportal.com, it is found that in Thailand the growth of the Twitter platform is interesting compared to a similar platform or what is called Social Network Site (SNS). The Social Network Site is devised as the platform of network communication, of which the user has the following: 1.Profile that provides unique identification consisting of the content set by the user and the content set by other users or the content determined by the system 2. An ability to connect with others by allowing others to come in and survey one's content 3. An ability to use the service, construct, or respond to the stream of the content determined by the user through connection on website (Ellison & Boyd, 2013, p. 157). The compared platforms include the following 1. Facebook: In 2019, there were 50 million accounts but in 2020 there were only 47 million accounts and 2. Instagram: In 2019, there were 13 million accounts but in 2020 there were only 12 million accounts. On the contrary, Twitter experienced high growth. In 2019, there were 4.7 million accounts but in 2020 there were 6.55 million accounts. However, the problem with Twitter is the difference of gender of male and female users which is very high. There are only 21.9% of male users but 78.1% of female users compared with 1. Facebook there are 50% each of male and female users 2. Instagram there are 36.4% male users and 63.6% female users. As a result, Twitter is the Social Network Site with the lowest ratio of male users.

Research Question

What is the motivation to use Twitter in male population in Thailand?

Research Objective

This study aims to figure out the motivation to use Twitter in male population in Thailand by conducting an online survey. The result may be helpful to both businesses and application developers to increase both users and usages of their platform.

Concepts and Theories

Twitter is the service for friends, families, and colleagues to communicate fast and frequently. The Twitter includes pictures, video, links, or characters. The messages will be posted on the profile of the users and sent to followers and can be searched through the searching tool of Twitter by limiting the number to 140 characters per 1 tweet (www.twitter.com).

Trust and Fake news on social media Fake news is news article with the intention to be false. Fake news is not a new problem. It changes all the time, from newspaper, radio, television, and social media (Shu, Silva, Wang, Tang and Lui, 2017). Twitter is the platform that stresses speed in spreading messages. As a result, the screening of messages may not be very efficient. Reliability is therefore one of the main parts for the use of online platforms (Akar and Mardikyan, 2014).

Spam and Duplicate Tweets Spam Twitter is easy due to the speed in tweeting various contents. The contents that are not requested will appear in personal news page, the result of the search, and hot topics. These contents will be disseminated by fake account that is clearly constructed by spam senders, who will send a large number of messages or repetitive messages (Thomas, Grier, Paxson and Song, 2011).

Gender differences in Social networking The research of Weiser (2000) dealt with the differences of the form of internet use between gender. It was found that the students of basic psychology and those preparing the questionnaire agreed on the 19 variables in the research. The research selected 2 variables to be in line with the use of Twitter and the research mentioned earlier as follows: 1. Meet new users because Twitter users do not need to reveal real information 2. Online game does not figure in the qualifications of Twitter.

Unified theory of acceptance and use of technology The unified theory of acceptance and use of technology by Venkatesh, et al. (2003) was developed to explain the acceptance and use of technology of users through the development of 8 theories as follows: 1. Theory of Reasoned Action (TRA) 2. The Technology Acceptance Model (TAM) 3. Motivational Model (MM) 4. Theory of Planned Behavior (TPB) 5. Model of PC Utilization (MPCU) 6. Combined theories between TAM and TPB 7. Theory of social foundation, diversities of factors used to explain innovation and use of tools relevant to innovation in organization (Innovation Diffusion Theory: IDT or Diffusion of Innovations: DOI) 8.Theory of changes in human behavior from environmental influence, personal factors, and qualifications of personal behavior (Social Cognitive Theory: SCT).

Research Framework

In consideration with the characteristics of Twitter itself and a few theories earlier explained, a research framework is proposed as seen in Figure 1. There are 9 independent variables, one mediator, and a dependent variable within 9 hypotheses.

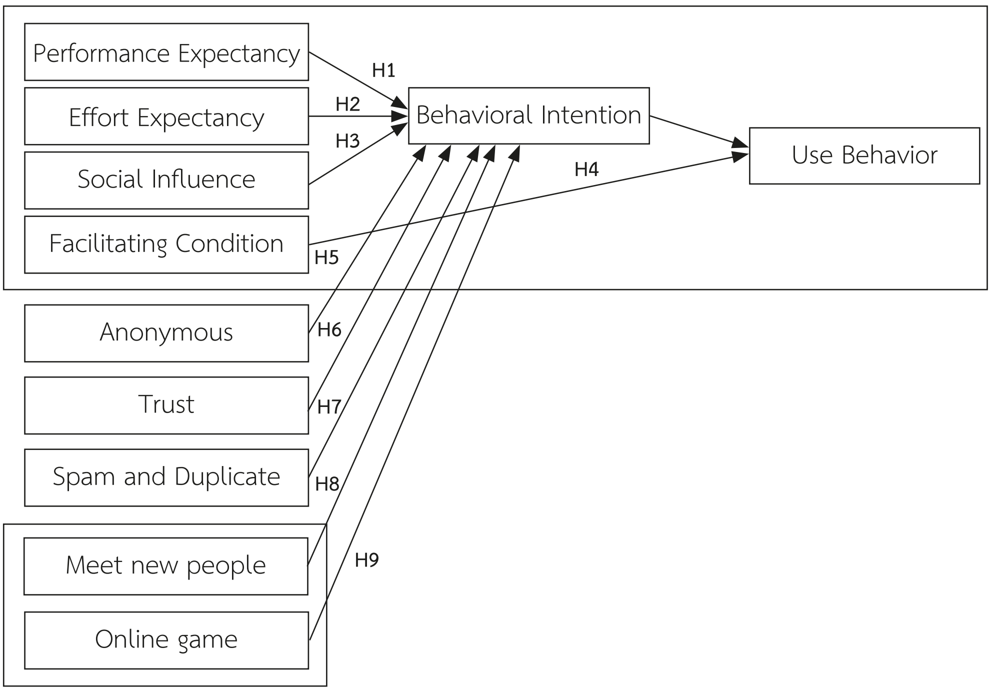

Figure 1: Research Framework

Methodology

This research used the online questionnaire to survey the use of Twitter in the Thai male population. The questions were relevant to the use of Twitter with the rating scale of 1, which means the least and 5, which means the highest. The questionnaire used to measure the variables of the study with three questions each, using the formula to calculate the sample size of Krejcie & Morgan that determined the confidence level of 95%, the ratio of the interesting features of the population of 0.5, and the consideration of 5% degree of error which would acquire the sample size of at least 384, using the SPSS for the analysis of the questionnaire. However, in this survey, 514 questionnaires were received and proceeded.

Research Results

The analysis of the motivation to use Twitter in male population in Thailand used the SPSS to process 514 copies of questionnaire from the sample who were male with or without experience of using Twitter in Thailand. The researchers determined the statistical significance at the level of 0.05 for the data analysis. The details of the analysis were as follows:

Results of Data Analysis relevant to Motivation to use Twitter

As shown in Table 1, the most influencing motivation factor is “Trust of the information”, followed by “Facilitating Condition”, “Performance Expectancy”, “Spam and Duplicate”, “Meeting new people”, “Online game”, “Anonymous”, and “Effort Expectancy”, respectively.

Table 1: Mean, and Standard Deviation of motivation level to use Twitter

(n=514)

Motivation to use Twitter	Motivation levels						
	Least	Low	Moderate	High	Highest	$\bar{X}$	S.D.
1. Performance Expectancy (PE)							
1.1 Use of Twitter is useful in daily life	1	3	0	172	338	4.46	0.538
1.2 Use of Twitter enables faster work	3	2	102	175	232	4.23	0.817
1.3 Use of Twitter enables faster reception of news and information	3	1	94	178	238	4.26	0.8
Total					**4.375**	**0.494**	
2. Effort Expectancy (EE)							
2.1 Usage in the system menu is clear and easy to understand	3	1	105	155	250	4.26	0.827
2.2 Can easily learn to use	3	2	98	173	283	4.25	0.814
2.3 Can easily achieve skill in usage	3	1	118	173	219	4.18	0.829
Total					**4.228**	**0.584**	
3. Social Influence (SI)							
3.1 You will use according to your friend's usage	2	3	105	168	236	4.23	0.818
3.2 You will use according to widely known fame	2	2	99	175	236	4.25	0.802
3.3 You will use according to the person whom you admire	4	2	92	188	228	4.23	0.809
Total					**4.237**	**0.575**	
4. Facilitating Condition (FC)							
4.1 You think you can gain access to Twitter conveniently	2	2	83	175	252	4.31	0.78
4.2 Your smartphone supports Twitter	1	2	103	164	244	4.26	0.801

Table 1: Mean, and Standard Deviation of motivation level to use Twitter (Continue)

(n=514)

Motivation to use Twitter	Motivation levels						
	Least	Low	Moderate	High	Highest	$\overline{X}$	S.D.
4.3 Suggestion within Twitter is easy to understand	3	2	0	181	244	4.61	0.576
Total					**4.394**	**0.491**	
5. Anonymous (A)							
5.1 You expect that your followers will use real information	1	114	0	141	258	4.28	0.81
5.2 You expect that the persons you follow will use real information	3	3	102	168	238	4.24	0.827
5.3 You expect that other users will use real information	0	6	109	156	243	4.24	0.822
Total					**4.25**	**0.584**	
6. Trust (T)							
6.1 Feel afraid in advance for usage	2	3	0	158	351	4.66	0.554
6.2 Feel that will receive inaccurate information	2	2	0	175	335	4.63	0.551
6.3 Feel that the information is not safe	1	3	0	145	365	4.69	0.521
Total					**4.66**	**0.366**	
7. Spam and Duplicate (SD)							
7.1 Feel that tweeting is too fast	2	4	103	156	249	4.26	0.828
7.2 Feel that there is too much tweeting	1	4	114	165	230	4.2	0.823
7.3 Feel that tweeting is annoying	1	5	0	164	344	4.64	0.558
Total					**4.368**	**0.502**	
8. Meet new people (MN)							
8.1 You expect to meet new friends	1	3	103	172	235	4.24	0.802
8.2 You expect to get acquainted with new friends	2	2	0	167	343	4.65	0.547

Table 1: Mean, and Standard Deviation of motivation level to use Twitter (Continue)

(n=514)

Motivation to use Twitter	Motivation levels						
	Least	Low	Moderate	High	Highest	$\bar{X}$	S.D.
8.3 You expect to meet users with the same interests	0	2	117	162	233	4.22	0.806
Total					**4.368**	**0.47**	
9. Online game (OG)							
9.1 You expect to have game to play	2	2	108	175	227	4.21	0.812
9.2 You want to play game with your friends	2	1	0	187	324	4.61	0.544
9.3 You want Twitter to have game to play	4	2	99	165	244	4.25	0.831
Total					**4.359**	**0.476**	
10. Behavioral Intention (BI)							
10.1 You intend to use Twitter for watching news	0	1	5	256	252	4.48	0.53
10.2 You intend to use Twitter for following others	3	2	1	235	273	4.50	0.59
10.3 You intend to use Twitter for expressing opinions on interested issues	2	1	3	267	241	4.45	0.564
Total					**4.476**	**0.368**	
11. Use Behavior (UB)							
11.1 You intend to use Twitter the following month	1	1	0	245	267	4.51	0.534
11.2 You hope to use Twitter the following month	3	1	0	248	262	4.49	0.576
11.3 You plan to use Twitter the following month	2	1	0	250	261	4.49	0.556
Total					**4.497**	**0.342**	

Linear Regression Analysis

Table 2: Regression Coefficient of forecasting equation among variables

Variables	B	Std. Error	Beta	t	p-value
Constant	1.865	0.206		9.042	0.000
PE	0.049	0.206	0.065	1.372	0.171
EE	-0.02	0.035	-0.032	-0.63	0.529
SI	0.058	0.032	0.09	1.795	0.073
A	-0.016	0.031	-0.026	-0.537	0.592
T	0.285	0.043	0.283	6.604	0.000**
SD	0.138	0.037	0.189	3.73	0.000**
MN	0.054	0.037	0.069	1.47	0.142
OG	0.032	0.037	0.042	0.86	0.39

Based on Table 2, it was found that Trust, Spam and Duplicate had influence on Behavioral Intention with the statistical significance at the level of 0.05 which could be used as a forecast to estimate the level of Behavioral Intention with the Path Coefficient of 0.283 and 0.189 and could be explained that when Trust, and Spam and Duplicate increased 1 unit, Behavioral Intention would increase 0.285 and 0.138 unit, respectively.

Table 3: Regression Coefficient of forecasting equation between Facilitating Condition, Behavioral Intention, and Use Behavior

Variables	B	Std. Error	Beta	t	p-value
Constant	2.994	0.191		15.665	0.000
FC	0.061	0.03	0.087	1.986	0.048*
BI	0.276	0.041	0.297	6.798	0.000**

In Table 3, it was found that Facilitating Condition, and Behavioral Intention influenced Use Behavior with the statistical significance at the level of 0.05 which could be used as a forecast to estimate the level of Use Behavior with the Path Coefficient of 0.087 and 0.297 and could be explained that when Facilitating Condition, and Behavioral Intention increased 1 unit, the Use Behavior would increase 0.061 and 0.276 unit, respectively.

Results of the assessment of congruence with empirical data of the model

Table 4 show the assessment of congruence of the evidence-based data and the model. Compared to each criterian, the results were met and the congruence was validated.

Table 4: Results of the assessment of congruence with empirical data of the model

Goodness of Fit Indices	Criteria	Statistics	Results
Chi-square	≤3.00 (Hair et al., 2010)	1.634	Met the criteria
RMSEA	≤0.05 (Sanchez et al.,2020)	0.035	Met the criteria
GFI	[0,1] (Sanchez et al.,2020)	0.917	Met the criteria
CFI	[0,1] (Sanchez et al.,2020)	0.89	Met the criteria
TLI	[0,1] (Sanchez et al.,2020)	0.87	Met the criteria
NFI	[0,1] (Sanchez et al.,2020)	0.765	Met the criteria

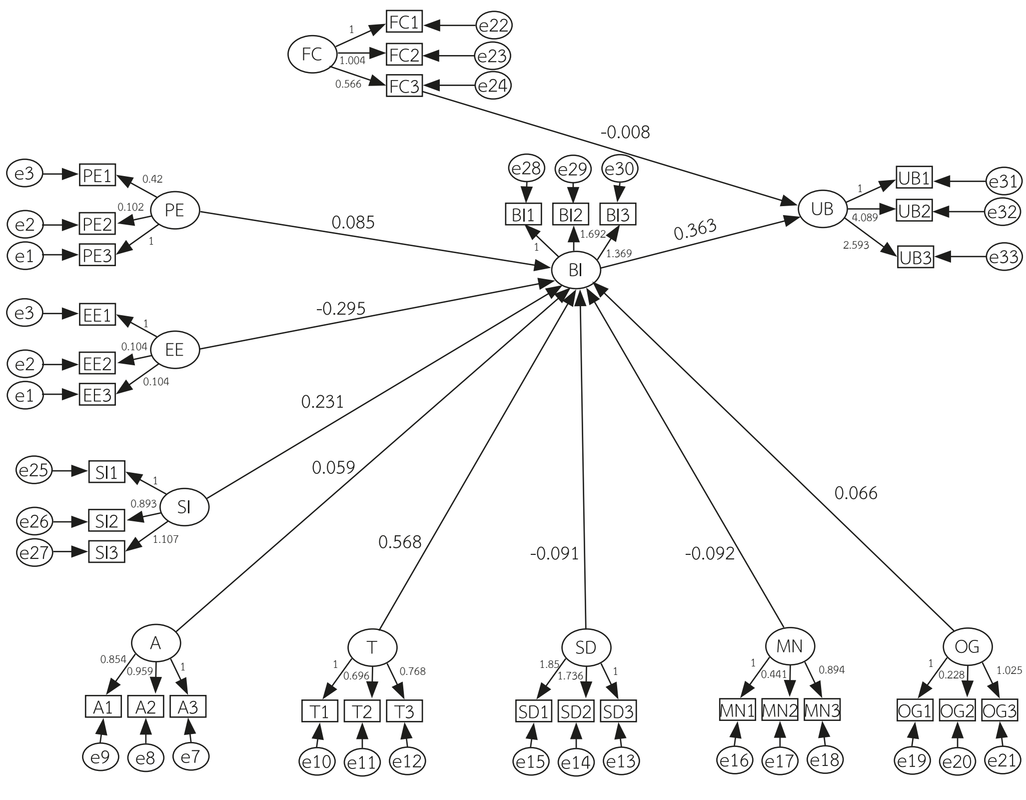

Figure 2: Path Coefficient

Table 5: Path Coefficient with direct, indirect, and combined effects of Independent Variables on Dependent Variables

Independent Variables	Effects	Dependent Variables	
		Behavioral Intention	Use Behavior
Performance Expectancy	SDE	0.193	-
	SIE	-	0.199
	STE	0.193	0.199
Effort Expectancy	SDE	-0.715	-
	SIE	-	-0.737
	STE	-0.715	-0.737
Social Influence	SDE	0.546	-
	SIE	-	0.563
	STE	0.546	0.563
Facilitating Condition	SDE	-	-0.046
	SIE	-	-
	STE	-	-0.046
Anonymous	SDE	0.152	-
	SIE	-	0.156
	STE	0.152	0.156
Trust	SDE	0.955	-
	SIE	-	0.985
	STE	0.955	0.985
Spam and Duplicate	SDE	-0.109	-
	SIE	-	-0.112
	STE	-0.109	-0.112
Meet new people	SDE	-0.179	-
	SIE	-	-0.185
	STE	-0.179	-0.185

Table 5: Path Coefficient with direct, indirect, and combined effects of Independent Variables on Dependent Variables (Continue)

Independent Variables	Effects	Dependent Variables	
		Behavioral Intention	Use Behavior
Online game	SDE	0.145	-
	SIE	-	0.150
	STE	0.145	0.150

Remark: Standardized Direct Effect (SDE), Standardized Indirect Effect (SIE), Standardized Total Effect (STE)

Table 6: Summary of the Results of the Research Hypothesis Testing

Hypotheses	Path Coefficient	P-value	Results
Hypothesis H1: Performance Expectancy influenced Behavioral Intention	0.085	<0.05	Accepted the hypothesis
Hypothesis H2: Effort Expectancy influenced Behavioral Intention	-0.295	<0.05	Accepted the hypothesis
Hypothesis H3: Social Influence influenced Behavioral Intention	0.231	<0.05	Accepted the hypothesis
Hypothesis H4: Facilitating Condition influenced Use Behavior	-0.008	<0.05	Accepted the hypothesis
Hypothesis H5: Anonymous influenced Behavioral Intention	0.059	<0.05	Accepted the hypothesis
Hypothesis H6: Trust influenced Behavioral Intention	0.568	<0.05	Accepted the hypothesis
Hypothesis H7: Spam and Duplicate influenced Behavioral Intention	-0.091	<0.05	Accepted the hypothesis
Hypothesis H8: Meet new people influenced Behavioral Intention	-0.092	<0.05	Accepted the hypothesis
Hypothesis H9: Online game influenced Behavioral Intention	0.066	<0.05	Accepted the hypothesis

Result of Hypothesis testing

The data analysis was conducted with the SPSS using the descriptive statistics to analyze Frequency, Percentage, Mean, and Standard Deviation, as well as the analysis of Inferential Statistics with the Structural Equation Modeling (SEM) for hypothesis testing from the analysis of the congruence of the Structural Equation Modeling and the analysis of the direct and indirect standard Path Coefficient with the statistical significance at the level of 0.005. The hypothesis testing results are as followed:

Hypothesis H1: Performance Expectancy influenced Behavioral Intention with the Path Coefficient of 0.085, the Effect Size of 0.193, and the statistical significance at the level less than 0.05. The result could be summarized as acceptance of the hypothesis.

Hypothesis H2: Effort Expectancy influenced Behavioral Intention with the Path Coefficient of -0.295, the effect size of -0.715, and the statistical significance at the level less than 0.05. It could be summarized as acceptance of the hypothesis.

Hypothesis H3: Social Influence influenced Behavioral Intention, with the Path Coefficient of 0.231, the Effect Size of 0.546, and the statistical significance at the level less than 0.05. It could be summarized as acceptance of the hypothesis.

Hypothesis H4: Facilitating Condition influenced Use Behavior with the Path Coefficient of -0.08, the Effect Size of -0.046, and the statistical significance at the level less than 0.05. It could be summarized as acceptance of the hypothesis.

Hypothesis H5: Anonymous influenced Behavioral Intention with the Path Coefficient of 0.059, the Effect Size of 0.152, and the statistical significance at the level less than 0.05. It could be summarized as acceptance of the hypothesis.

Hypothesis H6: Trust influenced Behavioral Intention with the Path Coefficient of 0.568, the Effect Size of 0.955, and the statistical significance at the level less than 0.05.

Hypothesis H7: Spam and Duplicate influenced Behavioral Intention with the Path Coefficient of -0.091, the Effect Size of -0.109, and the statistical significance at the level less than 0.05.

Hypothesis H8: Meet new people influenced Behavioral Intention with the Path Coefficient of -0.092, the Effect Size of -0.179, and the statistical significance at the level less than 0.05. It could be summarized as acceptance of the hypothesis.

Hypothesis H9: Online game influenced Behavioral Intention with the Path Coefficient of 0.066, the Effect Size of 0.145, and the statistical significance at the level less than 0.05. It could be summarized as acceptance of the hypothesis.

Note here that, the detail results are shown in Figure 2, Table 5, and Table 6.

Conclusions and Recommendations

Conclusions

The ranking of the influences toward the Behavioral Intention from the highest to the least was as follows: 1. Trust 2. Social Influence 3. Performance Expectancy 4. Anonymous 5. Online game 6. Facilitating Condition 7. Spam and Duplicate 8. Meet new people 9. Effort Expectancy.

The ranking of the motivation to use Twitter order by their means from the highest to the least revealed the following: 1. Trust 2. Facilitating Condition 3. Performance Expectancy 4. Spam and Duplicate 4. Meet new people (tied with Spam and Duplicate) 6. Online game 7. Anonymous 8. Social Influence 9. Effort Expectancy, respectively.

With these results in consideration, any Twitter-like business and developers could apply to their business and applications for the purposes of increasing the number of both users and usages. For example, Trust is the highest influencing factor, related businesses and developers should implement the secured system and also protect information accordingly.

Recommendations

In Thailand, Twitter experiences continuous growth but the rate of twitter usage in male population remains the same. The future research may increase the variables of the characteristics of the male population that are different from those of the female population which will enable the twitter usage to have different rates of usage.

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International Principles and Obligations Concerning The Right to Access and Use Contracts for The Use of Vehicles in International Traffic under The International Rail Transport Legal System

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Abstract

Thailand promotes the development of a rail transport system for the carriage of goods and passengers by rail both domestic and international traffic. The rail transport operators in Thailand must be licensed by the Department of Rail Transport of Thailand for the use of infrastructure systems and railway vehicles as means of transport for goods and passenger carriages. The findings indicated that the International Agreement on Rail Transport of the Intergovernmental Organization for International Carriage by Rail (OTIF) and the Organization for Cooperation of Railways (OSJD), defines the principles of rights, duties, and responsibilities of the contractual carrier, Infrastructure Manager and business operators related to the utilization of the railway infrastructure. These principles must be transformed into Thailand's rail law development for the implementation of

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international technic and standards on rail transport operation. Even though Thailand is not yet a member state of either OTIF or OSJD, however, such legal principles will be able to apply as a model law for development concerning law for the promotion and control of the utility infrastructure and the vehicles both domestic and international rail traffic. Based on the major findings, the results suggest that as follows: (1) Thailand must enact rail transport law of the Department of Rail Transport of Thailand; (2) the Department of Rail Transport must enact sui generis law as the regulation to specify the access and utilization of infrastructure and vehicle contracts; (3) and to specify the rights, duties, liabilities, dispute resolution, and limitation of actions of the contractual carrier, infrastructure manager and business operators to support sustainable economic development.

Keywords: International Railway Law, Railway Contract Law, COTIF, OSJD

หลักการและพันธกรณีระหว่างประเทศเกี่ยวกับสิทธิในการเข้าถึงและการใช้ประโยชน์จากการทำสัญญาการใช้งานของยานพาหนะในการจราจรระหว่างประเทศภายใต้ระบบกฎหมายระหว่างประเทศว่าด้วยการขนส่งทางราง

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บทคัดย่อ

ประเทศไทยส่งเสริมการพัฒนาระบบการขนส่งสินค้าและคนโดยสารทางรางทั้งภายในประเทศและระหว่างประเทศ ผู้ประกอบกิจการขนส่งทางรางต้องได้รับใบอนุญาตประกอบกิจการจากกรมการขนส่งทางรางในการใช้ประโยชน์จากระบบโครงสร้างพื้นฐานและการเดินรถ เพื่อการขนส่งสินค้าและคนโดยสารทางราง จากการศึกษาพบว่า ความตกลงระหว่างประเทศว่าด้วยการขนส่งทางรางขององค์การระหว่างรัฐเพื่อการขนส่งทางรางระหว่างประเทศ และองค์การเพื่อความร่วมมือในการขนส่งทางราง กำหนดหลักเกณฑ์เกี่ยวกับสิทธิหน้าที่ และความรับผิดตามสัญญาของผู้รับขนส่ง ผู้จัดการโครงสร้างพื้นฐานและผู้ประกอบธุรกิจอันเกี่ยวกับการใช้ประโยชน์จากระบบโครงสร้างพื้นฐานทางราง หลักการดังกล่าวควรนำมาปรับใช้เป็นหลักสำหรับการพัฒนาหลักกฎหมายขนส่งทางรางของประเทศไทย ไม่ว่าจะเป็นการกำหนดมาตรฐานระหว่างประเทศทางเทคนิคหรือแม้แต่มาตรฐานในการประกอบกิจการขนส่งทางรางก็ตาม ถึงแม้ว่าประเทศไทยจะยังมิได้เข้าเป็นภาคีสมาชิกไม่ว่าจะเป็นองค์การขนส่งทางรางระหว่างประเทศใด ๆ เลยก็ตาม แต่หลักการดังกล่าวสามารถนำมาปรับใช้ในฐานะที่เป็นต้นแบบการพัฒนาเกี่ยวกับการส่งเสริมและการควบคุมกำกับการใช้ประโยชน์จากยานพาหนะและโครงสร้างพื้นฐานทางราง ไม่ว่าจะเป็นในการเดินรถภายในประเทศ

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หรือระหว่างประเทศก็ตาม การศึกษาครั้งนี้เสนอแนะว่า (1) ประเทศไทยต้องประกาศใช้กฎหมายขนส่งทางรางของกรมการขนส่งทางราง (2) กรมการขนส่งทางรางต้องประกาศใช้กฎหมายเฉพาะในรูปแบบกฎหมายลำดับรองในการกำหนดสิทธิในการเข้าถึงและการใช้ประโยชน์จากสัญญาการใช้ประโยชน์จากยานพาหนะและโครงสร้างพื้นฐานทางราง และ (3) ต้องกำหนดกฎหมายเฉพาะเกี่ยวกับการกำหนดสิทธิ หน้าที่และความรับผิดของผู้รับขน ผู้จัดการโครงสร้างพื้นฐานและผู้ประกอบธุรกิจขนส่งทางรางเพื่อส่งเสริมการพัฒนาเศรษฐกิจที่ยั่งยืน

คำสำคัญ: กฎหมายขนส่งทางรางระหว่างประเทศ กฎหมายสัญญาขนส่งทางราง องค์การขนส่งทางรางระหว่างประเทศ

Introduction

The rail transport system development is Thailand's concept and strategy for economic growth for supporting foreign investment and international trade through domestic and international rail transportation whereas the geography of Thailand is linked with Laos, Myanmar, Cambodia, and Malaysia. (Exim, 2013)

The development concept complies with Sustainable Development Goal 8, which aims to promote sustainable and inclusive economic growth through improving labor productivity and developing technology and innovation for production. To achieve these goals, emphasis must be placed on strengthening entrepreneurship, creating jobs, and implementing policies to combat illegal labor, slavery, and human trafficking. (Office of the National Economic and Social Development Council, 2019) This will lead to full and productive employment and decent work in compliance with Goal 9 by promoting continually introducing innovations to society such as the development of energy-saving technologies, the invention of innovations, Industrial technology development that is environmentally friendly, development of digital technology including the perfect transportation and infrastructure system that facilitate the crossing of frontiers for people, goods and services carried by rail, which are key factors of the improvement of the quality of life and economic growth of Thailand. (Faculty of Science, Mahidol University, 2019)

In the present day, Thailand has increasingly progressive development concerning its transport infrastructure network, which is reflected in the World Competitiveness Ranking conducted by the International Institute for Management Development [IMD], which reports that Thailand's competitiveness in terms of infrastructure to support freight and logistics is improving by multimodal transportation networks. (Office of the National Economic and Social Development Council, 2019)

However, Thailand's legal mechanisms and systems have not yet developed in compliance with the international rail transport standards and legal system, whether it is the development of a draft law on rail transport business and the Transit-Oriented Development [TOD] draft laws that support the development of areas surrounding stations. In addition, Thailand has not yet entered into any member state of an international rail transport agreement.

Thus, the research questions are as follows: Should Thailand be a member state of the international agreement of OTIF or OSJD organization?, and Should Thailand promptly enact sui generis law to promote the regulator of state to regulate the utilization of the vehicle in internal and international rail traffic?

This paper will examine specific international rail law related to Principles concerning the Contract of Use of Vehicles and Infrastructure in International Rail Traffic of OTIF and the concept of the International Rail Transport Law development, OSJD's Draft Convention on International Through Railway Traffic [Draft OSJD Convention] as it plays a major role to set common rules and legal systems in managing the international rail transport system among member states. (Calme, 2016 ; Interreg Central Europe, 2019) Then, analyze legal problems and obstacles related to the development of legal systems in compliance with international rail transport in Thailand, and lastly, propose policy recommendations for the development of rail transport law and regulation.

Research Methodology

This research used documentary research by comparative analysis of the International Agreement on Rail Transport of the Intergovernmental Organization for International Carriage by Rail (OTIF) and the Organization for Cooperation of Railways (OSJD) and collecting and studying information gleaning from various sources such as papers, official websites, and relevant articles. This research adopted a qualitative approach. The information will be thoroughly analyzed especially the provisions of the International Agreement of OTIF and OSJD concerning the analysis of problems and obstacles, the role of Thailand in enacting specific laws to promote the regulator of state to regulate the utilization of the vehicle in international rail traffic. Finally, the proposals will also be considered focusing on drawing a sui generis law, and policy recommendations will also be made for the Thai Government if it decides to be a member state of an international agreement.

Research Findings and Discussion

A Comparative Principles and Obligations of the Contracts of Use of Vehicles in International Rail Traffic and the Contracts of Use of Infrastructure in International Rail Traffic

This part will be analyzed and compared by the principle and obligation concerning the Contracts of Use of Vehicles and the Contracts of Use of Infrastructure in International Rail Traffic between 2006 the Convention concerning International Carriage by Rail [COTIF] and the 2015 Draft OSJD Convention of OSJD (BGBl. III, 2006) and it will be discussed on the concept of the contracts of use of vehicles and the contracts of use of infrastructure in international rail traffic. Moreover, it will be also discussed the principles and obligations concerning the right, duty, and liability of the use of vehicles and the infrastructure.

Principle, Obligation, and Liability concerning the Contracts of Use of Vehicles in International Rail Traffic on Appendix D of COTIF and Annex 5, Annex 6, and Annex 7 of OSJD

Principle, obligation, and liability concerning contracts of use of vehicles in International Rail Traffic Agreements and the General Provision on the Standard of Use of Vehicles in International Rail Traffic on use of freight wagons and passenger coaches in International Rail Traffic Agreements.

1) The Concept of the Contracts of Use of Vehicles in International Rail Traffic Agreements

The study found that the international agreements of both the OSJD and COTIF stipulate the same criteria, service standards, and liability for damage arising from the rail transport service. It can be seen that the concept of the Appendix D Uniform Rules concerning Contracts of Use of Vehicles in International Rail Traffic (CUV) [Appendix D of COTIF] in Article 1 and Article 2 of Appendix D of COTIF (OTIF, 2019), which this agreement aims to set standards for the operation of rail transport in the territory of OSJD member states, whether it is operated by the state enterprise or private sector. (International Rail Transport Committee CIT, 2015)

Meanwhile, Annex 5 General Provision on Railway Rolling Stock in International Traffic [Annex 5 of Draft OSJD Convention] specify concept and idea to sets standards for providing safety services to passengers and using infrastructure or international rail transport operation among member states (Calme, 2016) such as Paragraph 1 of Annex 5 of Draft OSJD Convention specifies the scope of application and interpretation to all railway rolling stock in international traffic, which covers all locomotives, freight wagons, passenger coaches, including passenger coaches, including Paragraph 2 of Annex 5 of Draft OSJD Convention do not be permitted to operate in international through railway traffic in case of rolling stock which does not meet the safety standard regulation that requirements for rail operation specify by domestic legislation or international agreements amongst OSJD members states.

2) The General Provision on the Standard of Use of Vehicles in International Rail Traffic on Use of Freight Wagons and Passenger Coaches in International Rail Traffic Agreements

The study found that principles of the use of freight wagons and passenger coaches are set in Annex 5, Annex 6 General Provisions on Use of Freight Wagons in International Traffic [Annex 6 of Draft OSJD Convention] and Annex 7 General Provisions on Use of Passenger Coaches in International Traffic [Annex 7 of Draft OSJD Convention] However, these liability principles on the use of freight wagons and passenger coaches do not specify in Appendix D of COTIF.

2.1) The Principles on Duty, and Liability on the Use of Freight Wagons in International Traffic in Annex 5 and Annex 6 of OSJD

The study found that the concept of the Provision on the Use of Freight Wagons in International Traffic of Annex 6 of the Draft OSJD Convention has specified stakeholder relationships either amongst railway companies or between wagon processors and railway business operators on the use of freight wagons for performing carriage obligation. Moreover, this Annex also set the scope and interpretation of railway companies, wagons, wagon keepers, railway companies using a wagon, railway infrastructure, home stations, etc. (Calme, 2016)

Moreover, paragraphs 3.1 of Annex 5 of the Draft OSJD Convention specify the requirements for OSJD member states, which must lay down national provision for an application to all rolling stock concerning the markings and inscriptions stuck to wagon or coach bodies of rolling stock, the signals which mark the head end of a train, the equipment for the use of hand brakes for freight wagons in case of emergency incidents, the materials used in the production of either parts or components of rolling stock, and the rolling stock gauge on OSJD members' railway infrastructure.

Meanwhile, paragraphs 3.3 of Annex 5 of the Draft OSJD Convention specify the requirements to OSJD member states, which also enacts the requirements applicable to traction rolling stock concerning the devices for communications between the driver and the control center, electricity on elements of the railway infrastructure and the production of compressed air, and the driving of trains following the tonnage rating using in the railway infrastructure system of OSJD Members, etc.

In addition, the principles of Annex 6 of the Draft OSJD Convention also set several standards for the use of freight containers. First, Wagons were designed to be used for the carriage of goods on Article 6 of Annex 6 of the Draft OSJD Convention. Second, the container's signs, the number of the wagon, the wagon keeper, and an indication of the home station must be displayed on the wagon, which is specified by Article 3 of Annex 6 of the Draft OSJD Convention. Third, the wagon delivery must conclude between the railway company and another railway company and must also be recorded in documents concerning names of railway companies as contracting parties, the numbers of the wagons, and the date and time of wagon delivery, which is specified by Article 4 Annex 6 of Draft OSJD Convention. Forth, the wagons are suitable and stable whilst in use, which is specified by Article 5 Annex 6 of the Draft OSJD Convention. Fifth, company liability for compensation of all repairing and maintenance costs. in connection with Article 5 Annex 6 of the Draft OSJD Convention (Economic and Social Commission for Asia and the Pacific [ESCAP], n.d.)

It is worth noting that OTIF's international agreements do not prescribe the principles concerning details of the wagon utilization contracts as those set out in the international agreements in Annex 6 of the Draft OSJD Convention, which provides the principles, duties, and responsibilities in several provisions, whether the display of signs, handover of wagon duties of the company, duty to maintenance and repair wagons, etc.

In addition, the international agreement provides the liability that results from the fault of the railway operator from damage to or loss of a wagon, the operator must be liable for such damage or loss. This principle is provided by Article 7 of Appendix D of COTIF, in line with the principles outlined in Article 7 of Annex 6 of the Draft OSJD Convention. However, in case of the operator will be able to prove that such loss or damage was not a failure on its part, the operator shall not be liable *for any* damage or loss in Article 4, Part 1 of Appendix D of COTIF, which corresponds to the principles outlined in Article 7 of Annex 6 of the Draft OSJD Convention. (Organization for Co-Operation between Railway [OSJD], 2018)

Notwithstanding, these liability and exclusion principles, the parties may otherwise conclude into an agreement for excluding or limiting their liability following the principles outlined in Article 4 and Section 5 of Appendix D of COTIF and Article 7 and Paragraph 5 of Annex 6 of Draft OSJD Convention only in case of the damage is caused by the operator's negligence, However, this exceptional clause may not apply in case of it is proved that the loss or damage from failure by intention, recklessness, and operator foreseeable that such loss or damage would probably occur. (Working Party on Rail Transport, Group of Experts on Unified Railway Law, 2010).

However, the COTIF’s International Agreement provides in Article 9 of the Appendix D of COTIF for the liability of the company from servants and other persons, which are acting within the scope of their functions and the right of recourse and subrogation of action in Article 8 of Appendix D of COTIF (OTIF, 2018), including the prescription period for exercising limitation of claims within 3 years from the day of loss of or damage was discovered or damage occurred that specify by Article 12 of Appendix D of COTIF (OTIF, 2011). Meanwhile, Annex 6 of the OSJD international agreement does not specifically prescribe such a principle.

On the other hand, the OSJD’s International Agreement defines liability in detail more than COTIF’s International Agreements such as dispute resolution by the court, judicial jurisdiction which is outlined in Article 10 of Annex 6 of the Draft OSJD Convention, and the exercise of the right to such claims must act within 3 years from the day on which the circumstances giving rise to the claim have occurred, which specified by Article 11 of Annex 6 of the Draft OSJD Convention. Meanwhile, Appendix D of COTIF does not provide for the specific dispute resolution and limitation for claim periods as those set out in Annex 6 of the Draft OSJD Convention.

2.2) The Principles, Duty, and Liability on Use of Passenger Coaches in International Traffic only specified by Annex 5 and Annex 7 of OSJD

The study found that paragraph 3.2 of Annex 5 of the Draft OSJD Convention specifies the general principles on technical standards to be applied to passenger rolling stock concerning public health, safety on vehicles, especially for disabled people, a communication system between passengers and train crew, emergency brake system Electrical systems in passenger coaches, etc.

Meanwhile, Annex 7 General Provisions on Use of Passenger Coaches in International Traffic [Annex 7 of Draft OSJD Convention] set the fourth standard criteria concept related to the use of passenger coaches in Article 1 of Annex 7 of Draft OSJD Convention. It establishes the rights and duties among the railway companies that operate the rail transport business and coach keepers based on ownership or another legal basis of the passenger coaches. (Calme, 2016).

Besides, Article 2 of Annex 7 of the Draft OSJD Convention specifies the scope of application and interpretation to apply to railway companies, coaches, coach keepers, and Railway companies using a coach, maintenance, and lost coach. (ESCAP, n.d.). Meanwhile, the COTIF's International Agreement does not specifically provide the technical standards related to the use of passenger coaches by rail.

In addition, Annex 7 of the Draft OSJD Convention also prescribes principles and standards for the use of international rail passenger coaches regarding the Signs and inscriptions on passenger coaches on the numbers of coach, the sign of the coach keeper that may be made through electronic mark which specifies by Article 3 of Annex 7 of the Draft OSJD Convention, passenger coaches delivery that must be concluded by agreement between the railway companies and recorded in documents, which must specify details as follows the names of the company parties, the numbers of the passenger coaches, and the date and time of passenger coach delivery as defined by Article 4 of Annex 7 of the Draft OSJD Convention.

Moreover, the maintenance and repair of passenger coaches in Article 5 of Annex 7 of the Draft OSJD Convention stipulate that the passenger coach keeper must ensure that the passenger coaches are suitable and stable while operating safely and that the coaches must be in good technical operations. However, the parties may otherwise agree on other conditions. (Organization for Co-Operation between Railway [OSJD], 2018)

Meanwhile, the liability for the use of passenger coaches is not specified by the COTIF's Agreement as the OSJD's International Agreement, it can be seen that the OSJD International Agreement does set forth liability principles in several matters as follows:

First, in case of damage to or loss of the coaches, the railway company must be fault liability for such incidents, however, in case of the company will be able to prove that such loss or damage was not caused by fault on its part, the company do not liable for any damages occur as provided by Article 6 of Annex 7 of the Draft OSJD Convention.

However, Article 6 of Annex 7 of the Draft OSJD Convention also specifies the limited liability of compensation for damages in 2 cases as follows: In the first case, the railway company shall be liable for not more than the value of the passenger carriage available in the market at the time of the loss. In the second case, if the passenger coaches are damaged, Article 6 of Annex 7 of the Draft OSJD Convention also provides that the remedies shall be limited to the cost of the repair of the passenger coaches, however, to compensate for this damage, the rail transport company and the owner of the passenger carriage may otherwise conclude into an agreement that provided for in Article 6 of Annex 7 of the Draft OSJD Convention.

Second, in case of liability for loss or damage arising from passenger coaches, Article 7 of Annex 7 of the Draft OSJD Convention also stipulates fault liability of coach keeper for loss and damage arising from coaches, however, in case of the company will be able to prove that such loss and damage was not caused by the keeper, the company do not liable for any damages occurred.

Third, in the case of liability for the consequences of the actions of employees and other persons outlined by Article 8 of Annex 7 of the Draft OSJD Convention, the rail transport companies and the coach keepers are responsible for the consequences of the actions of employees whose are performing their duties in the official employment When it appears that such person has performed the duty as assigned Railway companies and coach keepers shall be responsible for persons in their employment and other persons.

Fourth, regarding dispute resolution and judicial jurisdiction on Article 9 of Annex 7 of the Draft OSJD Convention, the dispute shall be resolved by a court where the defendant is domiciled, unless otherwise agreed by the parties. In addition, the exercising period for actions is stipulated by Article 10 of Annex 7 of the Draft OSJD Convention and action must be made within 3 years from the date of the circumstances giving rise to the claim occurred.

It is worth noting that Appendix D of COTIF Principles does not provide for the specific dispute resolution and limitation claim periods as those set out in Annex 7 of the Draft OSJD Convention.

The Principle, Obligation, and Liability concerning Contracts of Use of Infrastructure in International Rail Traffic on Appendix E of COTIF and Annex 4 of OSJD

The study found that COTIF's international agreements contain contractual requirements for the utilization of infrastructures such as the content and form of the contract, and the binding and termination of the contract, while the OSJD's international agreements, do not specify such provisions.

Appendix E Uniform Rules concerning Contracts of Use of Infrastructure in International Rail Traffic (CUI) [Appendix E of COTIF] has aim to specify the same standards for the use of transport infrastructure contracts in OTIF's Member states, which outlined in Article 1 of Appendix E of COTIF to support the application of the provisions in the Uniform Rules concerning the Contract of International Carriage of Passengers by Rail (CIV-Appendix A to the Convention) and the Uniform Rules Concerning the Contract of International Carriage of Goods by Rail (CIM-Appendix B to the Convention) (United Kingdom, 2003). Article 3 of Appendix E of COTIF defines the scope of enforcement of the use of rail infrastructure, which means the railway lines and fixed installations. It is also addressed to managers, carriers, employees, or other persons who provide transportation services in the performance of the contract, the license granted by a State, and safety certificate, etc.

It is worth noting that the principles specify by Article 4 of Appendix E of COTIF are of public order and Bono mores provisions. No State Party may enact domestic legislation which, directly or indirectly, renders the principles outlined in this Appendix E of COTIF ineffective in that State Party territory. Such domestic law which is contrary to such public order and Bono mores provisions are void. (The association of European Rail Infrastructure Managers [EIM], 2014).

However, States Parties may, in certain instances, enact exceptional principles for non-applicability of the principles, which is specified by the Uniform Rules in Article 2 of Appendix E of COTIF and it is without prejudice to the principles of public order and Bono mores provisions specified by Article 4 of Appendix E of COTIF. Although damages are life, body or sanitary, or mental health, in case of it appears that such damage meets two criteria: firstly, the victim has the nationality of the State in question; and secondly, the victim has a regular residence in the State in which such damage occurred.

Whereas the concept of Annex 4 General Provisions on Railway Infrastructure in International Traffic [Annex 4 of Draft OSJD Convention] is to set the technical standards and safe operation provisions related to passenger coach and freight trains in international traffic which specify by Paragraph 1 and 2 of Annex 4 of OSJD (Calme, 2016). In addition, this principle also set forth technical measures to ensure unrestricted safety and must be always available for passenger and rail transport services, speed rating requirements, tonnage rating, and train headways laid down including railway infrastructure services for the different track gauges. In addition, Annex 4 of the Draft OSJD Convention also defines the scope of application of the railway infrastructure included as follows: railway tracks, bridges, tunnels, signaling devices and communications, energy supply, equipment ensuring the safe operation of coaches and rolling stock, and railway stations such as platforms passenger terminals and surrounding areas, etc.

Meanwhile, paragraph 3 of Annex 4 of the Draft OSJD Convention stipulates that the duty of the infrastructure manager must ensure that the equipment operating is maintained in good working condition and suitable for using together with paragraph 4 of Annex 4 of Draft OSJD Convention, also stipulates the duty of infrastructure manager to provide and prepare equipment and facilities for use at railway stations. Platforms shall also be equally available to the public whether it is for providing services to vulnerable groups or persons with physical and intellectual disabilities to receive convenient and equal services.

1) Domestic legislation to enforce the content and form of contracts for the utilization of rail transport infrastructure.

The study found that Annex 4 of the Draft OSJD Convention does not prescribe the principles of contracting for the utilization of infrastructure in the rail transport operation. On the other hand, Appendix E of COTIF specifies the content, details, and form of the contract including contractual obligations, contract termination, non-applicable laws, duties of carriers and infrastructure managers, contract termination, etc.

As a preliminary observation, Article 5 of Appendix E of COTIF requires member states to enact domestic legislation governing the legal relationship between the infrastructure manager and carrier or any other person who transports passengers or cargo. Such contracts must be made in writing, and contain necessary details about the terms of utilization, both in terms of compliance with the measures of the management's technical terms and financial terms.

Article 5 bis of Appendix E of COTIF also requires member states to enact domestic legislation to apply to the rights, obligations, and liabilities relating to rail operators, who are licensed to operate, and it also includes the infrastructure manager (OTIF, 2017). In addition, Article 6 of Appendix E of COTIF also establishes the specific duty of carriers to managers. Managers are empowered to require operators to show valid licenses and safety certificates for rail. (OTIF, 2018).

Meanwhile, the Termination of the contract in Article 7 of Appendix E of COTIF provides for the power of infrastructure managers to terminate an operation contract when it appears that first, the carrier does not authorize to carry by rail, second, the service personnel and vehicles do not meet safety standards requirements. On the other hand, the principle in Article 7 of Appendix E of COTIF also provides that the transport operator may use the right to revoke the contract in case of the manager is no longer right and responsible for managing the railway infrastructure.

However, the principles in Article 7 of Appendix E of COTIF also provide that each party may terminate the contract in case it appears that the contract in force has materially breached the terms relating to the safety of passengers or goods. The party causing such termination shall be liable to the other party for any damage or loss resulting from such activity unless it will be able to prove that such loss and damage were not the fault liability of the party who failed to comply with the provisions of the contract. (The association of European Rail Infrastructure Managers [EIM], 2014).

2) Liability from the utilization of railway infrastructure in rail transport operation

The study found the COTIF's International Agreement specifically provides for liability arising from the use of railway infrastructure as follows: liability of infrastructure managers and carriers for damage to life and bodily injury, claims, and limitation of actions, form, amount of damages and interest, nuclear incidents, dispute resolution, etc. Meanwhile, the OSJD's international agreement does not specifically provide the liability arising from the utilization of the rail infrastructure.

2.1) Liability of Infrastructure Managers and Liability of Carriers

Appendix E of COTIF has stipulated the liability of infrastructure managers and carriers in Article 8 Section 1 of Appendix E of COTIF (OTIF, 2011), which has specified the liability for all damage to life, body, mental, or property while using the infrastructure by the Uniform Rules on Carriage of Passengers and Luggage (CIV) and the Uniform Rules on Carriage of Goods (CIM).

However, Article 8 of Appendix E of COTIF provides for an exception clause that infrastructure managers are not liable for damages in three cases as follows: (OTIF, 2011).

First, the damages caused are not the fault liability of the infrastructure manager in which results from damages by the carrier, rise to the loss or damage caused by circumstances not connected with the management of the infrastructure manager, including it could not avoid and be unable to prevent, which is outlined in Section 2 a) of Article 8 of Appendix E of COTIF.

Second, the damages caused by the carrier's actions and not the fault liability of the infrastructure manager as outlined in Section 2 b) of Article of Appendix E of COTIF, in which the infrastructure manager has exercised due care in the nature and circumstances of the case, which cannot be avoided or is the result of which prevention cannot be taken.

Third, regarding the damages caused by nuclear incidents under Article 17 of Appendix E of COTIF, the infrastructure manager must not be liable for damages arising under the Uniform Rules and Appendix E of COTIF when it appears that any other person is legally liable and respond which is provided by sui generis domestic law.

Meanwhile, the liability of the carrier in Section 1 of Article 9 of Appendix E of COTIF also provides for liability for damage to life, body, metal, or property which is caused by the carrier during the use of the infrastructure. (The association of European Rail Infrastructure Managers [EIM], 2014). However, Section 2 a) of Article 9 of Appendix E of COTIF specifies for the following three exemptional clauses that the carrier will not be liable for damage that occurred (OTIF, 2011).

First, it is not the fault liability of the carrier under Section 2 a) of Article 9 of Appendix E of COTIF, which has exercised caution by the nature and circumstances, which is a situation that cannot be avoided or cannot be prevented, or which is the fault of the victim or a third party.

Second, in case of fault liability of infrastructure manager or by the order given by the manager and it is not the fault of the carrier, especially, the carrier cannot be avoided or where prevention cannot be taken according to Section 2 b) of Article 9 of Appendix E of COTIF.

Third, regarding the damages caused by nuclear incidents under Article 17 of Appendix E of COTIF, the carrier must not be liable for damages arising under the Uniform Rules and Appendix E of COTIF when it appears that any other person is legally liable and respond which is provided by sui generis domestic law.

2.2) Characteristic of liability for damage to life and bodily injury

The study found that Article 11 of Appendix E of COTIF sets forth the liability for damages of life in line with general tort law principles. The liability includes any expenses resulting from the death. The cost of transporting the body and the funeral expenses but in case of damages in case of personal injury such as non-immediate death or case of bodily or mental injury, Article 12 of Appendix E of COTIF is defined the compensation for damages as follows: any necessary expenses for the treatment and transport of the patient including any damages about the financial loss, total or partial loss of ability to work or necessary expenses occurred (OTIF, 2011).

In addition, in filing a lawsuit under Article 25 of Appendix E of COTIF specify that the period of limitation for actions in case of death is not more than 3 years from the day after the day the death occurred, but it is not more than 5 years from the day after the day of the accident. However, in case of bodily injury or loss of property, Article 25 of Appendix E of COTIF provides that the right of claim shall not exceed three years from the date on which the loss or damage occurred.

It is worth noting that a remedy measures for body damage, Article 13 of Appendix E of COTIF does not only limit the indemnity as provided by principles of Article 13 of Appendix E of COTIF but also allows other remedy manners that can be considered under the Domestic laws of the member states in which the damage has occurred.

Table 1: Summarized the International Legal Principles, Obligations, and Liability concerning the Contracts of Use of Vehicles and Infrastructure in International Rail Traffic

Legal Issues	OTIF Rules	OSJD Rules	Notice
1. Contracts of Use of Vehicles	1. the concept of the Appendix D Uniform Rules concerning Contracts of Use of Vehicles in International Rail Traffic 2. The scope of application and interpretation to all railway rolling stock of Appendix D	1. The concept of General Provision on Railway Rolling Stock in Annex 5 of Draft OSJD 2. List of requirements applicable to all rolling stock	OTIF and OSJD provide the same general provision and concept to enforce among member states
1.1 Freight Wagons and Passenger Coaches	No specific and general provision	1. The concept of General Provision on the Use of Freight Wagons in International Traffic of Annex 6 2. Scope and interpretation in Annex 6	- COTIF do not specify legal measure and technical standard - OSJD provide in detail the Use of Freight Wagons, signs and mark,

Table 1: Summarized the International Legal Principles, Obligations, and Liability concerning the Contracts of Use of Vehicles and Infrastructure in International Rail Traffic (Continue)

Legal Issues	OTIF Rules	OSJD Rules	Notice
		3. The provision for an application to Use of Freight Wagons 1) Signs and inscriptions on wagons 2) Handover of wagons 3) Upkeep and repair of wagons 4) Conditions governing the use of wagons	delivery of wagon and container, maintenance, and repair of wagons. These principles will be implemented in domestic law as a model law for development.
1.2 Liability for using Freight Wagons and Passenger Coaches	1. Liability in case of loss of or damage to a vehicle caused by a vehicle. 2. Liability for servants and other persons 3. Subrogation right 4. Limitation of actions	1. Liability in case of damage to or loss in Appendix 6 1) Liability in case of damage to or loss of a wagon 2) Liability for loss or damage caused by a wagon 2. Dispute resolution 3. Limitation period	- OTIF specifies general fault liability from using a wagon in line with the liability in OSJD. - OTIF also set forth the liability of the operator and also specifies case of loss of or damage to a vehicle and from the vehicle, etc. These provisions may be used for implementation as sui generis law; however, OSJD does not specify the specific provision.

Table 1: Summarized the International Legal Principles, Obligations, and Liability concerning the Contracts of Use of Vehicles and Infrastructure in International Rail Traffic (Continue)

Legal Issues	OTIF Rules	OSJD Rules	Notice
			- On the other hand, OSJD specifies in detail more than the principle of OTIF such as liability and responsibility from wagon and vehicle, dispute resolution, etc. - OTIF principle also provides a limitation period in line with of OSJD principle.
1.3 The use of passenger coaches in international traffic	No specific provision	1. The concept of the General Provisions relating to the use of passenger coaches in international traffic. 2. Scope and interpretation in Annex 7 3. The provision for an application to Use of passenger coaches 1) Signs and inscriptions on coaches 2) Handover of coaches 3) Maintenance and repair of coaches	- OTIF does not specify in detail the use of passenger coaches in international traffic, however, OSJD set forth principles on using passenger coaches such as Signs on coaches, coach delivery, duty to repair and maintenance, etc.

Table 1: Summarized the International Legal Principles, Obligations, and Liability concerning the Contracts of Use of Vehicles and Infrastructure in International Rail Traffic (Continue)

Legal Issues	OTIF Rules	OSJD Rules	Notice
1.4 Liability on the use of passenger coaches in international traffic	No specific provision	1. Liability in Annex 7 1) Liability in case of damage to or loss of a coach 2) Liability for loss or damage caused by a coach 3) Responsibility for employees and other persons 2. Dispute resolution by the Judiciary system 3. Limitation period	- OTIF does not specify in detail the use of passenger coaches in international traffic in line with OSJD. - OSJD set forth the principle on Liability in case of damage to or loss of a coach or damage caused by a coach, liability of employees and other persons, etc. These principles may be used as a model law for implementation and development as *sui generis law.*
2. Contracts of Use of Infrastructure in International Rail Traffic	1. The concept of Appendix E 2. The scope and interpretation in Appendix E	1. The concept of General Provisions on Railway Infrastructure in International Rail Traffic in Annex 4 2. The requirements of the technical standard of Infrastructure in international rail traffic	OTIF and OSJD provide the same general provision and concept to enforce among member states

Table 1: Summarized the International Legal Principles, Obligations, and Liability concerning the Contracts of Use of Vehicles and Infrastructure in International Rail Traffic (Continue)

Legal Issues	OTIF Rules	OSJD Rules	Notice
2.1 Provision of Contracts of Use of Infrastructure in International Rail Traffic	1. The technical standards and safe operation provisions 2. the scope of enforcement of the use of rail infrastructure 3. Termination of the contract	No specific provision	- OTIF set forth principles to conclude the contract on the use of railway Infrastructure, however, OSJD does not specify in detail these responsibilities and liabilities. - OTIF provides the term, form, content, obligation and legal binging, termination of the contract. These principles also use as a model law for implementation as *sui generis law.*
2.2 Liability from Contracts of Use of Infrastructure in International Rail Traffic	1. Liability of Use of Infrastructure in International Rail Traffic 2. liability in case of bodily loss or damage 3. Liability of the infrastructure manager and carrier 1) Liability of the infrastructure manager 2) Liability of the carrier and employee 4. Form and amount of damages	No specific provision	- OTIF provides the principles on responsibility and liability of using rail infrastructure, however, OSJD has no specific provision. - OTIF also set forth the content of the contract such as the liability of the infrastructure

Table 1: Summarized the International Legal Principles, Obligations, and Liability concerning the Contracts of Use of Vehicles and Infrastructure in International Rail Traffic (Continue)

Legal Issues	OTIF Rules	OSJD Rules	Notice
	5. Limitation of actions		manager and carrier on damages to life, body, and mental health, and also provide principle on claiming damages and limitation of action. These principles also use as a model law for implementation as *sui generis law*.

Problems and Obstacles, the Role of Thailand in Enacting Specific Laws to Promote the Regulator of State to Regulate the Utilization of the vehicle in International Rail Traffic.

The study found Thailand does not yet stipulate a mechanism and a specific legal system that set forth rules and procedures for the use of rail transport vehicles and the utilization of railway infrastructure.

Thailand's rail transport system is still governed by the State Railway of Thailand law, which has been in force for at least 60 years. The State Railway of Thailand Act, B.E. 2494, and its amendments is a law aimed to establish the State Railway of Thailand under the supervision of the Ministry of Transport of Thailand. This law has four main objectives as follows: first, rail transport operations and properties were transferred by the Department of Railways to the State Railway of Thailand as a state enterprise, which was specified by Section 6 of the State Railway of Thailand Act B.E. 2494 under the supervision of the Ministry of Transport of Thailand. Second, the growth of the rail transport operations by transporting passengers and rail freight as well as conducting other businesses, which are beneficial to the state and the people, which is specified by Section 9 of the State Railway of Thailand Act, B.E. 2494, amended by Act (No. 6), B.E. 2535. Third, determine the service fee rates in the rail transport operations, providing services and conveniences for using various services of the railway business, including organizing the method of payment for such services. Fourth, organizing the provision of safe services and using rail transport services in terms of various conveniences of the rail transport operations.

Although the State Railway of Thailand Act B.E. 2494 and its amendments will be no specific legal measures directly and comply with the standards outlined in international agreements of OTIF and OSJD, however, the construction of a new railway line must be approved by the State Railway of Thailand and the Cabinet before proceeding, which is specified by Section 39, amended by Act (No. 7), B.E. 2543. It may be said that this provision complies with international law concerning railway infrastructure investment and must be approved and authorized by the regulations of the state.

Meanwhile, the State Railway of Thailand Act B.E. 2494 and its amendments do not stipulate other principles related to rail transport investment and operation promotions and related to rights, duties, and liabilities arising from the utilization of the railway infrastructure and vehicle services. Section 25 of this Act stipulates that the committee of the State Railway of Thailand has the power and authority to lay down the policy and control the operation and business of the State Railway of Thailand as follows: first, power to lay down regulations concerning the provision under Section 9, second, the power to lay down regulations on the recruitment, appointment, and removal of employees of the state enterprise, third, power to lay down regulations on the operational regulations of the State Railway of Thailand and regulations on disciplinary action and punishment of employees of the state enterprise, fourth, the determination of standard rates for service fees, use of services, and various conveniences of the railway business and operations.

Even though, Thailand is attempted to develop the rail transport system in compliance with international technic standards for supporting the economic development of international and internal trade and investment that supports the movement of goods and services both around the territory and among neighboring countries. Thailand passed the law for establishing the Department of Rail Transport of Thailand in 1997, however, the development of the rail transport legal system also remains in form of a drafting law, but it has not yet been passed and enforced for supporting and promoting the infrastructure system investments as well as stipulated legal liability arising from using the rail transport operations following international carriage by rail.

The study found that the Department of Rail Transport is the responsible authority for controlling, supervising, and setting service standards such as train operators, sky trains, driver licenses, and fare rates. This draft law specified the role and powers of the Department of Rail Transport as a regulating organization for rail transport operations. It also determines the use of power by law enforcement and imposes administrative measures and specifies administrative and criminal penalties. Meanwhile, the draft law also has established mechanisms and legal measures to promote, control and regulate the utilization of vehicle contracts in railway traffic in many matters.

This draft law authorizes the Minister of Transport to exercise the power to regulate ministerial regulations in several issues on Section 4 of the Rail Transport Act B.E. .... as follows:

First, the determination of criteria, methods, and conditions for the use of railroad and necessary assets for the rail transport business. Second, determination of methods and conditions for connecting multimodal transport either rail, air, water, land transportation, bus station, distribution centers, cargo accommodation, land ports, industrial estates, and other related parts. Third, determination of the standardization of rail transport, duties, and powers of the Department of Rail Transport.

In addition, the draft law under Section 13 (8) of the Rail Transport Act B.E. .... also prescribes safe service in several technic standards, such as technical operation standards, safety standards, rail transport standards, specification standards testing, standards Inspection and assessment standards, railroad maintenance standards, personnel standards, rail transport business operations, other standard services required.

Moreover, It also stipulates the powers of the ministers to coordinate rail transport cooperation with relevant domestic and international agencies as well as setting the power to formulate policies to promote and support the rail transport operation. This principle complies with the principles in Appendix E of COTIF regarding the utilization of the infrastructure in rail transport operations. Although the OSJD’s international agreement does not prescribe such principles.

However, these principles in the Draft Rail Transport Act B.E. .... does not yet specify the details of the legal principles applicable to the contract consistent with the principles outlined in Appendix E of COTIF, whether it is the content and form of the contract, the binding and termination of the contract, etc.

It is worth noting that The Draft Rail Transport Act B.E. .... concept is the promotion of the utilization of rail transport business following the principles in Appendix E of COTIF, but this draft law has not yet stipulated the legal principles and measures relating to contracts and legal liability of service providers or providers of liability of infrastructure manager those are specifically based on the principles of Appendix E of COTIF. Because its necessary to further develop the legal regimes regarding contracting and the liability of infrastructure managers and rail service operators.

The study found that this Draft Law only specifies the criteria that operators must be complied by law and regulation in case they would like to operate a rail transport business, it must be permitted and obtained a license to operate a rail transport business by the Minister under Section 38 of the Draft Rail Transport Act B.E. .... and specify types of licenses for rail transport operators under Section 39 of the Draft Rail Transport Act B.E. .... that there are 4 types as follows: type 1, specific rail transport operation license, type 2, specific railway transport license, type 3 license for rail transport operation and railway transport license, and type 4 license for other related railway businesses as announced by the rail committee. The classification of such license complies with the promotion of contracts for the utilization of rail and infrastructure as specified in Appendix E of COTIF.

However, technical service standards such as technical measures to ensure the safety of passenger transport and rail freight operations, speed rating requirements, loading rate, the train headways laid down, the differences in track gauges, tracks, bridges, tunnels, communications equipment, electric power distribution systems, railway stations, and platforms terminal and surrounding area that outlined in paragraph 2 of Annex 4 of the Draft OSJD Convention, (Calme, 2016)

The study found that It is necessary to regulate the rules for controlling and supervising with legal measures and the liability for rail utilization of infrastructure manager and carrier in the Ministerial Regulation, however, they have not yet appeared such legal measures and principles in Draft Law, which is consistent with international agreements of OTIF and OSJD, The question is how and why it will be defined?

Although, the Draft Rail Transport Act BE .... under Section 51, will legislate for the rail transport business and operator that are specified by international agreements on many matters, whether the duty of the licensee must operate the business following the types and conditions specified in the license, the determining that the operation of the rail transport business shall be following the rail transport standards, assignment of duty to provide services to service users with equality, the right to collect fees, fares, transportation costs, and costs for utilization of the rail and infrastructure systems in Annex 4 of the Draft OSJD Convention.

However, the draft law has no specific legislation on the role, duties, and responsibilities of the rail transport operator, service providers, infrastructure managers, and employees of the operator, especially remedy measures for damages arising from the operations of rail transport following international principles and standards, which defined in Annex 7 of the Draft OSJD Convention.

Conclusion

International agreements of OTIF include the principles outlined in Appendix D-Uniform Rule concerning contracts of use of vehicles and Appendix E-Uniform Rule concerning contracts of use of Infrastructure. These principles aim to protect the civil rights of the consumers from damages occurred from the use of rail transport vehicles and infrastructure. It can be said that these principles specified by the Uniform Rules of OTIF are more focused on the protection of consumer rights than the rail transport operators' rights in both Appendix D and Appendix E.

Meanwhile, international agreements of OSJD outlined in the General Provisions on Railway Infrastructure of Annex 4 on rolling stock and Annex 5, as well as the use of freight wagons of Annex 6 and Annex 7, which aim to harmonization on the international technical service standards among member states and must implement to domestic law on contracting the use of vehicles in international traffic in compliance with the international agreements on utilization rail infrastructure concerning safety and service standards. The study found that these international principles focus on the harmonization of legal measures and principles for solving problems in a "practical service" rather than defining the "right to access" the rail infrastructure of the operators on how to proceed or how to enter the rail transport business commercially.

The OSJD's International Agreement does not focus on recognizing the "right of the private entity" in commercial rail transport, Annex 4, 5, 6, 7 and "rights of access" to the rail transport industry, and "contracts for the use of vehicles in international traffic". Thus, these rights must be considered domestic legal basis based on authorizing or approving businesses rather than on the principles of international agreements.

Nevertheless, no matter what the principles of international law prescribe, Member States, given the benefits expected from their accession to such international agreements, It is necessary to implement principles of international law to domestic law that can be used as tools for promoting, controlling, and regulating rail transport operations of entrepreneurs who are interested in the rail transport industry and the related service industry involved either the management of commercial interests of stations and infrastructure in the rail transport sectors in member states concerned.

Although Thailand has set policies and strategies for the development of international rail transport as well as the establishment and determination of the role of the Department of Rail Transport of Thailand as a regulatory organization for the operation and service of the rail infrastructure and transport system. However, such strategies and policies are still unable to produce concrete results for success because there is still a lack of measures and legal mechanisms to promote, control, and supervise the internal and international rail transport business and operator to support the development of an efficient foreign trade, economic and investment system in line with the international rail transportation standards.

According to the development concept of sui generis law to promote the controlling and supervising measures the rail transport business and the operator will challenge how the success of the government's goal concerning strategy and social and economic development policy, and decent work in compliance with the principles of sustainable development goal that will lead the nation to success and to create economic growth and job security. Especially investment and business operations both rail infrastructure system and transport operation, that is resulting from the rail transport business and investment to support the economic development of Thailand in compliance with the legal principles and technical standards of OTIF and OSJD's international agreements, and Thailand should be a member state of the international agreement of OTIF or OSJD organization to ensure that the right of investors, business operators, and consumers must be protected by sui generis railway law.

Recommendation

This paper proposes policy recommendations and the solution to problems and obstacles to the utilization and rail transport operations in Thailand in compliance with the technical service standards and international railway law as follows:

First, Thailand must accelerate the Draft Rail Transport Act B.E. .... to enter into force urgently.

Especially, it must be defined as a core strategy of the Ministry of Transport that is important to support economic development, international trade, and investment.

Second, Thailand should regulate sui generis law as Ministerial Regulation regarding the determination of technical service standards that are consistent with concluding contracts with government and private sectors for the utilization of railway infrastructure including the right, obligations, and responsibilities of operators, employees of the operator, and Infrastructure managers from the damages occurred by passenger and freight carriage contracts following the principles of international agreements of both OTIF and OSJD.

Third, Thailand should regulate sui generis law as Ministerial Regulation regarding that corresponds to the use of vehicles for rail transport, whether it is a passenger coach, or container, setting technical service standards that are consistent with safety, coaches, and container identification sign, including stipulating the rights, duties, responsibilities and exemptional clauses of liability of the infrastructure manager and operators in providing passenger and freight transport services by rail, determination of recourse and subrogation rights, determining of the judicial jurisdiction, and lastly, also determining of the limitations for the exercise of claims, which are consistent with the principles of international agreements of both OTIF and OSJD.

Lastly, Thailand should be a member state of the international agreement of OTIF or OSJD organization to ensure that the right of investors, business operators, and consumers in the usage of vehicles in international rail traffic.

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Types of Infographic Advertising Design with Influence on Consumers Case Study: Queen Crab Box

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Abstract

There is a growing culture of using marketing experimentation to understand the effectiveness of digital marketing strategies on target demographics. The objective of this research is to examine how digital marketing infographics can influence consumer responses on selected social media platforms i.e., Instagram and Facebook. As a case study, products from Queen Crab Box were used to create infographics. A split testing (A/B testing) approach was used on a sample group of consumers using Instagram and Facebook. The sample group was shown three types of infographics, including static, gifographics (semi-animated) and motion infographics. The study found that consumers on Facebook were more responsive to static infographics whereas consumers on Instagram were more responsive to gifographics. The study also found that infographics are highly effective in stimulating consumer curiosity, grabbing consumer attention, and influencing the target groups to make decisions to purchase.

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The results of this research will help marketing designers, digital content creators and business owners use infographics to promote their products. The information obtained can also be used as a guideline for businesses when creating advertising media.

Keyword: Infographic, Content Marketing, Advertising Design, Facebook, Instagram

ลักษณะของการออกแบบโฆษณาด้วยอินโฟกราฟิกที่มีอิทธิพลต่อผู้บริโภคกรณีศึกษา: ร้านควีนแครบบ็อกซ์

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บทคัดย่อ

งานวิจัยนี้มีวัตถุประสงค์เพื่อศึกษาอิทธิพลของการตลาดเชิงเนื้อหาบนสื่อสังคมดิจิทัลต่อการออกแบบโฆษณาผลิตภัณฑ์ด้วยอินโฟกราฟิกที่มีผลต่อการตอบสนองของผู้บริโภค ผลการวิจัยจะช่วยให้นักออกแบบโฆษณา ผู้คิดเนื้อหาประชาสัมพันธ์ผ่านสื่อดิจิทัล นักการตลาด รวมไปถึงผู้ที่สนใจเกี่ยวกับการนำอินโฟกราฟิกมาใช้ในการโฆษณาประชาสัมพันธ์ สามารถนำข้อมูลที่ได้ไปเป็นแนวทางในการสร้างสรรค์สื่อโฆษณาต่อไปได้ งานวิจัยนี้ดำเนินการโดยการทำ A/B Testing เกี่ยวกับการออกแบบโฆษณาผลิตภัณฑ์ด้วยอินโฟกราฟิก 3 แบบ คือ แบบภาพนิ่ง แบบภาพกึ่งเคลื่อนไหวและแบบภาพเคลื่อนไหว เพื่อให้เกิดประโยชน์สูงสุดต่อการออกแบบโฆษณาผลิตภัณฑ์ที่ตรงกับความสนใจของผู้บริโภค กลุ่มตัวอย่างคือผู้บริโภคในประเทศไทย โดยดำเนินการบนสื่อสังคมดิจิทัล คือ เฟซบุ๊กและอินสตาแกรม ผลการศึกษาพบว่า อินโฟกราฟิกแบบภาพนิ่ง เกิดการตอบสนองต่อผู้บริโภคมากที่สุดบนเฟซบุ๊ก และอินโฟกราฟิกแบบภาพกึ่งเคลื่อนไหว เกิดการตอบสนองต่อผู้บริโภคมาก

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ที่สุดบนอินสตาแกรม อย่างไรก็ตาม การออกแบบโฆษณาผลิตภัณฑ์ด้วยอินโฟกราฟิกทั้ง 3 แบบมีอิทธิพลต่อการตอบสนองของผู้บริโภคเกี่ยวกับการดึงดูดกลุ่มเป้าหมาย, การสร้างความสนใจให้เกิดยังกลุ่มเป้าหมาย และการสร้างความปรารถนาให้เกิดขึ้นจนกระทั่งซื้อสินค้า

คำสำคัญ: อินโฟกราฟิก การตลาดเชิงเนื้อหา การออกแบบโฆษณา เฟซบุ๊ก อินสตาแกรม

Introduction and Objectives

The technological advancement gives rise to social media that changes people's daily lives, including convenient and speedy reception of news, business competition, as well as the trend of higher growth of online business, resulting in clearly higher marketing competition. Therefore, marketing experts see the good opportunity of communication and access to customers through digital advertising. One of the marketing strategies currently popular in the digital age is the Content Marketing. It is the marketing process which constructs and disseminates valuable content to clearly attract interest and seek interaction with the target group. The aim is to drive consumers to generate profit for business. Therefore, various businesses such as VIU, service provider of VDO streaming of Korean series and varieties on the internet via mobile application platform with iOS and Android systems or Over-The-Top media service or OTT in short is the media service that is directly presented to the service recipients via internet (Wikipedia, 2021). Although the competition of the OTT market is relatively fierce, VIU manages to construct a different content with focus on Asian type content, accommodated in five languages, with online and offline views. As a result, VIU experiences the statistics of viewers who increase by 42% by measuring from the popular contents in Asia, survey by AMPD Research Center under Media Group (MGR Online, 2020).

It can be said that the key content marketing is to create value of the existing information to the target group, resulting in seeking tools to help communicate products and services for convenient, speedy, and useful understanding such as infographics and can easily share to other consumers via social media. Businesses increasingly turn to the content marketing with the infographics by applying the infographics in the advertising design of products, producing VDO clips, website design, etc. Therefore, it is interesting to study the influences of the content marketing through social media and how the infographic advertising design influences the consumer responses in Thailand. It will serve as the guideline for the development of the infographic advertising design which will be interesting and attractive for consumers through social media with the highest effectiveness.

Objectives

This research aimed to examine three types of infographic advertising design, namely Static Infographics, Gifographic Infographics, and Motion Infographics, by using Queen Crab Box as a test case. It also examined which type had the most influence to the consumer responses on social media in Thailand.

Research Scope

This research aimed to examine the types of the infographic advertising design of Queen Crab Box with the most influence on the consumer responses in Thailand via selected social media platforms i.e., Instagram and Facebook. The data was collected during May 2021 from customers, divided in four groups i.e., Gen X male, Gen X female, Gen Y male, and Gen Y female, of Queen Crab Box.

Definition of Terms

Infographics is the display of the information or knowledge through images that are easily read and understood (Supaluk, 2018). This type of graphic is popularly used for complex information such as board, and map. The research by infographics is also popularly used in the fields of computer, arithmetic, statistics to simplify complicated information (Wikipedia, 2021).

Static infographics. This type of infographic will not change or update the content, for examples, brochures, posters, books, images or being part of articles in magazines or newspapers, images, graphics accompanying news, television, etc. They are ready to be easily forwarded in digital media such as sending emails or using them to accompany articles on websites (Supha Lak, 2018) forwarding on social media such as LINE, Facebook, Instagram, etc.

Gifographics (or semi-animated infographics). This type of infographics are animated infographics further developed from static infographics and formatted as GIF (Graphics Interchange Format). It can be used to display on electronic device screens. Makes it suitable for use in web pages. Graphics include illustrations, graphs, statistics that are necessary for presentation (Natthapong, 2017).

Motion infographics (or animated infographics). This format is an infographic that has the power to communicate using animations and graphics to create a story with short messages and audio narration, and background music (Killer, 2017)

Content Marketing is the marketing technique to create and distribute the "valuable" content to the target group. The aim is for the target group to generate income for advertisers (Bhanond, 2015).

Advertising Design is to create and arrange artwork images used in advertising. The aim is to give information and news on products or services as well as concepts to consumers according to the set goal. The design components consist of fancy letters, edge line, cartoon, accompanying illustrations and photographs. This research designs infographic advertising in three types namely Static, Gifographic, and Motion Infographics (Wikipedia, 2021).

Facebook Ads is the advertising on Facebook platform to test and compare the three types of infographic advertising design which can determine the target group of the consumers as desired, as well as the advertising budget.

Instagram Ads is advertising on Instagram platform to test and compare the three types of infographic advertising design which can determine the target group of the consumers as desired, as well as the advertising budget.

Consumer response is what consumers express in the form of the number of pressing Likes (Results), the number of different viewers of the advertising (Reach), the number of advertising displays (Impression), the average rate of pressing Likes (Cost per Results), pressing Follows, and Engagement via social media called Facebook, Instagram, and Twitter platforms.

Number of pressing Likes (Results) is the number of Likes that the consumers respond to the format of product advertising.

Number of different viewers of the advertising (Reach) is the number of views of all infographic advertising designs that are posted.

Average rate of pressing Likes (Cost per Results) is the costs per result indicating if the goal set in the advertising campaign is efficient or not

Literature Review

In order to study the influences of the content marketing via social media on the infographic advertising design with impact on consumer response, the researchers conducted the literature review from the relevant concepts and research works as follows:

The role of technology results in great social changes through fast progress and development, generating activities and operations to compete and adapt for business survival in the new global age without frontier. Consumers can communicate and travel across borders quickly due to the widespread and increasingly popular digital social media (Nattakan, 2019).

Based on the study of the digital social media, it is the technology with the role in the current society which speeds development. What result from the use of various platforms of digital social media services is invaluable big data and serves as channels to generate profit for businesses. However, there is an increasing competition (Utterberg, 2016) in terms of business and marketing. It is undeniable that internet is crucial for marketing specialists because it can gain access to a large number of consumers at the same time. Most Thai consumers spend most time on social media compared to other types of online activities (Utterberg, 2016) especially in marketing where they want their products to be more attractive than their competitors. Advertising on various platforms has become a major component in the marketing plan of each business. Due to continuously fierce competition, marketing experts turn to focus on the content marketing which is crucial to advertising design as it is mutually supportive. If the advertising design consists of interesting content, there will be more viewers (Pulizzi, 2013). This strategy spreads to social media such as Facebook, YouTube, Instagram, and Twitter, etc.

Infographics is an efficient tool for content marketing as it can attract interest from the message recipients based on the creativity of images and design with the appropriate composition of colors (Stojanović, Tasić, & Šehović, 2014). The appropriate message that is consistent with the presentation objective can be easily understood and memorized (Mark, 2012). There are three types of infographics as follows:

1) Static Infographic is the type that is ready to easily share to digital media (Supalak, 2018) or share to social media such as LINE, Facebook, Instagram, etc.
2) Gifographic is semi moving and developed from the static image (Nattapong, 2018). It is a kind of album and moving album.
3) Motion Infographic is an animated image with the power of communicating with moving images and accompanying graphic sound to create a story with short message, as well as audio description, and accompanying music (Killer, 2017). At present, there is no research that indicates which type of infographics has the most appropriate influence on the advertising design via the social media.

Based on the study of the responsive process of marketing activity such as AIDA Model of St Elmo Lewis (corporatefinanceinstitute, n.d.), there are four processes as follows:

1) Attention is to attract interest by using motivations to attract customers' interest
2) Interest is to create interest by using motivations to attract customers' interest
3) Desire is to motivate or make customers desire (to purchase)
4) Action is to make customers act or decide to buy (sales closing)

These factors demonstrate the decision of consumers to purchase products and services. The adverting design is a major part and directly related to products in terms of image or the word of mouth of the value of the products, resulting from all marketing activities. Large companies put enormous budget specifically on advertising design. The advertising design that is direct to the point will allow consumers to respond to products more easily than before, according to the responsive process. It corresponds to processes through the perception process based on the attraction which results in the intention to receive the media first. Once the media consumption is continuous, consumers start to take interest, probably by searching for more information themselves. Afterwards, once there is interest, then it will turn into the wish to purchase, and finally the decision to purchase.

Queen Crab Box, an online seafood restaurant, was selected to be an informant of this research because it had a lot of customers. It also had a variety of customers, and their locations were able to define. In addition, it was convenient for this research due to the owner's support.

Methodology

Conceptual Framework

Based on the relevant concepts and theories as mentioned above, the research framework could be determined in order to study the influences of the content marketing via social media on the infographic advertising design with impact on consumer response as shown in Figure 1.

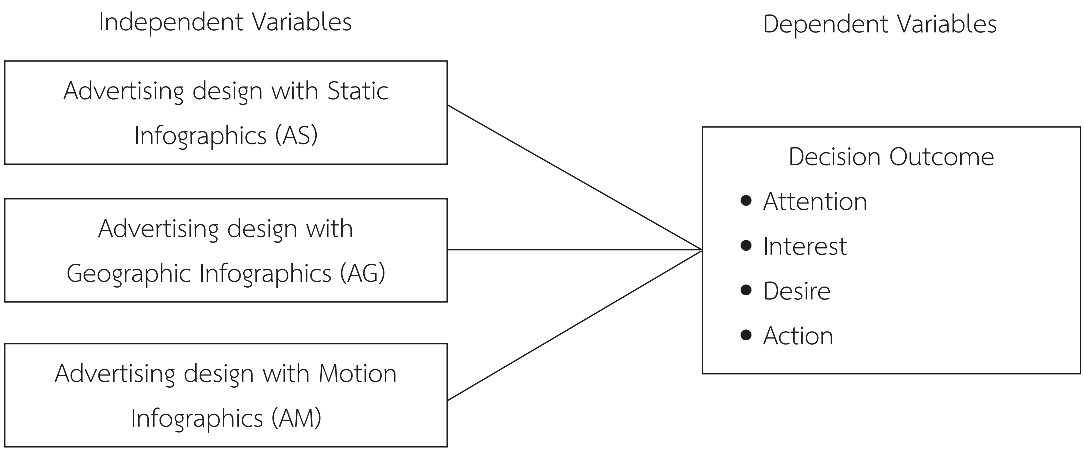

Figure 1: Conceptual Framework

The research conceptual framework applied the responsive process from the marketing activity such as AIDA Model of St. Elmo Lewis (E. St Elmo Lewis, 1908).

Research Hypothesis

The research hypotheses based on the previously shown framework are as follows:

Hypothesis H1: The static infographic advertising design influences the decision to perceive products, the interest in products, the desire for products, and the purchase of products.

Hypothesis H2: The gifographic infographic advertising design influences the decision to perceive products, the interest in products, the desire for products, and the purchase of products.

Hypothesis H3: The motion infographic advertising design influences the decision to perceive products, the interest in products, the desire for products, and the purchase of products.

Research methodology

The study of the influences of the content marketing via social media on the infographic advertising design with impact on consumer response was Experimental Research Method. The data collection consisted of the A/B Testing relevant to the three types of adverting design for the maximum benefit of the infographic advertising design that corresponds to consumers' interest.

The A/B Testing or the Split Testing is the methodology with the experiment of two or more variables such as A and B by applying the statistical hypothesis testing or "Two-sample hypothesis testing" used in the statistics to compare the single variable and consider which variable of the two is more efficient (Wikipedia, 2021).

Figure 2: Picture of Infographic Advertising Design

In terms of research tools, this research used the Experimental Research Method in the form of A/B Testing by advertising through Facebook and Instagram for the total of one week. The testing consisted of comparison among the three types of infographic advertising design namely Static Infographics, Geographic Infographics, and Motion Infographics using the same content as shown in Figure 2.

source: https://drive.google.com/drive/u/1/folders/1VZF-xTvxJ9OaK3g_GbhIUL-vkyQKcLsc

The sample group used in the experiment was collected from statistics of service users through social media during the past 3 years (2018-2020). From the statistics, data was collected in generations with 2 generation groups with the highest statistics in the past 3 years (according to https://www.weforum.org). The targets were divided into four groups as follows:

Group 1: Generation X, male, aged between 41-55 years old

Group 2: Generation Y, male, aged between 26-40 years old

Group 3: Generation X, female, aged between 41-55 years old

Group 4: Generation Y, female, aged between 26-40 years old

The comparison testing was divided into two platforms namely Facebook Ads and Instagram Ads. Each platform was divided into one Campaign, four Ad sets, and 12 Ads as shown in Figure 3.

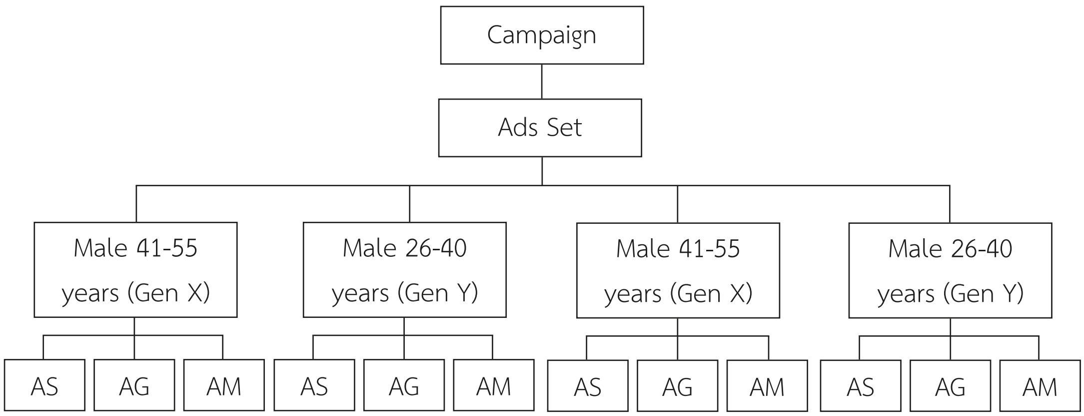

Figure 3: Format of setting the testing campaign

In this research, after collecting data, each dimension of measurement was summarized based on AIDA Model as shown in Table 1.

Table 1: Measurement of various dimensions with the testing tools via Facebook and Instagram Ads

Dimensions of measurement of AIDA Model on advertising	Measurement methods from Facebook	Measurement methods from Instagram
Attention	Number of different viewers of the advertising (Reach)	Number of different viewers of the advertising (Reach)
Interest	Number of clicking of Links	Engagement with the posts
Desire	Chatbot with the set words "Order goods"	Chatbot with the set words "Order goods"
Action	Number of purchases of goods from the advertising	Number of purchases of goods from the advertising

Results

Based on the A/B Testing of the purchase of advertising by classifying the different target groups into four target groups which differed in terms of gender (male and female) and generations (X and Y), the similarities consisted of the control of other factors to have the same images and the determination of the amount of advertising money that was equal for each ad but with different outcomes as follows:

Table 2: Outcomes of advertising campaign on Facebook platform by using the highest value in each dimension

Sexual	Reach=Attention	Click Link=Interest	Chatbot=Desire	Action=Orders
Male Gen X	2,295 (AG)	35 (AS)	32 (AS)	15 (AS)
Male Gen Y	2,060 (AS)	41 (AS)	38 (AS)	20 (AS)
Female Gen X	1,704 (AS)	34 (AS)	31 (AS)	25 (AS)
Female Gen Y	1,545 (AM)	31 (AS)	29 (AS)	23 (AS)

Remark: AS = Advertising design with Static Infographics
AG = Advertising design with Gifographics
AM = Advertising design with Motion Infographics

Results of the data analysis of A/B Testing on Facebook platform

The Facebook platform determines the advertising budget with impact on the access to the target groups. On this issue, the researchers determined budget per post ad at 100 baht. The access to the four target groups was determined according to the budget or the access to the target groups of 777-2,000 persons. The four processes of consumer responses (AIDA Model) underwent the analysis with the following results: The Static Infographic advertising design was the most efficient and with the most responsive among the four groups of consumers in each dimension as well. The dimension of attracting interest of consumers constituted 34%, the dimension of creating interest of the target groups 46%, the dimension of creating desire of the target groups 47%, and finally the dimension of action by ordering goods 51%, followed by the Gifographic Infographic advertising design which impacted the responses of the target groups in the dimension of attracting the interest 33%, the dimension of creating interest of the target groups 31%, the dimension of creating desire of the target groups 31%, and finally the dimension of action by ordering goods 32%. The Motion Infographic advertising design constituted the least consumer response on Facebook platform with the responses of the target groups in the dimension of attracting interest 33%, the dimension of creating interest of the target groups 23%, the dimension of creating desire of the target groups 22%, and finally the dimension of action by ordering goods 17%. The Static Infographics attracted the male target group of generation X the most but the dimensions of creating interest and desire of the male in generation Y were higher. The other target groups had the similar statistical data. The last dimension which was ordering goods, the female of generation X constituted the most responsive target group. The summary is in Table 2.

Table 3: Outcomes of advertising campaign on Instagram platform by using the highest value of each dimension

Sexual and Gen	Reach=Attention	Click Link=Interest	Chatbot=Desire	Action=Orders
Male Gen X	1,636 (AG)	106 (AG)	1 (AG)	-
Male Gen Y	1,819 (AM)	196 (AS)	5 (AS)	5 (AG)
Female Gen X	1,648 (AM)	174 (AM)	15 (AM)	7 (AM)
Female Gen Y	1,593 (AG)	218 (AG)	16 (AG)	9 (AG)

Results of the data analysis of A/B Testing on Instagram platform

The Instagram platform determines the advertising budget with impact on the access to the target groups. On this issue, the researchers determined the budget per post ad at 100 baht. The access to the four target groups was determined according to the budget or the access to the target groups of 974-2,800 persons. The four processes of consumer responses underwent the analysis with the following results: The Gifographic advertising design was the most efficient with the most responsive among the four groups of consumers in each dimension. The dimension of attracting interest of consumers constituted 47%, the dimension of creating interest of consumers 45%, the dimension of creating desire of consumers 46%, and finally the dimension of action or ordering of goods 45%, followed by the Motion Infographic advertising design which impacted the responses of the target groups in the dimension of attracting interest 43%, the dimension of creating interest of the target groups 40%, the dimension of creating desire of the target groups 32%, and finally the dimension of action or ordering of goods 36%, and the Static Infographic advertising design experienced the least consumer responses on Instagram platform. The response of the target groups in the dimension of attracting interest constituted only 10%, the dimension of creating interest of the target groups 15%, the dimension of creating desire of the target groups 22%, and finally the dimension of action or ordering of goods 19%. The Gifographics attracted the female in generation Y the most but created interest of the male in generation Y more. In the dimension of creating desire, the female in generation Y were the most responsive. Other target groups had the similar statistical data. For the last dimension, ordering of goods, the female in generation Y remained the target group with the most responsive. The summary is in Table 3.

Discussions

The results of the experimental research on the “Types of Infographic Advertising Design with Influence on Consumers, Case Study: Queen Crab Box” through the two types of online advertising platforms namely Facebook and Instagram yielded different results. The different viewers of advertising (Reach), the number of clicks of the Links or the number of engagements with the post, the clicks of chatbot with the words “Order of goods” established by the researchers in each post ad and the order of goods in each post ad would be used as indicators of consumer responses. It was consistent with the theory of consumer responses (AIDA Model) of St. Elmo Lewis. Therefore, all types of Infographic advertising design influenced the consumer responses. The discussion is as follows:

Hypothesis H1 The Static Infographic advertising design influenced the decision of the perception of products, the interest of products, the desire of products, and the purchase of products the most on Facebook platform. The male target group was responsive to attraction and creation of interest the most but the female target group especially generation Y were responsive to the desire of products and leading to order of goods the most. On the contrary, the Static Infographic advertising design on Instagram platform was the least popular type.

Hypothesis H2 The Gifographic advertising design influenced the decision of the perception of products, interest of products, the desire of products, and the order of products the most on Instagram platform. The female and male target groups of generation Y were responsive to the attraction and the creation of interest the most. But the female target group especially of generation Y were responsive to the desire of products leading to the purchase of the products the most. On the contrary, the Gifographic advertising design was ranked second in the results of the consumer responses on Facebook platform.

Hypothesis H3 The Motion Infographic advertising design influenced the decision of the perception of products, interest of products, desire of products, and purchase of products the least on Facebook platform. The female target group of generation X were responsive to the attraction, the interest, the desire, leading to the purchase of products the most. On the contrary, the Gifographic advertising design was ranked second in the consumer responses on Instagram platform.

Table 4: Ranking of types of Infographic advertising via online platforms

Platform Online	Static Infographics	Gifographics	Motion Infographics
Facebook	1	2	3
Instagram	3	1	2

In Table 4, the test results revealed that in terms of advertising via the Facebook and Instagram platforms using the three different types of Infographic advertising, the Static Infographic received the responses in the 4 dimensions the most on Facebook platform. It contradicted the Social Media Marketing Survey 2016 of Clutch (thumbsup, 2016) which conducted the test by comparing the advertising with VDO and image on YouTube platform. It revealed that VDO was the most popular and gave the opinion that VDO was a more efficient tool to communicate clearly and understandably to consumers than the static one did. However, this reason was not confirmed because the survey of Clutch was conducted via YouTube platform, which highly focused on the view of VDO. At the same time, the test with images did not use the infographic to summarize the information but the image or article that consumers must understand through reading by themselves. It was probably why VDO was more popular as consumers could understand more than static image which was different from the use of infographics to summarize information for consumers to understand within an image. According to the test results with Instagram platform, the Gifographics received the best feedback from the target group. The researchers assumed that the Gifographics communicated emotion and feeling for the target group on order to see the image more clearly. This was consistent with the article of Marketeer which stated that the good Gifographics would allow the message recipient to be able to understand some message within seconds or communicate emotion or feeling at the particular time for others to view the image more clearly (marketeer, 2017). Although Instagram platform was popular mostly for photography, the Gifographic advertiing might attract more consumers as it created emotion and feeling of the advertising better. But the importance of the use of the test results of Infographic advertising design was that the first thing that marketing expert must decide was to select the AD Objective which was equally important as the determination of the objectives (AdsMatters, 2020). If one wanted the target group to see or perceive the advertising of products and services, one should consider the results of the advertising based on perception or access (Reach) to create motivation for the target group. Or if one wanted the advertising to focus on the interaction of the target groups, one should take the advertising results in the dimension of creating interest and consider the test results from engagement, etc. If the marketing expert or advertising designer or public relation people used the objectives properly, the advertising would be sent directly to the target groups and could also save more advertising costs.

Problems and Constraints

The data collection of the target groups in the responsive process of the creation of the desire established the chatbot with the word, "Order goods". Therefore, advertising required different timeframes and more time to avoid repetitive data collection. Moreover, the responsive process of the target groups in terms of purchasing goods facing a problem as Queen Crab Box sold its products in pre-defined and exact periods of time for delivery. So, the customers, who wanted the products at their self-defined time, probably cancelled their orders. It was the loss of opportunity to sell more products although there were a lot "Click Chatbots" of incoming orders.

Recommendations for Utilization

The research results are useful for the Infographic advertising design in various businesses and serve as good source of information for those who want to study the Infographic design, advertising designers and marketing experts as well as interested people to apply it or use it as a guideline of the Infographic design in the future. As the research results show that the good Infographic advertising design will clearly impact the consumer responses. The research results can clearly divide the consumer groups in terms of gender, generation, and advertising via diverse platforms which will help those who study to understand and analyze the response and the demand of consumers in more detail. The benefit of the research results can be used and enhanced such as Instagram platform has features of Instagram Stories & Highlight Stories with the display duration of only 24 hours. The Gifographic advertising design can be used to create the interesting, modern, readily memorable content or the use of Static Infographics for the review of the instruction of the use of products for easy understanding in one image on Facebook platform with focus on the target groups of the particular product of generations, for example, the compilation of information of lady handbag by dividing the information based on the content "which is the color of the handbag that corresponds to the birthday and that is great for use" with the female target groups of generations X and Y, etc.

Limitations in the Utilization of the Study Results

A limitation of this research is the Infographic advertising design of only one product of food. The advertising found in daily life is numerous for consumer products. Thus, for other products, the test results may change.

Guideline of Future Research

1) A/B Testing should be conducted in other features as appeared on various platforms as this research tested the advertising campaign via promotion of post of which at present there are features such as stories or even other social media platforms which are experiencing the growth in leaps and bound such as Tiktok mainly for consumers of the generations Y and Z. It can be done as well which will have more results in various dimensions and can serve as the guideline for creativity of various advertising designs.
2) In terms of creativity in design, as the research is relevant to the advertising design especially for seafood, therefore the advertising design of other products may entail more specificity. For example, for the advertising design of electronic devices, it is probably more responsive to male consumers than female counterparts or the use of colorful Infographics which is soft may attract more female consumers, etc.
3) The determination of more specific target group is another choice to properly gain access to consumers. For example, for Infographic advertising design of durians, the target group may be determined as durian lovers or for advertising design of tools for joint use with ipad, the target group may be determined as consumers at school age or working age, etc.
4) At present, the AIDA Model is increasingly applied to measure the marketing results. Therefore, for the process of consumer responses, additional results are measured in numerous dimensions such as AIDMA Model that adds the dimension of motive to make consumers take interest in a product in order to increase sale, etc. The application of other theories will ensure more detailed measurement of the consumer responses.
5) Determination of budget in advertising and period used in additional advertising is a factor that can change the advertising result and can enhance on other future research such as changes of budget and period used in the advertising which impact sales, etc.
6) The reason that makes different generations behave differently in response to various digital advertising on social media platforms.

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Online Influence of Consumer' Purchase Intention Towards Products Endorsed by Korean Boy Bands on Youtube*

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Abstract

The objective of the study is to understand the influence of advertisement format and platform engagement on purchase intention for products endorsed by Korean boy bands on YouTube. The study was conducted in a quantitative approach from 408 respondents exposed to YouTube ads in 2022. The results show that advertising format, namely product placement (B = 0.267) has a positive influence on the purchase intention of the Thai audience alongside the action of clicking 'Like' (B = 0.108). Analysis through multiple regression shows a positive influence from the product placement variable on purchase intention over other advertisement formats available on YouTube. The results suggest the significance of in content product placement method aiming for more aiming the 'Like' metric of engagement for effective targeting for low involvement products.

Keywords: K-Pop, YouTube ads format, YouTube Online Engagement, Product Involvement, Purchase Intention

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ปัจจัยที่มีผลต่อความตั้งใจซื้อผลิตภัณฑ์ที่ได้รับการรับรองจากบอยแบนด์เกาหลีบนยูทูปของผู้บริโภค*

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บทคัดย่อ

การศึกษาวิจัยครั้งนี้มีจุดมุ่งหมายเพื่อทำความเข้าใจอิทธิพลของรูปแบบโฆษณาและการมีส่วนร่วมของแพลตฟอร์มต่อความตั้งใจซื้อสินค้าที่ใช้บอยแบนด์เกาหลีบนยูทูป โดยการวิจัยครั้งนี้เป็นการวิจัยเชิงปริมาณที่เก็บข้อมูลจากผู้ตอบแบบสอบถาม จำนวน 408 คน ที่เคยรับชมโฆษณาบนยูทูปในปี พ.ศ. 2565 ผลการวิจัยพบว่า รูปแบบการโฆษณา ได้แก่ การจัดวางผลิตภัณฑ์ (B = 0.267) มีผลเชิงบวกต่อความตั้งใจซื้อสินค้าของผู้ชมชาวไทยควบคู่ไปกับการกระทำของการกด ‘ถูกใจ’ (B = 0.108) ผ่านการวิเคราะห์ตัวแปรแบบถดถอยพหุคูณซึ่งแสดงให้เห็นว่า ตัวแปรการจัดวางตำแหน่งสินค้ามีผลต่อความตั้งใจซื้อสินค้ามากกว่ารูปแบบโฆษณาอื่น ๆ ที่มีอยู่บนยูทูป ผลการวิจัยชี้ให้เห็นถึงความสำคัญของวิธีการจัดวางตำแหน่งเนื้อหาของสินค้าโดยมุ่งเป้าไปที่ตัวชี้วัดการมีส่วนร่วม ‘ถูกใจ’ เพื่อการกำหนดเป้าหมายที่มีประสิทธิภาพสำหรับสินค้าเกี่ยวพันต่ำ

คำสำคัญ: เค-ป๊อป แพลตฟอร์มของโฆษณาบนยูทูป การมีส่วนร่วมทางออนไลน์ของยูทูป การมีส่วนร่วมของสินค้า ความตั้งใจซื้อสินค้า

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Introduction

Significance of the Study

With the increasing importance of social media in consumers’ lives, marketing approaches can no longer limiting themselves to traditional communication methods such as television and radio or print. Users are now increasingly spending more time online, especially when it comes to finding information and making a purchase (Cai et al., 2004).

The ephemeral nature of social media platforms has left communicators ever evolving in their marketing approaches. With over 4.62 billion global social media users in the first month of 2022, it averages 13 new users per second in annualized growth (Kemp, 2022). In this evolutionary era of communication methods, some media platforms have remained constant for over a decade, YouTube being one major platform.

Its social features, like most popular platforms, allow registered users to like, share, comment, and upload videos. This not only lets them engage but also provides a sense of community to the users by giving them a sense of control over their activities on the site. With such a huge repository of content, YouTube is transforming the consumption of video media in this high-speed internet age.

Given its prominence in users’ lives, it's functionality cannot be limited to just publishing videos online. The advancing user interfaces of YouTube also include live-streaming and premium channels for paying subscribers. Though some may perceive it to be a platform for just publishing videos, some see it as competition for broadcast television (Kim, 2012). Wesch (2008) reported that the users create more content in six months than sixty continuous years of broadcasting by the three largest networks in the United States of America has done combined. Moving on from the traditional broadcasting methods, YouTube distinguished itself from an archive of videos by providing a user-to-user social experience which categorizes it as a social media and gained high popularity (Susarla et al., 2012).

Korean boy bands and YouTube Endorsement

YouTube is the new age technological replacement for older media tech, such as the radios, MP3s, CDs/DVDs, and music channels on television. Renowned labels like SONY music, EMI, and Columbia Records, among many, have all moved online to YouTube. Though the American population consider iTunes (a music streaming platform by Apple) as the main outlet for purchasing music, global K-Pop fans believe in YouTube as a free source to stream music.

A fan is someone who spends their time, money, and energy on supporting their subject of adoration, usually celebrities, through buying albums, concert/ movie tickets, and merchandise and helping in the process of winning competitions and awards through votes and creating awareness for their admired celebrity (Jenol, 2020). Jenkins (1992) defined a fan as an individual harboring positive affection for a celebrity or of interest. A K-Pop fan is typically a member of a Korean fandom-collective participation in a subculture based on a shared interest, in this case, Korean music artists, and Korean boy bands.

One of the most famous Korean boy bands is BTS. BTS, the famous abbreviation for global K-Pop sensations Bangtan Sonyeondan or Bulletproof boy scout, depicts the challenges of modern-day youth in their music and other media content. Other than quality content from the seven-member band, their fan engagement, and social media interaction where they share their collective and personal lives and works and commentaries on various topics and showcase their interest to their fans have led to them having one of the biggest fans following online. HYBE, formerly known as BigHit, has over 64. Million subscribers on YouTube. BTS' collaboration with American musician Halsey, Boy With Luv, has been viewed over a billion times since its release in 2019. Their latest music video 'Butter' holds the record of the most viewed K-Pop video with 108.2 million views in the first 24 hours of release (Statista, 2022). Their success can be credited to their fandom, ARMY. The fandom is infamous for its support for the group. ARMY have been reported spending a fortune to keep BTS' new release 'Butter' at the top of the Billboards charts for weeks in a row by buying 4-6 albums every week (McIntyre, 2021). BTS alone contributes to 88% of HYBE's sales in 2020 (Dooley & Lee, 2020).

Other than BTS, Korean boy bands like NCT, under SM Entertainment, and Got7, under JYP entertainment, also have a massive fan base in Thailand. An example of endorsement by members of the boy bands is:

NCT member Jaemin is known for his photography skills other than being an idol in another very popular Korean boyband. Adobe took this opportunity and endorsed his personal hobby and sponsored his segment of the NCT vlog on NCT's official YouTube channel. Na Jaemin doesn't only plug in Adobe Photoshop anywhere he can, he also created a personal vlog segment on the how to of photoshop. The thirteen-and-a-half-minute video on NCT's official channel has received over 500 thousand views. Another of these endorsed videos receives over 5 million views where he simply edits the boy band's concert video on Adobe Premiere Pro during his segment of the 'NCT Relay Cam' vlog.

Companies often use advertisements as a media strategy to introduce their brand or products on a global scale, according to Rojo et al. (2022). Advertisements not only entertain audiences but also influence their purchasing decisions. In the case of Kpop, advertisements collaborate with well-known personalities to endorse products and persuade audiences to purchase them. This creates a living "Seal of Approval" that assures fans and others of the product's quality (Rojo et al., 2022).

YouTube is the preferred platform for sharing Kpop-related content and has been the standard for viewing videos on the internet. Xu et al. (2017) suggested that YouTube played a significant role in the growth of Kpop globally, known as the Hallyu wave. Kpop entertainment uses video-sharing platforms like YouTube to reach fans worldwide by uploading teasers, music videos, advertisements, and other activities. These platforms showcase Kpop idols' visuals, fashions, dance, and concepts, which significantly contribute to gaining more audiences. This approach brings international fans closer to their Kpop idols, helping them to top music charts (Doré & Pugsley, 2019).

Recently, Bu & Kim (2021) conducted research to examine the effects of celebrity endorsement in advertisements involving the personal social media use of the celebrities, in this study its BTS. They hypothesized that the shared stories online by the celebrities and their fans would affect the online response of the fans (Likes, dislikes, shares, and comments). They analyzed audience responses on 12 BTS endorsed advertisements on social platforms like YouTube. They concluded with higher ration of acceptance through likes and even higher participation like commenting, 1800 comments were analyzed (Bu & Kim, 2021).

Research Objective

To study the influence of YouTube advertising format and online engagement

Research Question

What is the influence of YouTube advertising format and online engagement of Thai consumers on the products endorsed by Korean boy bands on YouTube?

Literature Review

YouTube Advertising format

YouTube marketing allows a brand to quickly target a controlled ad in a sustainable and cost-effective way, especially in the case of topical video content. As studies have shown, younger consumers tend to find YouTube ads more intrusive, especially in developing countries where streaming commercials are hindered by pricey and slow-paced bandwidth (Duffet, 2020). Other than the frequently observed ads on the platform like standard display ads, in-search (discovery), and sponsored cards, video bumper commercials and overlay ads, brands have been known to use influencers for product placement in either paid or owned content in form of testimonials, promotions, or collaborations. Such investment in influencer marketing on YouTube has driven online traffic and exposure to the brands' marketing efforts (Westenberg, 2016; Horakova, 2018; Vingilsa, 2018). Product placement has become one of the most common marketing strategies for marketing and promotion without the use of obvious commercials (BoixRomero et al., 2021; Fong Yee Chan & Lowe, 2018).

YouTube Online engagement

Online engagement can be explained as a 'user-initiated action' (Gluck, 2012) which may lead to co creation of value (Brodie et al., 2013). Other researchers have explained engagement on the platform as a multidimensional concept that brings in cognitive and emotional aspects along with behavioural aspects in engagement, i.e., the inclusion of thoughts and feelings alongside actions when engaging online (Hollebeek, 2011). YouTube engagement can be understood through an individual's use of media.

Khan (2017) studied YouTube audience engagement in two behavioural aspects-participation and consumption, i.e., click based interaction and simple viewing. Khan (2017) assessed participation through likes, dislikes, comments, shares, and uploads. Likes to represent the viewers appreciation of the content. The higher the likes, the higher the popularity of the tent. Dislikes are the thumbs down button that lets the viewers express their disapproval of the media. Comments vary from length, but the text-based descriptions are often opinions or commentary on the video content. Shares are the conscious decisions that the viewer makes to make the content be available to their friends and families. Lastly, uploads are considered high level participation where the viewer shares the content they publish to a wider audience.

Consumption has been assessed through view counts and passive reading of comments. YouTube provides the features the ability to collect views, i.e., the number of times a video is viewed. Similar to likes, the higher the view count, the more popular the video is.

Consumer Involvement (high and low)

The origin lies in social psychology where "ego involvement" relates to an individual's relationship with an issue or an object. This concept became the base for involvement in consumer behaviour. Consumer involvement has been defined by many researchers in various ways. Goldsmith & Emmert (1991) defined consumer involvement as the fondness and interest shown by a consumer for a specific product category. It revolves around a consumer's behavioural and emotional (thoughts and feelings) towards a product category (Miller & Marks, 1996; Gordon et al., 1998). Laaksonen (1997) classified consumer involvement in the individual state approach category. In layman's terms, it is the interaction between the characteristics of both the consumer and the product. The level of product involvement varies with individual consumers rather than being constricted to its product category. To illustrate, household products like detergent can be deemed as high involvement to some consumers as it involves personal health and environmental consequences whereas the same thing wouldn't take up much time and effort to some who already either have a preferred brand or go to a laundromat (Laaksonen, 1999).

A peripheral route of persuasion is taken for a product that requires lower cognitive efforts (low involvement) whereas a central route is taken for a logical analysis of a high involvement purchase decision (Roser, 1990; Vaidyanathan & Aggarval, 2001; Wand et al., 2019). Involvement has been understood as the level of an individual consumer's personal relationship with a product/service comprising perceived value, risk, and importance. The significance is based on the recognition of antecedents (causes) and consequences (effects) (Antonides & Van Raaij (1998).

Celebrity endorsement

A celebrity endorser is a public figure loved and recognized by the community or the target market of a brand where the celebrity makes use of their reputation and attracts consumers (McCracken, 1989). Various companies worldwide invest in famous, credible, and attractive celebrities to endorse their products (Pornpitakpan, 2003; Amos et al., 2008). Such celebrities or online influencers are individuals, in an online spectrum, with a large social following and, are perceived as influential and trustworthy in niche markets (Sudha& Sheena, 2017).

Endorsements provide brands with a fast track to their specific target audience. Not only is it cost-efficient, but it also helps cultivate goodwill in the community (Taleverna, 2015; Harrison, 2017; Awobamise & Jarrar, 2018). Through market research, marketers can optimize audience reach by understanding the target audience of these online influencers.

These celebrities hold the power to influence consumer opinion and brands can harness it by endorsing them, through sponsorship or collaboration or simply paid partnership (Booth & Matic, 2011). Many brands cooperate with such celebrities and showcase their products in their videos.

Purchase intention

In consumer behaviour, an individual goes through six steps before making a purchase: awareness, knowledge, interest, preference, persuasion and then finally purchase (Kotler & Armstrong, 2010). The purchase intention of a consumer is also said to be influenced by other factors such as brand names, product quality and advertisement efforts by the brand (Kawa et al., 2013; Mirabi et al., 2015).

YouTube advertisements and product placement in the videos have been discovered to have a huge positive impact on a consumer's attitude regarding the correlation between the advertisements and purchase and intention (Lai et al., 2015). Yuksel (2016) identified elements of the platform that is unique and has shown positive effects on the purchase intention of the viewer. The perceives usefulness, attitude towards the purchase, perceived credibility and purchase intention were concluded to have shown an effect on the perceived credibility of the video.

Research Methodology

This study has taken a quantitative approach by using online questionnaires of 400 male and female participants that have been exposed to YouTube videos of Korean boy bands endorsing products in the game, luxury apparel, food and beverages and skin care categories.

The period of the research spans a month in the year 2022. The respondents are given the choice to select an answer which matches their attitude on a 5-point Likert scale chart.

Population and Sample

The data were collected from 400 respondents, irrespective of their gender. Social media including YouTube has emerged as an interactive tool for young adults (Berryman et al., 2018) with a considerable number of users falling in the age group of 18 - 34 years (Talwar et al., 2020a; YouTube, 2020). YouTube has 42.80 million users in Thailand in the first quarter of the year 2022 and YouTube ads have reached 78.5% of the total internet users in January 2022 (Kemp, 2022). The highest number of social media users fall between the ages of 25 - 34 and closely followed by ages between 18 - 24 in Thailand (Kemp, 2021). Thus, the ages of 18 - 35 were used in this study.

Due to time constraints, the study is conducted only in the Bangkok Metropolitan area. During the month of survey data collection, the number of sample suitable for the use of multivariate regression analysis statistics should be 5-10 times the index (Hair, et al., 2010). The study consists of 25 questions, hence the approximate sample size 250. The number of samples does not interfere with the calculation of the statistics, therefore, 408 respondents as the total sample size is used (Henseler et,al., 2016).

Research Instrument

The questionnaire is categorized into 6 sections, starting from preliminary questions, demographic, source characteristics, fan engagement and purchase intention. The 25 questions survey is distributed in two languages, English and Thai. The valid respondents are given the choice to select an answer which matches their attitude on a 5-point Likert scale chart.

Preliminary questions

To collect valid responses, two questions were asked to establish that they have been exposed to a YouTube with a Korean boy band endorsement in the specified categories and that they fall under the age range of 18 - 35. Only those that meet the requirements can answer further.

Demographics

The respondents answer general demographic questions such as specific age category between 18 - 35, gender, education level, occupation and over all time spent on YouTube daily.

YouTube Ad Format

To study the influence of different ads formats on the platform, the current advertisement options are adapted to frame 5 questions understanding the consumers' preferences. The five main advertising formats being skippable ads, non-skippable ads, bumper ads, overlay ads and product placements.

Online Engagement

This section comprises five questions which measure the likability of the respondents to engage in the social features provided by YouTube on the platform such as viewing, clicking like, reading comments, commenting, sharing content (Khan, 2017).

Product Type

This section has two questions measuring the cognitive involvement that goes into purchasing decisions of a consumer. The two types of involvement are high involvement that requires more time and effort from a consumer before deciding and low involvement where not much effort or thinking is involved (Kahle et al., 1980).

Purchase intention

The last section has five questions intending to understand the purchase intention of the viewers after being exposed to the endorsed video content on YouTube. Adapted from Yuksel (2016), they measure the intention of the respondents to purchase the endorsed products based on willingness, opportunity, trial, consideration, and likelihood.

Check for Reliability and Validity

It is imperative for any research to check for reliability and the validity of the in struments used to assess the variables. Reliability is understood as the stability of the findings through the measurement, the consistency whereas validity determines the accuracy of the measure, the truthfulness of the results (Carmines, 1979; Altheide & Johnson, 1994).

Cronbach's Alpha is applied to establish validity and reliability of the online survey. A pre-test with 30 samples is conducted with the acceptance level of 0.7 for all the variables is to be considered correlated.

Table 1: Conbach Alpha Beliability

Variable	**Cronbach Alpha reliability**
YouTube Engagement	0.914
Product involvement type	0.766
YouTube ads format	0.813
Purchase intention	0.822

Data Collection and Data Analysis

The data is collected in the months of April to June 2022 using an online questionnaire as the instrument. SPSS (Statistical Package for the Social Sciences) program is used to assess and analyze the gathered data.

The analysis of the results was described through descriptive statistics, which includes the means, standard deviation, and frequency. Pearson's Product Moment Correlation is used to assess the correlation between the variables. The finding will include the use of multiple regression analysis to test the influence of the independent variable (source characteristics and fan engagement) on the dependent variable (purchase intention). The results of this study are reported in the next chapter.

Table 2: Likert Scale Calculation

Level of Agreement	**Score**
Strongly Agree	5.00
Agree	4.00
Somewhat Agree	3.00
Disagree	2.00
Strongly Disagree	1.00

Pearson's Product Moment Correlation is used to explore the correlation of the variables, based on the model by Okveja and Ongkrutraksa (2017).

Table 3: Pearson's Product Moment Correlation

Range	Correlation Strength
0	No positive association
0 - 0.25	Very weak positive association Weak
0.025 - 0.50	positive association
0.50 - 0.75	Moderate positive association
0.75 - 1	Very strong positive association
1	Perfect positive association

Results

Table 4: Demographic Characteristics of the sample

Baseline Characteristics	n	%
Sex		
male	110	26.96
female	289	70.83
other	9	2.21
Age		
18 - 29	347	85.05
30 - 35	61	14.96
Education		
secondary school or equivalent	58	14.22
bachelor's degree	231	56.62
master's degree	115	28.19
Doctor of Philosophy	4	0.94
Occupation		
employee	117	28.68
student	151	37.01
civil service	23	5.64
private employee	67	16.42
business owner	20	4.90
unemployed	23	5.64
other	7	1.72

Note. n = 408, n is the sample

Table 1 shows the demographic characteristics of the samples. When classified by gender It was found that the samples were more females than males. of which 289 were female, accounting for 70.83%, while 110 were male, accounting for 26.96%, and 9 others, accounting for 2.21%.

When classified by age, it was found that most of the samples were aged between 18 - 29 years, 347 people, representing 85.05%, and in the age group 30-35 years, 61 people, representing 14.96%.

The majority of the sample group held 231 bachelor's degrees or 56.62%, followed by 115 people who graduated with a master's degree, accounting for 28.19 percent, 58 people accounting for secondary school or equivalent, 14.22%, and Doctor of Philosophy level, 4 people, representing 0.98%

The majority of the sample consisted of 151 students, accounting for 37.01%, followed by occupational employees of 117 people, accounting for 28.68 percent, private employees of 67 people, making up for 16.42 percent, civil service and unemployed equal, or 23 people, accounted 5.64%, business owners amounted to 20 persons, or 4.91%, and 7 individuals responded as other, or 1.72%.

YouTube advertising format

YouTube advertisement format refers to the categorization of product promotion content on YouTube's expanded advertising methods. The five formats studied in the research are skippable, non-skippable, bumper, overlay and product placement. With the overall mean score of 2.998, it is concluded that the respondents have a moderate level of attitude towards these advertisement formats, scoring as skippable M = 3.66, SD =1.28, non-skippable M = 2.85, SD = 1.31, bumper M = 2.75, SD = 1.22, overlay M = 2.92, SD = 1.14 and product placement M =2.81, SD = 1.22.

Table 5: Frequency, Means, and Standard Deviation of Attitude towards advertising format.

Attitude towards	Level of advertising					*M/ (SD)*	Response
	Strongly Disagree (%)	Disagree (%)	Un decided (%)	Agree (%)	Strongly agree (%)		
Skippable ads	30 (7.35)	59 (14.46)	70 (17.16)	108 (26.47)	141 (34.56)	3.66/ (1.28)	high
Non skippable ads	97 (23.77)	52 (12.75)	119 (29.17)	97 (23.77)	43 (10.54)	2.85/ (1.31)	moderate
Bumper ads	86 (21.08)	81 (19.85)	115 (28.19)	99 (24.26)	27 (6.62)	2.75/ (1.22)	moderate
Overlay ads	58 (14.22)	80 (19.61)	133 (32.60)	109 (26.72)	28 (6.86)	2.92/ (1.14)	moderate
Product placement	81 (19.85)	68 (16.67)	142 (34.80)	81 (19.85)	36 (8.82)	2.81/ (1.22)	moderate
Average of Response Level						**2.99**	**moderate**

Note. Cronbach's Alpha = 0.813

Firstly, the study showed that product placement within the video content is found to be more influential for the purchasing intention of the audience (Beta = 0.267). Yuksal (2016) and Schwemmer & Ziewiecki (2018) studied and are supported through the findings of this research, the rising trend of product promotion through placement in the YouTube content videos and its positive effectiveness on purchase intention.

Online Engagement

Online engagement refers to the process of engagement available on YouTube as a platform, such as viewing the video, clicking like, reading comments, commenting, and sharing content. The results show that the sample group were more engaging to consumption-based actions rather than participatory behaviour on YouTube. Viewing ((M = 3.62, SD = 1.26) and clicking (M = 3.61, SD = 1.23) had the highest mean score in comparison to other actions-reading comments (M = 3.15, SD = 01.29) where they will have to scroll all the way down, commenting (M = 2.64, SD = 1.33) or sharing (M = 2.82, SD = 1.43).

Table 6: Frequency, Means, and Standard Deviation of Online engagement.

Engagement type	Level of engagement					*M/ (SD)*	Response
	Strongly Disagree (%)	Disagree (%)	Un decided (%)	Agree (%)	Strongly agree (%)		
View	38 (9.31)	40 (9.80)	85 (20.83)	123 (30.15)	122 (29.90)	3.62 (1.26)	high
Click like	41 (10.05)	27 (6.62)	97 (23.77)	130 (31.86)	113 (27.70)	3.61/ (1.23)	high
Read comment	63 (15.44)	58 (14.22)	110 (26.96)	110 (26.96)	67 (16.42)	3.15/ (1.29)	moderate
Comment	117 (28.68)	78 (19.12)	83 (20.34)	96 (23.53)	34 (8.33)	2.64/ (1.33)	moderate
Share	121 (29.66)	42 (10.29)	92 (22.55)	97 (23.77)	56 (13.73)	2.82/ (1.43)	moderate
Average of Response Level						**3.16**	**moderate**

Note. Cronbach's Alpha = 0.914

Table 7: Frequency, Means, and Standard Deviation of Attitude towards advertisement for product type.

Attitude towards advertisement for product type	Level of engagement					*M/ (SD)*	Response
	Strongly Disagree (%)	Disagree (%)	Un decided (%)	Agree (%)	Strongly agree (%)		
High involvement	16 (3.92)	48 (11.76)	105 (25.74)	164 (40.20)	75 (18.38)	.57/ (1.04)	high
Low involvement	25 (6.13)	68 (16.67)	89 (21.81)	156 (38.24)	70 (17.16)	3.44/ (1.14)	high
Average of Response Level						**3.50**	**high**

Note. Cronbach's Alpha = 0.766

Table 5 shows a high response level. It was found that the sample group had the mean of the response level at a high level with both sub variables ranking at a high level.

When considering each item, it was found that of the variables with the response level score, the highest was High involvement with the mean of 3.57, followed by Low involvement, the mean of 3.44, respectively.

Table 8: Frequency, Means, and Standard Deviation of Purchase intention.

Purchase intention	**Levels**					*M/ (SD)*	**Level of Response**
	Strongly Disagree (%)	**Disagree (%)**	**Undecided (%)**	**Agree (%)**	**Strongly agree (%)**		
Consider purchasing	14 (3.43)	73 (17.89)	161 (39.46)	22 (29.90)	38 (9.31)	.24/ (0.97)	moderate
Shall purchase	38 (9.31)	96 (23.53)	132 (32.35)	117 (28.68)	25 (6.13)	2.99/ (1.07)	moderate
Intend to purchase	15 (3.68)	83 (20.34)	182 (44.61)	114 (27.94)	14 (3.43)	3.07/ (0.874)	moderate
Try the consider	6 (1.47)	82 (20.10)	157 (38.48)	149 (36.52)	14 (3.43)	3.20/ (0.85)	moderate
Intend to consider	13 (3.19)	60 (14.71)	157 (38.48)	156 (38.24)	22 (5.39)	3.28/ (0.89)	moderate
Average of Response Level						**3.15**	**moderate**

Note. Cronbach's Alpha = 0.822

Table 6 shows a moderate level of response. It was found that the sample group had the mean of the response level moderate in for which all 5 sub variables received moderate level of response.

When considering each item, it was found that the variable with the response level score, the highest was Intend to consider, with an average of 3.28, followed by Consider purchasing, with an average of 3.24, Try the Consider, with an average of 3.20, Intend to purchase with an average of 3.07, and shall actually purchase, with an average of 2.99, respectively.

Table 9: Regression Coefficients of Predictors for Responsive Behaviour

Variable	*B*	*SE*	95% CI		p
			LL	*UL*	
constant	1.757	0.124	1.514	2.000	0.000*
Fan Engagement					
Click like	0.108	0.026	0.056	0.160	0.000*
Read comment	-.015	-	-	-	0.796
Comment	0.007	-	-	-	0.878
Share	0.055	-	-	-	0.286
YouTube ads format					
Skippable ads	0.031	-	-	-	0.467
Non skippable ads	0.054	-	-	-	0.247
Bumper ads	-0.025	-	-	-	0.605
Overlay ads	-0.089	-	-	-	0.084
Product placement	0.267	0.026	0.216	0.319	0.000*
Product involvement level					
High involvement	0.045	-	-	-	0.307
Low involvement	0.074	0.028	0.019	0.130	0.009*

Note. F (3,403) = 61.896, R^2 = 0.315, * $p < 0.05$

Table 7 shows the multiple regression analysis by stepwise method which is the most suitable forecasting method. It was found that the variables of exposure and attitude (View, Click like, Read comment, Comment, Share, Skippable ads, Non skippable ads, Bumper ads, Overlay ads, and, Product placement, High involvement and Low involvement) total 14 variables, three of these sub variables had an influence on consumers' purchase intention, namely Click like (Beta = 0.108), Low involvement (Beta = 0.074), and Product placement (Beta = 0.267), with the significance of up to 31% at the 0.05 level. Even though product involvement variable didn't show any significance, its sub variable showed a positive influence over the dependent variable (Low involvement Beta = 0.074).

Conclusion

The results of the survey found a clear support for strong influence of YouTube engagement on the purchase intention of consumers on products endorsed by Korean boy bands. namely, the action of clicking like. This shows that the consumers have a higher tendency to purchase intention when they engage in passive participatory actions like clicking on the video. This data supports the finding presented by Bu & Kim (2021) where they presented the participation of the fans, or in this case, the audience, through likes and comments on BTS' personal account received higher acceptance of messages and advertisements.

Firstly, the study showed that product placement within the video content is found to be more influential for the purchasing intention of the audience (Beta = 0.267). Yuksal (2016) and Schwemmer & Ziewiecki (2018) studied and are supported through the findings of this research, the rising trend of product promotion through placement in the YouTube content videos and its positive effectiveness on purchase intention.

Secondly, results also show the influence of YouTube advertising formats. With the five common formats provided on the platform, the analysis showed that skippable ads were better received by the respondents than any other format of advertisement on the platform, supporting the findings previously studied by Ongkrutraksa (2020) which was that the Thai viewers skip the YouTube advertisements. Similar to the study by Sebastian et al., (2021) where it was concluded that consumers tend to wait for the skip button to appear and skip the advertisement, and that they generally pay less attention to skippable advertisements unless the advertisement is unique or attractive. This shows that the audience is more likely to disregard the advertising as they actively seek to skip it, supporting the findings by Verma, (2016) and Sabuncuoğlu-Inanç et al., (2020).

Lastly the involvement level of the audience in the product purchase intention resulted in high consideration especially for low involvement products like games and food and drinks and cosmetics (B= 0.074). Supporting the results by Arora et al., (2019) that portrays that though high involvement forms a stronger attitude towards brands, celebrity endorsement has a stronger influence towards low involvement products and are more likely to lead to higher purchase intention. Building upon this, this research found that Korean boy bands have a higher influence on the purchasing intention of low involvement products. The audience are more likely to intend to consider purchasing the product that is low involvement. The results demonstrated that the level of involvement is an important factor in the audiences' decision-making process and low involvement products are more likely to be influenced using a third-party endorser such as Korean boy bands.

Recommendations

Product placement as a medium of advertisement on the platform is an important implication that can be taken for the research. With the introduction of YouTube Premium, this way of product promotion would be more effective as other forms of original YouTube ads are no longer exposed to those who subscribed to the Premium feature. Product placement in the content itself is suggested for adequate strategic media plan. YouTube advertisements are more likely to yield higher participation from the audience if they aim to engage and promote liking the video content. The metrics to understand and follow up the effectiveness of the campaign can be measured through the likes received by the content as the data has shown a positive influence of this type of engagement on the platform with the purchasing intention of the audience.

Directions for Future Research

This study has potential to be developed further by going deeper into the relevance of the independent variables with the dependent variable. Since the research only focused on the celebrity power of the Korean boy bands, the influence of girl groups on the same or similar audience. Considering the social media platform, YouTube, future researchers can dive into the advertisements on other social media platforms such as Instagram and TikTok which are popular with the audiences of the range in the study. Going further, the variables can be studied in context to non-mainstream celebrities such as popular youtubers for the same product category and find their influence. This research can also be the foundation of future studies on the influence of Korean celebrities in South Korea and compared to Thailand or other nations outside their native country.

Limitations

This study was limited to those who do not subscribe to the service or recalled the various ads purely from memory ever since the launch of YouTube Premium, subscription-based service allows YouTube viewers an ad-free viewing experience. Information overload and media saturation of similar content on various social media platforms may have been an unstudied factor in this research. The respondents may have been exposed to advertisements outside of YouTube alone and answered the survey with slight information bias.

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The Influence of Online Store Attributes on Consumers' Purchase Intention Towards Online Marketplace Sellers

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Abstract

Nowadays, with the development of electronic information and digital devices, e-commerce is growing rapidly. Covid-19 has also made people rely more and more on online shopping (Shaw et al., 2022). Online store competition is also becoming more and more stimulating. In order to attract more consumers and stand out in the fierce competition, it is an important topic for sellers in the online marketplace to attract consumers' purchase intention. Exploring the impact on customers' purchase intention from the perspective of online store attributes is the subject of this study. Online store attributes are analyzed from five perspectives, including appearance design, product information, promotion campaign, store services, and consumer review. This study collected 304 online questionnaires through a convenience sampling method and used Ordinary Least Squares regression to verify the hypotheses. The result shows that only the appearance design and consumer review of the online store have a significant and positive impact on the purchase intention of customers. Product information, promotion campaigns, and store services have a positive effect but are not supported.

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Besides, the findings of the control variables found that older consumers have more purchase intention than younger consumers, and freelancers tend to have the lowest purchase intention among other occupational groups. In conclusion, the findings suggest that sellers should pay more attention to appearance design and consumer review. Particular attention should be paid to the appearance design.

Keywords: Online Store Attributes, Consumers' Purchase Intention, Online Marketplace Sellers

อิทธิพลของลักษณะร้านค้าออนไลน์ต่อความตั้งใจซื้อจากผู้ค้าขายในตลาดออนไลน์ของผู้บริโภค

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รับวันที่ 22 ตุลาคม 2565 ส่งแก้ไขวันที่ 6 มิถุนายน 2566 ตอบรับตีพิมพ์วันที่ 21 มิถุนายน 2566

บทคัดย่อ

ในปัจจุบันการพัฒนาของข้อมูลอิเล็กทรอนิกส์และเครื่องมือดิจิตัลนั้นส่งผลให้การพาณิชย์อิเล็กทรอนิกส์เป็นไปอย่างรวดเร็ว โควิด 19 ทำให้ผู้คนพึ่งพาการใช้จ่ายออนไลน์มากขึ้นเรื่อย ๆ (Shaw et al., 2022) การแข่งขันของร้านออนไลน์กำลังเป็นเพิ่มขึ้นเรื่อย ๆ เช่นกัน ทั้งนี้เพื่อดึงดูดผู้บริโภคและมีความโดดเด่นในการแข่งขัน สิ่งนี้จึงเป็นประเด็นสำคัญสำหรับผู้ค้าขายในตลาดออนไลน์เพื่อการดึงดูดความตั้งใจซื้อของผู้บริโภค การสำรวจผลกระทบจากความตั้งใจซื้อของผู้บริโภคจากมุมมองของลักษณะร้านค้าออนไลน์นั้น คือวัตถุประสงค์หลักของงานวิจัยนี้ โดยทำการวิเคราะห์ลักษณะของร้านค้าออนไลน์จากมุมมองห้าด้าน คือการออกแบบรูปลักษณ์ภายนอก ข้อมูลผลิตภัณฑ์ แคมเปญการประชาสัมพันธ์ บริการทางร้าน และการรีวิวจากผู้บริโภค โดยงานวิจัยเก็บข้อมูลจากแบบสอบถามออนไลน์ 304 ชุด ด้วยวิธีการสุ่มตัวอย่างแบบง่ายและใช้สถิติการถดทองกำลังสองน้อยที่สุด (Ordinary Least Squares Regression) ผลการวิจัยแสดงให้เห็นว่ามีเพียงการออกแบบภายนอกและการรีวิวจากผู้บริโภคของร้านค้าออนไลน์เท่านั้นที่มีผลกระทบเชิงบวกและมีนัยสำคัญต่อความตั้งใจซื้อของผู้บริโภค ส่วนข้อมูลผลิตภัณฑ์ แคมเปญการประชาสัมพันธ์และการบริการของร้านค้ามีผลลัพธ์เชิงบวกแต่ทว่าไม่สามารถยืนยันสมมุติฐานได้ นอกจากนี้ผลการวิจัยจากตัวแปรควบคุมพบว่าผู้บริโภคกลุ่มอายุสูงขึ้นไปจะมีความตั้งใจซื้อมากกว่ากลุ่มที่มีอายุน้อยกว่า อีกทั้งผู้ประกอบวิชาชีพอิสระมีแนวโน้มที่จะตั้งใจซื้อน้อยที่สุดเมื่อเทียบกับกลุ่มวิชาชีพอื่น ๆ โดยสรุปคือผลการวิจัยชี้ให้เห็นว่าผู้ค้าขายควรให้ความสำคัญกับการออกแบบรูปลักษณ์ภายนอกและรีวิวจากผู้บริโภค โดยเฉพาะอย่างยิ่งการออกแบบรูปลักษณ์ภายนอกของผลิตภัณฑ์

คำสำคัญ: ลักษณะร้านค้าออนไลน์ ความตั้งใจซื้อของผู้บริโภค ผู้ค้าขายในตลาดออนไลน์

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Introduction

Nowadays, with the development of electronic technologies, the application of the internet, and the improvement of e-business infrastructure, e-commerce is growing rapidly. More recently, the rapid development of smart devices and the popularity of broadband networks have also provided more convenience for e-commerce development. Currently, people's life cannot be separated from the internet, while e-commerce which is conducted in the electronic marketplace based on the internet has deeply affected people's lives. More and more people gradually rely on online shopping, especially during the pandemic of COVID-19 (Shaw et al., 2022), the trend of online shopping is accelerated, and more people's shopping habit has been transferred. The demand for online shopping is increasing, which promotes the development of e-commerce. Global e-commerce sales were $4938 billion in 2021, a 16.2% increase over 2020 and a 47.4% increase over 2019. (*Global Retail E-commerce Sales 2026 | Statista*, 2022). From 2019-2022, the share of e-commerce in total global retail sales increases from 13.8% to 19.7%. (*Global E-commerce Share of Retail Sales 2026 | Statista*, 2023)

By 2022, China will be the world's most penetrated e-commerce market, with nearly half of all retail sales coming via the Internet. The UK and South Korea follow closely behind with over 36% and 32% respectively, but there are still many countries such as the US, Norway and Canada with online retail penetration rates below 20%. (Statista, 2022). With the rapid development of e-commerce and the impact of online shopping trends, especially in some countries where the online market is still a blue ocean compared to China, more and more online marketplace sellers are emerging to seize this opportunity, including individual sellers and corporate sellers. The competition in the online seller market is becoming more and more fierce. Besides, many sellers cannot obtain the consumer or get success even though the existing e-commerce platforms give them many supports and guidance, as well as the certain fixed operation pattern. There are many reasons, such as lacking e-commerce knowledge or experiences, unattractive store image, uncompetitive product information or price, incomprehension of consumer behavior, etc. Online shopping also offers consumers the possibility of a more convenient and comparable product selection. Consumers can browse and compare more product information and prices online, which also makes it easy for them to find what they want online according to their intention. (Chen et al., 2022).

To catch customers' eyes, be consumers' preferred choice, obtain more consumers, and increase online stores' competitiveness in a more and more fierce competition environment, it is necessary for online marketplace sellers to consider how to attract and raise consumers' purchase intention. This study focuses on the online store attributes in terms of online marketplace sellers, which influence consumers' purchase intention. However, this topic has rarely been studied before. The effect of the factors on consumers' online purchase intention has been researched widely. According to Ngoc et al. (2019), the research pointed out that perceived usefulness, perceived ease of use, attitude, subjective norms, and trust have a positive effect on customers' online purchase intention. Ru et al. (2021) found that perceived usefulness and subjective norm significantly affect the online purchase intention of Shopee's customers in Malaysia. From the perspective of the online store, the online store attribute also provides perceived usefulness and subjective norms towards customers. Deng et al. (2021) found that consumers' perceived benefits of online shopping are the most important factor influencing their online purchase intentions. Aqeel and Othman (2022) found that ease of use is the biggest factor influencing purchase intention, otherwise they revealed that the opinions of others in the comment section had the greatest impact on purchase intention, and the number of comments had the least impact on purchase intention. Nawi and Sulaiman (2021) showed that there are five key factors that consumers choose before making an online purchase, and they are security factors, products offered, risk, trustworthiness, and user experience. Here are also studies on the impact of attributes of online shopping on customer satisfaction. According to Mofokeng (2021), Product delivery, perceived security, information quality and product diversity influence customer satisfaction. Dholakia and Zhao (2010) pointed out that on-time delivery has a dominant effect on customer satisfaction. However, customer satisfaction occurs after the purchase, and the authors prefer to investigate the influence of store attributes on shopping intention, that is, before the actual shopping action takes place. Therefore, from the consumer's point of view, when the author shops online, the online store's attributes do affect buying intention. The author has been affected by the shop's overall design, product information, promotion, and so on. The feelings and experiences of online consumers are based entirely on the information provided by online stores, as they are unable to have physical contact with the products. (Vasic, Kilibarda & Kaurin, 2019). On the other hand, in terms of online sellers, this study provides them with a deeper understanding and reference meaning for the ways to attract consumers' purchase intention from the perspective of their own store attributes. It helps online store sellers optimize store attributes, improve consumers' purchase intention, further increase store goodwill, and enhance competitive advantages.

Literature Review

Online Store Attributes

Store image is a multidimensional concept of a synthesis of tangible (or functional) and intangible (or psychological) attributes of a store as perceived by consumers. (Lindquist, 1974). Van der Heijden & Verhagen (2004) also point out there are many aspects of consumer perception of a store, often referred to as components or attributes, which together make up the store image. In research from Van der Heijden and Verhagen (2004), they concluded that in B2C, online store image can be divided into 7 dimensions: online store usefulness, shopping pleasure, online store ease of use, trustworthiness, online store style, online store familiarity, online store solutions. Gupta et al. (2022) indicated that store image is defined as "a mixture of attributes that consumers perceive in a store". These attributes include service and product quality, personnel skills, and accessibility. According to Ghosh, Tripathi & Kumar (2010), store attributes refer to the basic components of the store image dimension (e.g., merchandise, physical facilities, services, atmosphere, etc.). Thus, according to online marketplace sellers' online store characters and basic components of the store image dimension, this study proposes that online store attributes are attributes that belong to the online store itself and be a part of the store image, and attributes are what the online store wants to offer to its customers, which can be seen and perceived by customers.

Consumers' Purchase Intention

Marlien et al. (2020) believed that purchase intention is a combination of consumers' trusting attitudes toward products and services. It is also the determining factor for the occurrence of the act of purchasing a product or service. In addition, purchase intention is a collection of ideas about whether individuals are willing to buy or their particular buying behavior (Jain, 2021). A consumer's purchase intention refers to that consumer's attitude towards a particular purchase and the extent to which the consumer is willing to pay. It is essentially a signal of the consumer's buying behavior (Zhang et al., 2020). Many researchers have discovered that focusing on consumer purchase intent, which is well maintained in online buying for a sustainable digital economy, would be beneficial (Dong et al., 2021). It is important because intentions are considered to be key predictors of actual behavior (Peña-García et al., 2020).

Factors Affecting Consumers' Purchase Intention

Given that the focus of this study is on the influence of online store attributes on consumers' purchase intention, the study takes the influence on consumers' purchase intention as the starting point and analyzes online store attributes from five aspects: (1) appearance design; (2) product information; (3) promotion campaign; (4) store service, (5) consumer review. The importance of these attributes and how they affect consumers' purchase intention are discussed below.

Appearance Design

In research from Ganguly et al. (2010), content, structure, interaction, and presentation are the four elements of design from an architectural standpoint. Therefore, the appearance design of an online store can be considered as the overall presentation, including the overall layout, color tone, style features, the location of functional keys, product catalog, and so on. According to Krysik (2021), As many as 93% of shoppers consider the appearance of an online store to be the most important aspect when making a purchase. For an indecisive shopper, an online store with an attractive design may be the main factor in determining whether a customer chooses to use the offer or go to a competitor.

The appearance design of the online store is conveyed to customers through visual effects. The appearance with attractive features will close the psychological distance between the store and consumers, which is conducive to customer curiosity about the product and enhance goodwill. Ganguly et al. (2010) empirically found that website design is a significant influential factor driving consumer trust, which in turn leads the online purchase decisions. In research from Tlapana (2021), store design characteristics have a significant impact on the cost of the shopping experience, particularly the psychological cost, thus sellers should carefully evaluate them (e.g., store layout, merchandise arrangement). These characteristics have a significant impact on potential shoppers' psychological costs, and consequently their buying experience.

Hypothesis 1: The appearance design of an online store has a positive impact on customers' purchase intention.

Product Information

According to Tzeng et al. (2021), product information covers detailed information about product features, etc. In this study, product information can be considered as the information conveyed by the product, including the product picture or video introduction, product title, detailed description, and demonstration of product sales. Whether shopping in a brick-and-mortar store or online, customers generally prefer to be provided with comprehensive product information to help them make more informed purchasing decisions (Zhao et al., 2021). Potential online customers, in particular, are concerned about the quality of information available on websites to assist them in making sound purchasing decisions. (Mofokeng, 2021b).

The product information that is clearly described and conveyed makes it easier for customers to understand and recognize the product. A product that meets the customer's expectations and whose information is positively conveyed will stimulate the customer's interest in buying the product. In research from Lim and Dubinsky (2004), they mentioned the accurate description and portrayal of product information is a critical factor that influences consumers' decision to shop online. Because customers are unable to touch the product. Therefore, this hypothesis is proposed as follows:

Hypothesis 2: The product information of an online store has a positive impact on customers' purchase intention.

Promotion Campaign

In research from KARA and YAPRAKLI (2017), they pointed out that promotion is the most common and comprehensive activity in marketing communication practice. They also mentioned promotion is communication by the seller to influence the buyer’s attitude and behavior. In this definition, the communication phenomenon of influence and persuasion in promotions is considered as the main factor (KARA & YAPRAKLI, 2017). In the online store context, a promotion campaign should include coupons, discounts, promotional campaigns, promotional days, etc.

The research result from KARA and YAPRAKLI (2017) demonstrates the existence of a positive relationship between promotion and customer purchase intention. Customers are always willing to choose the products with a better price in the process of purchasing. The more promotions, the more frequent, and the more discounts, the more customers will be motivated to buy. In research from Zhao et al. (2021b), they pointed out that external environments, such as promotions, have a strong influence on consumer behavior. just like some promotion slogans posted on the window can promote customer traffic. There is a positive relationship between promotion and customer purchase intention. Therefore, this hypothesis is proposed as follows:

Hypothesis 3: The promotion campaign of an online store has a positive impact on customers' purchase intention.

Store Service

Store service refers to the online services and customer service that online stores provide to consumers to help customers solve problems through digital channels (Brown, 2020). In the online store context, it includes comment response, online consulting services, and so on.

Good service in the store will prompt good feelings and recognition from customers. It was discovered that the quality of e-services had a positive impact on three consumer behavior intentions: purchase intentions, site revisit, and WOM (Gounaris et al., 2010). Online customer service can promptly and professionally respond to customer inquiries and politely respond to customer comments, which can close the psychological distance with customers and make them feel happy and comfortable, prompting purchase intentions. Jaiswal and Singh (2020) pointed out that E-tailers offer a variety of online services that can improve customer engagement. Javed et al. (2020) found the service quality of online stores has a positive impact on the purchase intention of online customers. Therefore, this hypothesis is proposed as follows:

Hypothesis 4: The store service of an online store has a positive impact on customers'purchase intention.

Consumer Review

In research from Zheng (2021), Online consumer reviews are generated by consumers through text, images, and video to evaluate products, services, prices, features, and user experiences. According to Ismagilova et al. (2020), online consumer review is regarded as a new type of communication through electronic word of mouth. Online stores often place customer reviews near purchase information, making it easier for customers to get word-of-mouth information or other information. Customer reviews and ratings are also a visual representation of word-of-mouth. Research shows that 93% of customers read online reviews before making a purchase. 91% of 18–34-year-olds trust online reviews as much as personal recommendations (Kaemingk, 2022).

Online ratings and reviews are an important source of information for consumers or buyers. (Thakur, 2018). In research from Ahani et al. (2019), consumers perceive online reviews to be a valuable source of information that influences their online shopping habits. According to Chen and Chang (2018), perceived value has a stronger impact on potential customers' purchase intention. Consumer ratings can be an important tool for consumers to refer to products and reduce the risk of purchase. And positive reviews have a significant impact on purchase intention (Lee & Shin, 2014). Besides, word of mouth is a very important factor that influences the purchase intention of customers (Ismagilova et al., 2020). Kato (2022) show that consumer online reviews, as a form of electronic word-of-mouth, have a causal impact on consumer purchase behavior. At the same time, feedback from other customers about the product also provides an important reference value for customers in the selection process (Katawetawaraks & Wang, 2011). The more positive the feedback, the more it will stimulate customers' goodwill towards the product and increase their desire to buy. Therefore, this hypothesis is proposed as follows:

Hypothesis 5: The consumer review of an online store has a positive impact on customers' purchase intention.

All hypotheses are summarized in the conceptual model, as shown in Figure 1.

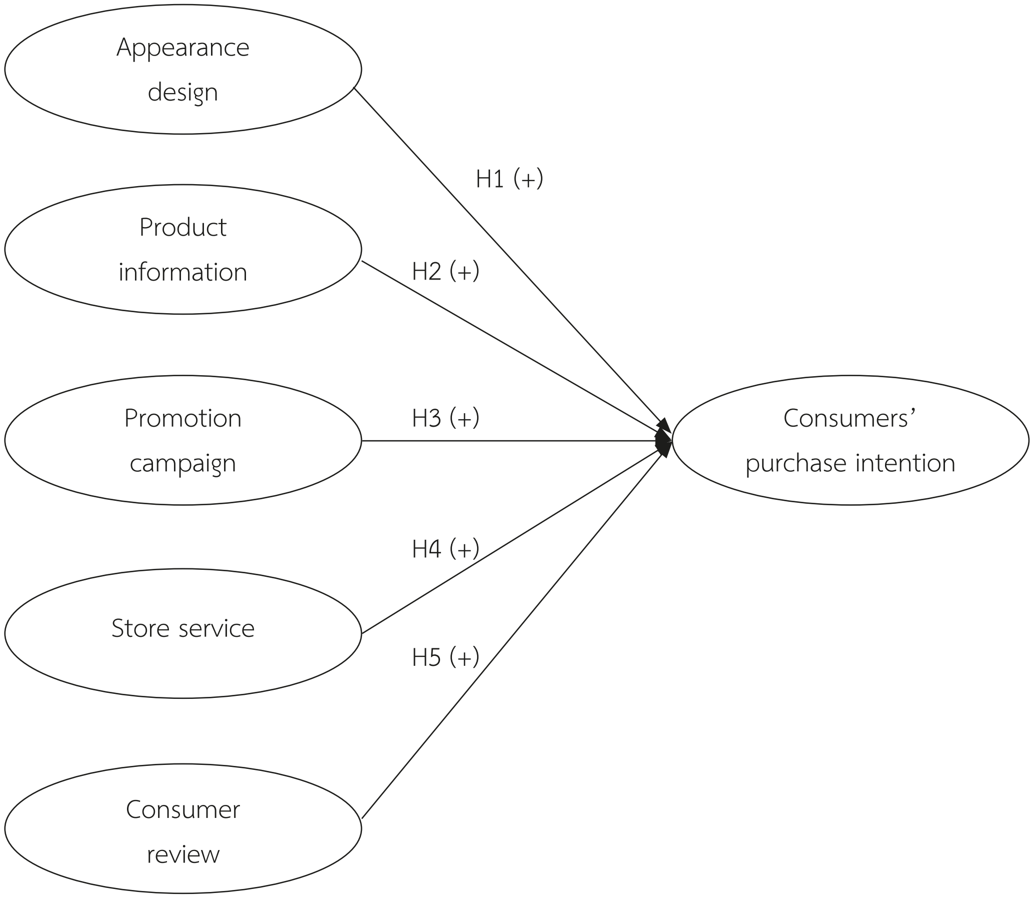


Figure 1: Conceptual model

Methods

Sample and Data Collection

The target population of this research is people who have online shopping experiences from China and Thailand. This is because of the high penetration of e-commerce users in China and Thailand, which are expected to be 76.8% and 57.4%, respectively, in 2023, and on the other hand because the authors live in China and Thailand and can access the research data more easily in these two countries (Statista, n.d.). The samples were selected by using a convenience sampling method, which is part of the nonprobability sampling methods. In this study, the questionnaire survey was used to gather the data, which was conducted by the Microsoft forms and in both Chinese and English languages. The questionnaire includes closed-end questions and open-end questions, which consist of basic personal information, instruction, and Likert-scale questions of key variables. The questionnaire link was collected from 3rd April 2022 to 26th April 2022, and was distributed via different social communication platforms, such as Facebook, Wechat, and Line. The link to the questionnaire was posted in different online social groups and also shared individually with friends requesting to fill it out. However, not many replies were received. So, the author started to post the link in the exchange survey filling group by filling out others' surveys and then getting the respondents in return. The respondents were informed that the data collection was totally conducted in an anonymous way. Bonus incentives were adopted to encourage people to actively participate in filling out the survey. In this way, the number and quality of responses are fast and relatively satisfactory. The target sample collected was 400 respondents, the number of responses was 305, so the response rate was 76%. However, there was 1 respondent who answered that he had no experience with online shopping, thus, the number of available responses were 304. The respondents' characteristics are summarized in Table 1:

Table 1: Descriptive statistics of the respondents

Variables	Attributes	Frequency	Percentage
Gender	Male	89	29.2
	Female	216	70.8
Age	10 - 20	87	28.5
	21 - 30	184	60.3
	31 - 40	31	10.2
	41 - 50	3	1.0
	51 - 60	0	0.0
	60+	0	0.0
Education Level	Primary and secondary schools	19	6.2
	Bachelor	219	71.8
	Master	64	21.0
	PhD	3	1.0

Table 1: Descriptive statistics of the respondents (Continue)

Variables	Attributes	Frequency	Percentage
Employment Status	Student	206	67.5
	Employee	64	21.0
	Business owner	15	4.9
	Freelancer	14	4.6
	Unemployed	6	2.0
	Retiree	0	0.0
Have you ever shopped online	No	1	0.3
	Yes	304	99.7
How long have you been shopping online	1 year or less	21	7.2
	1 - 3 years	66	21.6
	3 - 5 years	81	26.6
	5 - 7 years	55	18.0
	7 years or above	81	26.6
How often do you shop online	Once a year or not	10	3.6
	Several times a year	57	18.7
	Several times a month	166	54.4
	Several times a week	61	20.0
	Once a day	10	3.3

Measures

Appearance design was measured by the scales developed by the author. The scales employ a five-point Likert scale with 1 (*strongly disagree*) to 5 (*strongly agree*) and include a total of 3 questions. The questions are as follows:

(1) Store overall layout is clear and orderly

(2) The overall color tone of the store is harmonious

(3) Attractive style features of the store

Product information was measured by the scales developed by the author. The scales employ a five-point Likert scale with 1 (*strongly disagree*) to 5 (*strongly agree*) and include a total of 3 questions. The questions are as follows:

(1) A product picture or video introduction is clear and effective to express the product features

(2) The product title and keyword are easy to understand and to the point

(3) The detailed description is comprehensive to express all details related to a product

The promotion campaign was measured by the scales developed by the author. The scales employ a five-point Likert scale with 1 (*strongly disagree*) to 5 (*strongly agree*) and include a total of 3 questions. The questions are as follows:

(1) Sellers provide coupons or discounts

(2) The promotion campaign is frequent

(3) The store offers more discounts than usual on major promotional days (e.g., 11.11day)

Store service was measured by the scales developed by the author. The scales employ a five-point Likert scale with 1 (*strongly disagree*) to 5 (*strongly agree*) and include a total of 3 questions. The questions are as follows:

(1) Online customer service is very good attitude and patient

(2) The online stores answer questions and help customers quickly

(3) The online store provides good support to customers

Consumer review was measured by the scales developed by the author. The scales employ a five-point Likert scale with 1 (*strongly disagree*) to 5 (*strongly agree*) and include a total of 3 questions. The questions are as follows:

(1) The store has received good consumer reviews

(2) Consumer reviews are mostly positive

(3) The consumer review score is quite high

Consumers' purchase intention was measured by the scales developed by the author. The scales employ a five-point Likert scale with 1 (*strongly disagree*) to 5 (*strongly agree*) and include a total of 3 questions. The questions are as follows:

(1) I would like to buy from this online seller

(2) If I buy the same product, I will give priority to this online store

(3) I will buy from this online seller

Control Variables

The control variables in this study include the basic personal characteristics of the respondents that might affect consumers' purchase intention, such as gender, age, education level, and employment status, which are commonly adopted by many researchers. Moreover, there are other online shopping-related questions of control variables such as whether they shop online, how long they have been shopping online, and how often they shop online. If the respondent has no experience in online shopping, the questionnaire will automatically jump to the page of the submission. All the questions of control variables are measured by either nominal scale or ordinal scale.

Statistical Analysis

To determine the relationship between the independent and dependent variables, the analysis in this study used the statistical method of ordinary least squares (OLS) regression. The data analysis was carried out using IBM SPSS Statistics version 26 software.

Results

The reliability analysis is used as a method to verify the responses' internal consistency, which always is tested by using the Cronbach's alpha (α) coefficient. As Nunnally (1967) recommended, it is generally considered that the value of Cronbach's α coefficient is between 0 and 1. If the coefficient is less than 0.6, it is considered to have poor or unacceptable internal consistency reliability, in the range of 0.6 - 0.7 it means that the reliability level is acceptable, in the range of 0.7 - 0.9 it means that the scale has a good reliability level, if the coefficient is greater than 0.9 it means that the internal consistency reliability is excellent. The result of the Cronbach alphas coefficient of each variable is more than 0.8, which is in the range of 0.7 - 0.9 according to Nunnally (1967), represents all variables have good reliability. The specific indicators are shown in Table 2.

Table 2: Results from a reliability test

Variables	Appearance design	Product information	Promotion campaign	Store service	Consumer review	Consumers' purchase intention
Cronbach alphas (α) coefficient	0.862	0.884	0.860	0.895	0.869	0.829

Table 3 shows the correlations among key variables. We can conclude each key variable has a positive correlation with consumers' purchase intention. The specific indicators are as follows.

Table 3: Correlations among key variables

	AD	PI	PC	SER	CR	INTEN
AD	1	.693**	.556**	.603**	.540**	.576**
PI		1	.530**	.701**	.665**	.533**
PC			1	.500**	.500**	.413**
SER				1	.638**	.495**
CR					1	.587**
INTEN						1

Notes: ** p-value <.01

AD = Appearance design, PI= Product information, PC= Promotion campaign,

SER = Store service, CR= Consumer review, INTEN= Consumers' purchase intention

The following are the results of the hypothesis testing using OLS regression, as shown in Table 4.

Table 4: Multiple regression results

Independent Variables	Standardized Beta coefficients and the level of significance	VIF
Main independent variables		
Appearance design	.347***	2.282
Product information	.040	2.960
Promotion campaign	.022	1.733
Store service	.040	2.401
Consumer review	.324***	2.176
Control variables		
Gender (Woman=1)	.048	1.112
Age	.155**	1.726
Education level	-.080	1.233
Employee	.034	1.415
Business owner	.091	1.293
Freelancer	-.128**	1.197
Unemployed	.020	1.049
How long have you been shopping online	-.090	1.230
How often do you shop online	.003	1.137
R-square	.490	

Notes: *** p-value <.001, ** p-value <.01, p-value * <.05

Standardized beta coefficients are reported

Hypothesis 1: Appearance design is positively correlated with consumers' purchase intention. There is a positive beta coefficient (b=.347) with a p-value of .000. This represents that the appearance design of an online store positively affects the consumers' purchase intention. The more attractive the appearance design, the higher the purchase intention. The result is significantly supported. Thus, hypothesis 1 is supported.

Hypothesis 2: Product information is positively correlated with consumers' purchase intention. There is a positive beta coefficient (b=.040) with a p-value of .582. This shows that product information of online stores also positively affects the consumers' purchase intention. An online store that has clear product information will increase consumers' desire to buy. However, the result is not statistically significant. Hence, hypothesis 2 is not supported.

Hypothesis 3: Promotion campaign is positively correlated with consumers' purchase intention. There is a positive beta coefficient (b=.022) with a p-value of .690. This indicates that the promotion campaign of an online store positively affects the customers' purchase intention. The more promotions and the more discounts, the more customers will be motivated to buy. However, the result is not statistically significant. Therefore, hypothesis 3 is not supported.

Hypothesis 4: Store service is positively correlated with consumers' purchase intention. There is a positive beta coefficient (b=.040) with a p-value of .542. This shows that the store service of an online store positively affects the customers' purchase intention. A store with better service will increase customers' purchase intention. However, the result is not statistically significant. As a consequence, hypothesis 4 is also not supported.

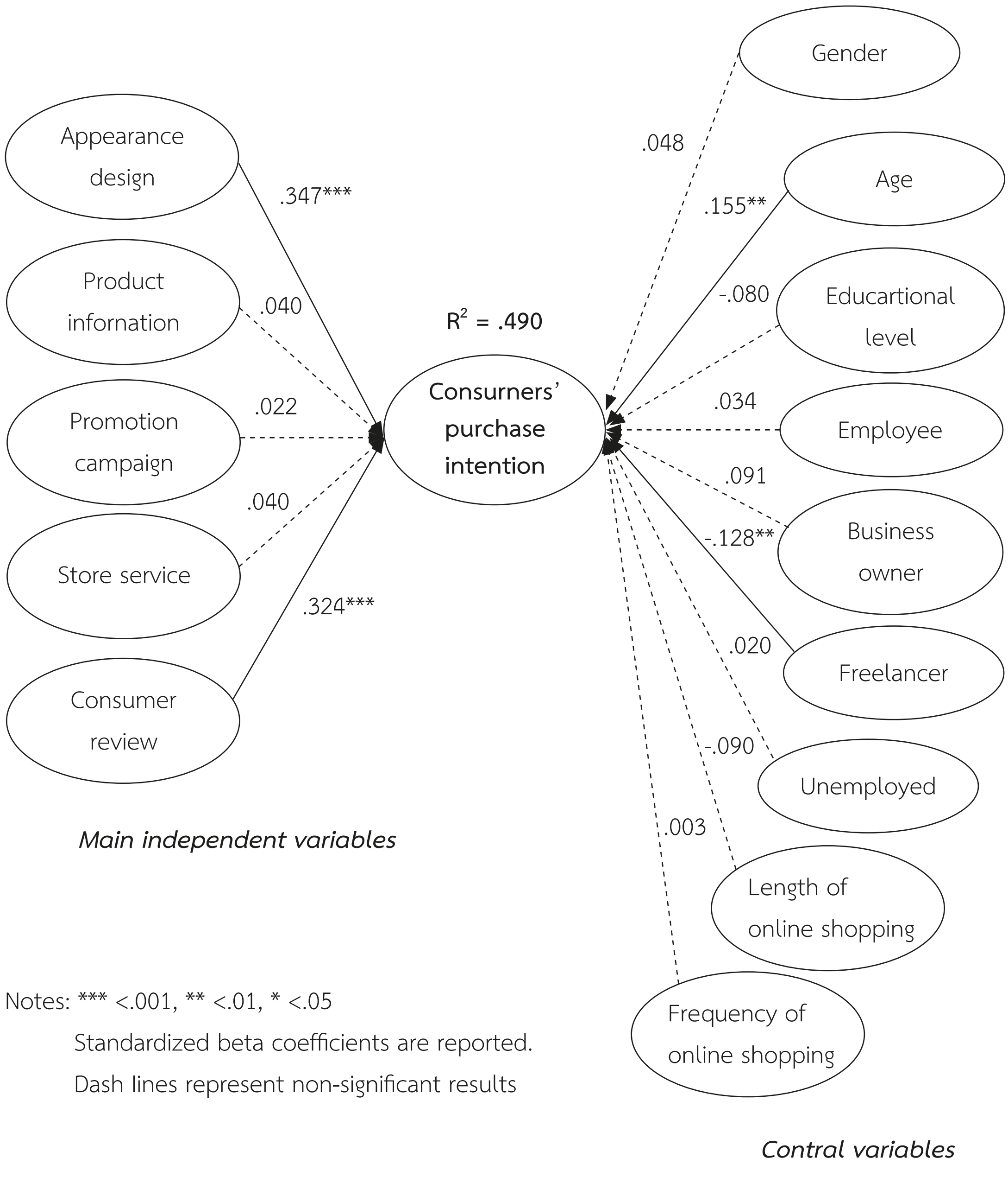
Hypothesis 5: Consumer review is positively correlated with consumers' purchase intention. There is a positive beta coefficient (b=.324) with a p-value of .000. This indicates that the consumer review of an online store positively affects the customers' purchase intention. The more positive the content of the customer's review or the higher the review score, the higher the customer's purchase intention. In addition, the result is statistically significant. Thus, hypothesis 5 is supported.

In terms of control variables, the result shows that gender is positively related to consumers' purchase intention (b=.048; *p*=.275). This means females have higher purchase intentions than males. However, the result is not statistically significant. Thus, the factor of gender is not supported. Regarding the beta coefficients of age (b=.155; *p*=.005), it shows that older consumers have more purchase intentions than younger consumers. And the result is statistically significant. The factor of age is supported. With regard to education level (b=-.080; *p*=.087), this shows education level is negatively associated with purchase intention. People with higher levels of education have lower purchase intentions than those with lower levels of education. Nevertheless, the result is not significantly supported due to the p-value being more than .05. Therefore, the factor of education level is not supported. For employment status, the analysis only showed that freelances are the only group that has a significant beta coefficient, which is negative (b=-.128; *p*=.006). It can be interpreted that, among all groups of employment status, freelances tend to be the group that has the lowest purchase intentions. The beta coefficient for how long you have been shopping online (b=-.090; *p*=.054) is negative, which means the longer experience people shop online, the less intention they are to buy. And the beta coefficient for how often you shop online (b=.003; *p*=.943) is positive, which means that the more often people shop online, the more intention they are to buy. However, the effects of these two factors are not supported due to their p-value being more than .05. So, to summarize, the factor of age and freelance roles can be supported in the control variables section.

Variance inflation factor (VIF) was used to find out the serious multicollinearity problem in this study, which should be no more than 10. The index of VIF in this study was within the range of 1.049 and 2.960, which means there is not a major multicollinearity problem.

In the end, the r-square of the regression is .490. This indicates that all the variables in the regression (including appearance design, product information, promotion campaign, store service, consumer review, gender, age, education level, employment status, online shopping time length, and frequency of online shopping) can explain 49.0 percent of consumers' purchase intention, the rest of 51.0 percent can be explained by factors not included in the regression.

As illustrated in Figure 2, the OLS regression results are described in the conceptual model.



Notes: *** <.001, ** <.01, * <.05
Standardized beta coefficients are reported.
Dash lines represent non-significant results

Figure 2: Results from OLS regression

Discussion and conclusion

General Conclusion of the Result

This study was written to examine the effect of online store attributes on consumers' purchase intention in terms of the online marketplace sellers. The online store attributes were divided to be five aspects: appearance design, product information, promotion campaign, store service, and consumer review. Based on the previous section, the results of OLS regression show that all these five aspects positively affect the consumers' purchase intention. However, the consumers' purchase intention for the online marketplace sellers is significantly positively affected only by appearance design and consumer review. Besides, the appearance design of online stores has a more significant impact. The other three main independent variables' effects such as product information, promotion campaign, and store services are non-significant. In terms of the control variables, only the factor of age and freelance roles have a significant effect on purchase intention. Older consumers have more purchase intentions than younger consumers. And freelancers have the lowest purchase intention than other occupational groups.

First of all, the finding that appearance design positively and significantly influences customers' purchase intention is supported by the findings of previous studies. Mofokeng (2021c)'s research concludes that customers' enthusiasm to buy from an online store is highly correlated with their satisfaction with the information. Design is considered a visual cue, which often influences the subconscious mind (Prasad & Mishra, 2019). When customers are looking for buying something, a good visual cue will influent the subconscious of purchasing, which stimulate consumers to generate positive intention. The result of this study is also in line with Shi et al. (2021)'s research result, which is that design aesthetics has a significant effect on participants' purchase intention. The rate of purchase intention was significantly higher for products with high design aesthetics than for products with low design aesthetics.

In addition, the previous research also backs up the conclusion that consumer review in online stores positively and significantly influences customers' purchase intention. Customer online reviews, as a sort of electronic word-of-mouth, have a direct impact on consumer buying behavior, according to Köylüoğlu (2022). In research from Zhang et al. (2022), high quality online consumer reviews are positively associated with high customers' purchase intention. Pooja and Upadhyaya (2022) also concluded that the more the perceived credibility of online consumer reviews among potential customers, the more likely they are to buy. According to research, online customer reviews had a substantial effect on buy intention when modeling online purchase behavior, with items with a high percentage of positive online reviews having a significantly greater purchase intention than those with a high percentage of negative online reviews (Zhang et al., 2020).

For online shoppers, appearance design takes precedence over the visual presentation of consumer reviews. Appearance design provides the first impression to the shopper. Customer reviews are often placed near purchase information. In research from Clark et al. (2020), first impressions are usually formed quickly and unconsciously. First impression judgments have been shown to influence people's behavior and determine the beginning of positive or negative interactions. When consumers are exposed to the appearance of the presentation, consumers will involuntarily generate the first impression and compare it with the psychological expectations of buying, thus influencing the judgment of the next behavior. Customers' purchase intention is influenced by appearance design first, therefore, it can be argued that appearance design has a more significant impact on purchase intention than consumer review.

Secondly, the results that product information, promotion campaign, and store service are positive but not significant effect on consumers' purchase intention. Product information provides product details and descriptions. Clear and comprehensive product information descriptions help consumers better understand the product and enhance purchase intention. However, it is only one of the ways for consumers to understand the product and does not significantly influence consumers' purchase intention. Purchase intention occurs before the decision to buy (Rahadian et al., 2020). Customers' online shopping behavior often occurs under the premise of having a need and a purpose. When purchasing needs are clear, they tend to care more about the goods or services they need than whether there is a good deal or the quality of the service. In terms of purchase intention, customers are positively influenced by promotions and services, but the impact is not profound. Positive promotions and services will have a good impact on buyers' psychology, and these factors may have more influence on the final purchasing decision or buying experience. Therefore, the influence of promotions and services on purchase intention is not significant.

Besides, in the perspective of the control variables that are significantly supported, older consumers have more purchase intention than younger consumers. Age is a variable that captures the income level of an individual and the cognitive ability characteristic of an individual (Cole et al., 2008). Older customers will generally have more purchasing power and more demand than younger customers, so when older customers are positively stimulated, they may generate more purchase intentions. Freelancers have the lowest purchase intention among other occupational groups. The nature of freelance workers' work and the uncertainty of their financial income may have an impact on their purchase intentions.

Other respondents' personal information such as gender, educational level, length of online shopping, and frequency of online shopping does not significantly affect purchase intention. The reason may be since everyone's aesthetics, psychological condition, and perception or judgment of things are different. And purchase intention is in the consumer's subjective perception of the goods or services produced when the consumer is exposed to them (Lin & Shen, 2023). Individual characteristics vary greatly, and subjective perceptions vary, while subjective perceptions are also influenced by other factors. Thus, it is very difficult to assess the impact of personal information characteristics on their purchase intention. This would explain the research findings of non-significant effects.

Recommendations for Future Research

Although this study can provide relevant guidance for subsequent studies, the concept of online store attributes has still not been outlined comprehensively. There could be considered other attributes such as security or personal privacy policies, delivery conditions, payment method. In addition, due to the difference in the mindset of men and women, there may be differences in the effects of store attributes on the purchase intention of male and female customers. This also requires consideration of different studies for different genders. Besides, there would be more variables that can be analyzed in future research. Finally, it will be interesting to explore why appearance design and customer reviews, more than any other factors, have a significant impact on customers' online purchase intentions.

Limitations

The percentage of freelancers is only 4.6 percent of the respondents, so the conclusion that freelancers have the lowest purchase intention among other occupational groups is limited and may not be representative. The r-square of the regression is .490, which means that only 49% of the factors are taken into account, r-square still has a lot of room for growth when additional independent variables that have an impact on online purchase intentions are taken into account. Moreover, the sampling method was adopted by convenient sampling via the internet due to the time and budget limitations, it is not a probability sampling method, which cannot generalize the findings from the sample to the entire population. In addition, there is another limitation about the sample size. The study does not provide information on how the sample size was determined because of time, budget, and accessibility to the target population. Also, the establishment of validity for each variable item is another limitation in the methodology section.

Contribution to Knowledge

The study found that appearance design and consumer review had a significant positive effect on consumers’ purchase intention in terms of the online marketplace sellers. In addition, the appearance design of the online store had a more significant impact on their purchase intention. These findings are contributed to the literature on the influence of online store attributes on consumers' purchase intention and provide insights on how online marketplace sellers can practice attracting more consumers from the perspective of store attributes.

Practical Implications

In research from Ganesh et al. (2010), the findings pointed out that one of the differentiating points between e-stores and traditional stores is their ability to control the content of their websites. This point is consistent with the study's conclusion. Sellers in the online marketplace have the ability to control their store's content. All the appearance designs such as logo, structure, overall layout, color tone, style features, the location of functional keys, and product catalog can be controlled by online sellers. Ganguly et al. (2010) pointed out that as marketing tools, online retailers should employ effective website design features including information design, visual design, and navigation design. This boosts purchase intent by increasing consumers' trust in the online store. In order to obtain more traffic, attract more consumers, and be outstanding in the fierce competition, the first step that the sellers should consider is how to attract the consumers' purchase intention. According to the research result, the sellers should pay more attention to the appearance design and consumer review that significantly and positively affect the consumers'purchase intention.

First of all, the sellers should focus on the appearance design, which has the most significant influence on the consumers' purchase intention. The goal of many shoppers is convenience. This includes quickly entering and leaving the store as well as quickly identifying the things they require (Baker et al., 2002). Therefore, sellers should consider the functionality of the design, making the functional design easier and more straightforward. User-oriented and user-friendly is the primary direction so that customers can feel the convenience and effectiveness of online shopping as much as possible. This will be more conducive to enhancing the customer's good feeling and purchase intention. In addition to functionality, sellers should also pay more attention to the visual appeal of the design in the appearance. It is especially important to promote products in a way that emphasizes aesthetics and attracts the attention of customers. There are many aspects that can be considered, such as logo, structure, overall layout, color tone, style features, the location of functional keys, product catalog, and so on. Designing as attractive a style as possible, using harmonious colors, a clear and orderly overall structure, an organized catalog layout, etc., are all good strategies to enhance customers' purchase intentions.

Then, the consumer review is another important perspective that the seller should pay attention to. Smart search makes it easier for customers to compare products. Sellers need to make customers think they are different from others. The reviews section provides a great convenience for consumers to learn about products or stores. In today's commercial world, online consumer reviews are one of the most important forms of communication. Online reviews are both information providers and information recommenders. High-quality online consumer reviews are positively associated with high customer purchase intention. (Obiedat, 2013). Most buyers will leave objective reviews based on the real condition of the product or service. Therefore, for sellers, the first requirement to conduct customers to leave positive reviews is to provide good quality products and services. Sellers can offer incentives to consumers who post good reviews, or they can set the order of reviews to be based on quality rather than chronological order. According to research, consumers with low engagement are largely impacted by the number of reviews rather than the quality of reviews, whereas consumers with high engagement are mostly influenced by the number of reviews (Park et al., 2007). Therefore, the number of reviews is also extremely important. The customer can predict the popularity of this product by the total number of reviews, which will influence his purchase intention. Even if the product and service are good, there are some consumers who are too lazy to leave a review, which requires sellers to think about how to promote and encourage buyers to leave reviews. For example, the online store can send messages with review reminders or offer rebates to consumers who leave reviews to encourage them to leave as many reviews as possible. In addition, the seller's response and feedback on the review are particularly important. For positive and quality reviews, sellers can reply to express their appreciation and welcome buyers to buy again. For some negative comments, the sellers should also respond timely or provide solutions in a polite and sincere manner, which will increase consumers' goodwill and satisfaction with the store. Besides, J. Lee et al. (2011) believe that in online shopping stores, the first impression of a product is more positive if the seller places online customer reviews in the product advertising rather than presenting them after the product information. Thus, this is also a very good strategy for sellers to use quality customer reviews as a kind of promotional advertising.

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Research on The Motivation of Users' Participation in Online Reviews on Catering O2O Platform

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Abstract

Driven by the exponential increase in internet usage, particularly in online shopping, traditional chain retail companies in China face the pressing need to actively pursue transformation as their sales growth slows and profitability declines amidst technological advancements and evolving consumer preferences. With the progress of science, technology and the vigorous development of network infrastructures, the sales growth of traditional chain retail companies has slowed down and the growth rate of profits has declined, so chain retail companies need to adapt to the characteristics of the times. It is urgent to actively seek the development of transformation. The essence of O2O (Online to Offline) is to integrate virtual network business and real business in the field of life consumption through Internet technology. The current study applied TAM model to research on the relationships between independent variables (the individual's pursuit of economic returns, reputation and self-efficacy) and dependent variable (users' willingness

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to participate in online review), while moderating by other users' perceived comment costs. The results shown that comment cost has a moderating effect on the effect of perceived usefulness on online comment intention (review), and all independent variables and dependent variable have significant relationships either directly or indirectly.

Keywords: Online to Offline (O2O), TAM, Comment Costs, SEM

การศึกษาแรงบันดาลใจการมีส่วนร่วมในการทบทวนช่องทางการส่งเสริมการผสมผสานธุรกิจจากออนไลน์ไปสู่ออฟไลน์ (O2O) ของผู้ใช้

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บทคัดย่อ

การใช้อินเตอร์เน็ตที่เพิ่มขึ้นอย่างสูง โดยเฉพาะการใช้จ่ายออนไลน์นั้น ส่งผลให้บริษัทขายปลีกรูปแบบดั้งเดิมในประเทศจีนต้องเผชิญกับความต้องการเร่งด่วนที่จะแปรสภาพธุรกิจ เนื่องจากการเติบโตของยอดขายช้าลงและกำไรเกิดการถดถอย อันเป็นผลมาจากความก้าวหน้าทางเทคโนโลยีและความนิยมของผู้บริโภคที่เปลี่ยนไป ความก้าวหน้าทางด้านวิทยาศาสตร์ เทคโนโลยีและการพัฒนาโครงสร้างเครือข่ายพื้นฐานอย่างรวดเร็วนี้ส่งผลให้การเติบโตของยอดขาดของบริษัทขายปลีกรูปแบบดั้งเดิมล่าช้าลง ประกอบกับมีกำไรน้อยลง บริษัทจำพวกนี้จึงต้องปรับตัวให้ทันกับกาลเวลาที่เปลี่ยนแปรไป มีความจำเป็นเร่งด่วนที่จะต้องพัฒนาการแปรสภาพ จุดสำคัญของออนไลน์ไปสู่ออฟไลน์นั้น เป็นไปเพื่อบูรณาการธุรกิจเครือข่ายเสมือนจริงและธุรกิจจริงในวงการการบริโภคในชีวิตผ่านเทคโนโลยีอินเตอร์เน็ต งานวิจัยนี้ประยุคใช้โมเดลการยอมรับเทคโนโลยี เพื่อศึกษาหาความสัมพันธ์ระหว่างตัวแปรต้น (การแสวงหาผลตอบแทนทางเศรษฐกิจของบุคคล ชื่อเสียงและความสามารถของตน) กับตัวแปรตาม (ควายยินดีมีส่วนร่วมในการทบทวนออนไลน์ของผู้ใช้) ทั้งนี้ควบคุมโดยต้นทุนจากการตอบข้อความที่คิดว่าจะเกิดขึ้น ผลการวิจัยพบว่าต้นทุนจากการตอบข้อความมีอิทธิพลกำกับต่อผลของประโยชน์ที่คิดว่าจะเกิดขึ้นและตัวแปรตามมีความสัมพันธ์ที่มีนัยสำคัญไม่ว่าจะเป็นทางตรงหรือทางอ้อมก็ตาม

คำสำคัญ: ออนไลน์ไปสู่ออฟไลน์ (O2O), โมเดลการยอมรับเทคโนโลยี (TAM), ต้นทุนการตอบข้อความ, การตลาดผ่านเครื่องมือค้นหา (SEM)

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Introduction

Research Background

According to the People's Network of China (Zhao, 2020), as of March 2020, the number of internet users in China had reached 904 million, with an internet penetration rate of 64.5%. The number of online shopping users was reported to be 710 million. However, despite the progress in science, technology, and the vigorous development of network infrastructures, traditional chain retail companies have experienced a slowdown in sales growth and declining profit margins. Therefore, these companies need to adapt to the changing trends and actively seek transformation.

In August 2010, Alex Rampell, the founder of TrialPay, a payment company in the United States, proposed the concept of "online-to-offline" commerce (O2O). Essentially, O2O aims to integrate online and offline elements of the consumer experience by leveraging internet technologies. This integration enables the creation of new business models and facilitates the transition of online users into offline physical stores. A prime example of O2O in the catering industry is seen in Dianping's food and beverage reviews. Dianping first attracts user comments and reviews, subsequently attracting other restaurants to join their platform. While these reviews may possess subjective opinions from consumers, they also fulfill consumers' longing for authentic information.

It is important for chain retail companies to recognize the significance of O2O and its potential impact on their operations. By embracing this model, companies can better engage with their target market, establish stronger connections with customers, and enhance trust, ultimately improving sales performance.

Currently, many chain retail companies still rely on the Business-to-Customer (B2C) online shopping model. However, reconciling the traditional chain operation mode with e-commerce has proven challenging. In comparison, O2O presents advantages over the B2C model. By integrating online and offline elements, O2O can effectively target customers in specific markets, enhance customer understanding and familiarity with products, and improve trust, ultimately increasing sales turnover.

According to the “China Online Takeaway Market Special Survey and Investment Prospect Forecast Report 2017-2022” published by Zhiyan Consulting Network, in 2019, the internet catering takeaway market in China reached a scale of 331.3 billion yuan, with 320 million users and a growth rate of 30%. It is expected that by 2020, the market will reach 360 billion yuan. Although the growth rate of the online takeaway market has slightly decreased, it remains popular, and it is projected to continue growing at around 20% in the next two years. Furthermore, the scale of the internet catering takeaway market is estimated to exceed 400 billion yuan in 2020.

The continuous growth of the online takeaway market demonstrates its increasing popularity, even though the growth rate is slowing down. Nonetheless, it is still expected to maintain steady growth in the coming years. This indicates the potential for further development and opportunities within the market.

Customers can provide timely feedback to businesses through evaluations, enabling improvements and better alignment of products or services with customer needs (Homburg & Fürst, 2005). However, it is important to note that the O2O catering takeout model also faces certain limitations. These include payment risks, a lack of customer trust, and the prevalence of false information on the internet (Wang & Scrimgeour, 2021).

Statement of the Problem

In recent years, there have been ten new O2O catering companies emerging in the market, including “Elema, Baidu takeout, Stupid bear cooking, Home gourmet club, Word-of-mouth takeout (Tao Dian Dian), Line O, Downstairs 100, Meituan takeout, Life radius, No.1 takeout”. Among these platforms, “Elema” and “Meituan takeout” are the most renowned. These takeout platforms offer great convenience for customers to order meals and other products or services from local businesses directly through the platforms. This allows customers to receive their orders at home, eliminating the need to settle for monotonous reheated fast food, snacks, or instant noodles. However, the online realm also presents certain risks, such as the disparity between the actual food received and the pictures displayed on websites or mobile applications, concerns regarding personal privacy protection, and potential payment vulnerabilities. These factors can significantly influence users’ intention to utilize catering takeout services and their satisfaction with the platforms.

Customers often provide authentic feedback and share their genuine experiences through online platforms, enabling businesses to understand their needs better. This feedback is crucial for enhancing customer satisfaction, fostering loyalty, and driving profitability. According to Sun (2016), consumers' online reviews exert a substantial influence on the reputation of e-commerce companies' products. Consequently, companies should consider online comments when devising strategies for product development and service improvement. Online reviews possess both advantages and disadvantages for companies, and it is vital for businesses not to overlook their significance. For instance, companies could enhance the trust mechanism of online review systems, establish incentive mechanisms for online reviews, and utilize online reviews for marketing activities. Nevertheless, some customers may choose to refrain from participating in online reviews due to factors such as the fear of complexity or concerns over information leakage. Thus, exploring ways to mobilize customer enthusiasm and encourage universal participation in online reviews is an urgent and important issue to address. Therefore, the current study aims to investigate the motivational factors influencing users of O2O catering takeout platforms to engage in online reviews.

Research Objectives

With the increasing development of society and the increasing popularity of the network, more and more people buy and order takeout through the network platform, and so on, this kind of catering takeout O2O platform transaction brings convenience to people's lives, but also more economical and affordable products and services to save consumers' time and costs (Tang & Zhu, 2019). Therefore, it is imperative for O2O catering takeout platforms to thoroughly examine the motivations behind consumers' participation in online reviews. Based on their own experiences, consumers express their opinions, whether it be praise or criticism, at the bottom of products or services. These comments provide valuable insights for consumers to better comprehend the information about the products or services, thereby facilitating the decision-making process for other potential consumers. To drive profitability, businesses rely on positive reviews from customers to attract new users and expand their customer base. The customers' reviews to the merchant through the comment, and provide the opinion reference for other consumers, the good evaluation attracts more customers, then, the consumers and the merchants can achieve the mutual benefit (Amed, Mukherjee, Das, & Datta, 2019). Simultaneously the online reviews can also make the consumer feel the self-valued, sincere reviews bring good reputation to themselves (Chen, Teng, & Chiou, 2020). By investigating the motivations that drive users of catering O2O platforms to engage in online reviews, companies can gain a profound understanding of consumer psychology. This understanding can be leveraged to not only boost sales of products or services but also enhance the visibility and reach of the company's outlets.

Research Problem

In order to understand the motivation factors for catering O2O platform users to participate in online reviews, several points are put forward here, namely, the pursuit of economic returns (Wang & Scrimgeour, 2021), reputation (Raharjo, 2020), self-efficacy (Ahmad & Guzmán, 2021), review cost (Luo, Zhou, Song, & He, 2022), perceived ease of use and perceived usefulness (Bae & Han, 2020). According to the above research contents, the questions of this study are as follows:

(1) Do the variables of pursuit of economic return, reputation, self-efficacy, perceived usefulness, perceived ease of use, review cost and user's willingness to participate in online reviews have differences under different background variables?

(2) Does the pursuit of economic reward, reputation, self-efficacy, perceived ease of use, perceived usefulness, and review cost affect users' willingness to participate in online reviews?

(3) Does perceived usefulness mediate the relationship between (pursuit of economic reward, reputation, and self-efficacy) and users' willingness to participate in online reviews?

(4) Does perceived ease of use mediate the relationship between (pursuit of economic reward, reputation, and self-efficacy) and users' willingness to participate in online reviews?

(5) Does the cost of reviews moderate (perceived ease of use, perceived usefulness) and users' willingness to participate in online reviews?

(6) Is user's willingness to participate in online reviews influenced by the pursuit of economic rewards, reputation, self-efficacy, perceived ease of use, perceived usefulness, and cost of reviews?

Research Significance

The findings of the survey conducted by the China Internet Network Information Center (CNNIC) indicate that consumer reviews, whether for familiar or unfamiliar products, play a crucial role in the decision-making process of online shoppers. However, the willingness of users to actively contribute their own reviews remains low. Instead, most users prefer to browse through existing comments provided by other consumers. According to the CNNIC survey, among internet users who have engaged in online shopping, only 3.5% of them frequently share their online consumption experiences, while 19.8% occasionally share their experiences across multiple platforms or applications. These figures amount to a mere 23.3% of online consumers, indicating that a significant majority (76.7%) of online shoppers refrain from sharing their experiences. Considering this, it becomes imperative for e-commerce companies and platforms to explore the motivations behind consumer reviews and develop effective incentives in order to achieve sustainable development.

This study primarily examines the influence of economic incentives, reputation, self-efficacy, review costs, perceived ease of use, and perceived usefulness on the intention of O2O platform users to engage in online reviews. Theoretically, it provides practical guidance for future research on the motivations that drive O2O platform users to participate in online reviews. Studies have shown that the willingness of platform users to comment is influenced by technical factors (perceived ease of use and perceived usefulness) (Bae & Han, 2020), social factors (self-efficacy and reputation) (Ahmad & Guzmán, 2021; Raharjo, 2020) and individual user psychological factors (economic rewards and review costs) (Luo et al., 2022; Wang & Scrimgeour, 2021). This study confirms that the pursuit of economic returns, reputation, self-efficacy, review costs, perceived ease of use, and perceived usefulness are significant factors that influence users' engagement in online reviews. As a result, this study offers a theoretical framework for companies to explore and integrate these factors across various domains when conducting research on relevant phenomena.

Literature Review

Based on the classical technology acceptance model, this paper combines social cognitive theory, social exchange theory, achievement needs theory, Maslow's hierarchy of needs theory and the research results of Li (2021), and combines the characteristics of catering O2O platform and users to construct catering O2O platform. Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) are defined as technology-related driving factors; Pursuit of Economic Return (ER), Cost of Review (CC), Reputation (SY) and Self-efficacy (SE) are defined as individual driving factors.

Technology Acceptance Model

The Technology Acceptance Model (Davis, 1989; Davis, Bagozzi, & Warshaw, 1989) is primarily employed to elucidate users' behavior in accepting and adopting new technologies and systems. Built upon the theory of reasoned action, this model emphasizes the impact of two key variables, namely perceived usefulness, and perceived ease of use, on users' intentions to use a particular technology or system. Lu and Xu (2005) posit that information technology acceptance research encompasses various models, each with distinct determinants of acceptance. Within this model, user attitudes are contingent upon perceived usefulness and perceived ease of use. These two variables can also be applied to explain users' intentions to engage in online word-of-mouth, as the review system of O2O catering platforms essentially functions as an information system. The willingness or attitude of users on e-commerce platform to post consumers' reviews is also closely related to users' perceived usefulness and perceived ease of use of the online review system (Duan, Gu, & Whinston, 2008), and this model can be well used to explain the online review intention of O2O catering platform users.

Yang, Wang, and Sun (2016) suggested that to enhance the effectiveness of online marketing, online merchants can enhance the performance of the online recommendation system by proactively providing explanations for recommended items to consumers, actively gauging consumers' satisfaction with the recommendation outcomes, and displaying detailed information about the recommended products. To reduce consumers' search costs and cater to their diverse needs, it is recommended to display diversified recommendation lists (Adomavicius & Tuzhilin, 2005). The recommendation algorithm can be optimized by prioritizing popular brands with a strong reputation and perceived quality, as well as recommending novel products in order to enhance the quality of the recommendation information. This approach can also improve perceived ease of use and perceived usefulness, ultimately increasing consumers' intention to adopt the recommendations (Zhou et al., 2010). Tao, Zhang, Yang, and Zhang (2017) indicated that while both the number of online reviews and price have a positive influence on the diffusion of new products, there exists a negative interaction between the number of online reviews and price concerning product diffusion. Perceived usefulness acts as a partial mediator, meaning that the number and sentiment of online reviews impact the perceived usefulness, subsequently affecting the diffusion of new products. Additionally, Yan and Meng (2013) argued that online reviews with more extreme emotional expressions and longer texts have a positive effect on the perceived usefulness of online reviews.

Social Cognitive Theory

Social cognitive theory, developed by American psychologist Bandura in the late 1970s, is an educational theory that experienced rapid development in the 1990s. It incorporates cognitive elements into the traditional behaviorist personality theory, thereby establishing its distinctive social cognitive theory.

Social cognitive theory holds that social psychology is stored in people's minds in a certain structure, and there is a relationship between the structure and its parts. Zhu et al. (2010) have proposed that consumers, new technologies and adoption are a dialectical tripartite reciprocal decision system, and reviewed and analyzed several basic user acceptance models: Technology Acceptance Model (TAM) (Davis, 1989; Davis et al., 1989), Theory of Planned Behavior (TPB) (Ajzen, 1991), and Value-based Adoption Model (VAM) (H.-W. Kim, Chan, & Gupta, 2007). There are three theories to explain the existence of social cognitive information: The first one can be called feature theory, which holds that the relevant social psychological phenomena are represented by various features in people's long-term memory. When people are stimulated by relevant stimuli, they will analyze these features and compare them with the features and connections in long-term memory, so as to respond to some social psychological phenomena. The second is the prototype theory, which holds that the cognition formed by a certain social psychology can be regarded as the general representation of various specific phenomena of the social psychology, and it is the basic feature of the social psychology. The third is the exemplar theory, which holds that social psychological phenomena are stored in people's minds in the form of concrete examples, and they have a one-to-one correspondence with external phenomena. When people are stimulated by the corresponding stimulus, the stimulus information is encoded, and the corresponding exemplar will be activated, thus producing a corresponding response to a certain social psychological phenomenon. Customers can get a better public image and a sense of social identity by commenting, and online comments can communicate with consumers with similar interests and generate a sense of belonging. Huang, Wang, Gu, and Peng (2011) proposed that innovation self-efficacy is an important incentive mechanism for individuals to innovate. After that, the predictive effect of innovation self-efficacy on innovative thinking, innovative behavior and creativity has attracted wide attention. Researchers from companies to schools have found that innovation self-efficacy has a positive predictive effect on innovation performance. Zhang (2015) believes that network self-efficacy has a predictive effect on deep learning, and there is a significant positive correlation between them. Specifically, there is a significant linear correlation between network self-efficacy and deep learning in the middle and low levels; in the middle and high levels of network self-efficacy, the increase of deep learning shows a downward trend, and there is a linear correlation between them. Xie, Shen, Yang, and Wu (2016) proposed that the application of online learning space can gradually improve college students' self-efficacy in online learning, and the application effect of black product is very significant: in the process of applying online learning space, the improvement effect of each dimension of college students' self-efficacy is different, among which the improvement effect of "ability sense", "effort sense" and "environment sense" is more significant. At the same time, the study found that "individual's sense of social presence in the learning space", "functional support of the network learning space" and "network learning behavior mode" are the main factors affecting the promotion effect of network learning self-efficacy.

Social Exchange Theory

This theory, proposed by (West & Turner, 2007), examines the rewards and costs associated with social interactions. It suggests that individuals who are most appealing to themselves are those who can offer the greatest benefits. People strive to maximize the rewards they receive from their social interactions. To receive rewards, individuals must also provide them. As the principle of human society is based on mutual assistance, others reciprocate with benefits. Therefore, the process of social interaction can be viewed as an exchange process.

Social exchange theory holds that social behavior as an exchange is a kind of reciprocal benefit behavior. When one party provides help and support to the other party, the other party has the obligation to return, but this obligation is not as clear as economic exchange. Social exchange theory assumes that people focus on relatively long-term interests and expectations for the future, rather than one-time exchanges (Cropanzano & Mitchell, 2005). O2O catering platform users publish consumer comments and expect the platform and other users in the community to be full of benefits. Usually, people tend to produce the willingness to exchange behavior through cost-benefit assessment. Only when all parties to the exchange can benefit from the exchange, and the perceived benefits are greater than the perceived costs, can such an exchange occur, and the interaction between them will be attractive and lasting. Under the influence of social transformation, the economic values of contemporary post-90s college students have undergone profound changes. The orientation of economic values is utilitarian, and the ideals are blurred in the treatment of money and ideals (Frey & Stutzer, 2002). On the issue of self-worth and social status, 51.56%, 41% and 58.81% of college students oppose money-oriented, ideals are secondary, improving the economic situation is the way to realize self-worth, and the advantages and disadvantages of economic conditions are the embodiment of social status (Longfield, Romas, & Irwin, 2006). These views show that most of the post-90s college students have their own ideals and pursuits. They hope to realize their life value in the process of realizing their ideals, and constantly improve their economic situation through their own efforts. Whether e-commerce platform users participate in consumer reviews or not, they often consider the gains and losses of participating in online community behavior from the perspective of cost-benefit, and only when they maximize the benefits and minimize the costs, they will actively participate in community activities. When consumers need reference information to choose restaurants, they also hope to get help from others. When consumers choose restaurants, they also want to repay others by posting their real consumption experience via comments. Fu and Wang (2015) pointed out that many online shopping websites have adopted different incentive measures, such as small economic returns, to encourage consumers to post online product reviews, hoping that these reviews will help consumers make purchase decisions and ultimately promote product sales, but there is no clear conclusion about the impact of economic returns on online product review behavior. Based on the theory of social relations Based on the actual data of online reviews on two major shopping websites in China, this paper empirically tests the impact of small economic returns on online product reviews. The results show that, compared with social returns, online product reviews published in the form of small economic returns have higher ratings, but the depth of product reviews is shallower and the perceived usefulness of review readers is lower.

Achievement requires theory

The theory of achievement needs is a theory that studies people's needs for achievement, and it is an important part of the theoretical system of later behavioral science (McClelland, 1961). The representative is McClelland of the United States. This theory divides the basic needs of human beings into three kinds: achievement needs, power needs and friendship need, among which achievement needs play a vital role in the development of individuals, groups and society (Koestner, Lekes, Powers, & Chicoine, 2002). People with high achievement needs are generally concerned about the success or failure of their career, willing to take responsibility, they have clear goals, like creative work, and are not afraid of fatigue. The more of these types of people there are, the more likely the business is to succeed. Achievement needs can be cultivated and improved through effective educational means. Customers provide help to other consumers by posting comments, and feel that their comments are valuable and recognized by others. In social life, people often observe two kinds of phenomena: one kind of phenomenon is from the individual to the aggregate sense, that is, the individual reputation of members adds up the collective reputation, and the society can establish the reputation of the organization in the sense of "average probability" of the individual reputation of members of the organization; the other kind of phenomenon can be said to be just the opposite: individuals in the organization can take full advantage of the reputation that the organization has built up, either literally or in a way that is not worthy of the name. If the reputation of the organization is abused, the reputation of the organization will be destroyed, and the organization will lose its most important function. Guo, Wang, and Zhao (2014) believe that the primary factor affecting consumers' positive comments is consumers' perceived usefulness of the online reputation system, followed by consumers' satisfaction with the shopping experience. The primary factor that affects consumers' negative comments is consumers' dissatisfaction with the shopping experience, followed by consumers' perceived usefulness of online reputation systems. Jin and Wang (2016) There have been "economic man", "social man", "self-actualization man" and "complex man" in the history of western management thought. The hypothesis of "economic man" holds that the goal of human beings is to maximize their personal interests based on material interests. Social man "assumes that people not only have the motivation and need to pursue income, but also need friendship, security, respect, belonging and power." Self-actualization "man" assumes that everyone needs to reach his potential. Only when one's potential and ability are brought into full play, can one feel the greatest satisfaction. These hypotheses of human nature have their own explanatory power and limitations, but any hypothesis of human nature does not lie in its right or wrong, but in its practical significance and application value.

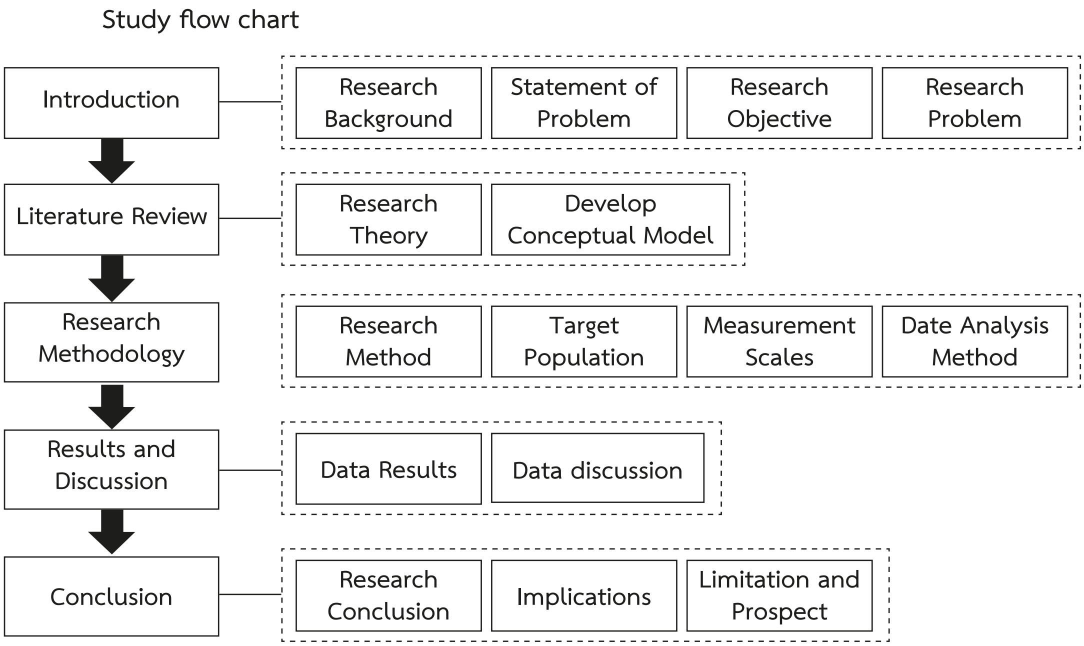

Figure 1: Study Flow Chart.

Research model and framework

According to the research of Xu, Zhao, Wu, Zhu, and Shao (2017), the motivation of user-generated content is closely related to technology drivers, social drivers and individual drivers. Liu, Lang, and Li (2013) believe that the motivation of micro-blog users to generate content is mainly influenced by three factors: social incentives, technical incentives and internal needs. Generally speaking, when technology and social humanities are well integrated, the application system can better meet the needs of users and achieve greater success, such as Apple's series of products. So, based on the technology acceptance model and social exchange theory, this paper attempts to build a research framework model for the user's willingness to comment on the O2O catering platform review system, as shown in Figure 2-2, in combination with the integrated model established by Xu et al. (2017), which affects the motivation of user-generated content. This paper argues that the motivation of users to publish consumer reviews on the O2O catering platform is mainly affected by three factors, namely, social motivation, psychological motivation and technical factors. Among them, users' social motivation mainly ref ers to users' motivation to publish consumer reviews under the influence of external social factors, which is closely related to consumers' desire to be recognized and concerned by the society (community), including the expectation of contacting friends with similar interests, the expectation of being respected by community members, the improvement of self-image and reputation, reciprocity, etc. Individual psychological motivation of users mainly refers to the motivation of publishing consumer reviews generated by the internal psychological needs of individual consumers, which is closely related to the self-awareness and internal needs of users. Such as the spirit of altruism, the perception of fun, the desire to be rewarded with points and so on. Technical motivation mainly refers to that when users publish consumer reviews online, they pay more attention to the usefulness, ease of operation and security of the online review system of e-commerce platform. At the same time, the three types of motivation often do not affect the user's behavior intention alone, they interact with each other and affect the user's comment intention together. That is to say, the user's individual psychological motivation, social motivation and technical motivation also have mutual influence, technical motivation will promote the generation of user's social motivation and psychological motivation, and user's psychological motivation will also promote the formation of social motivation. That is to say, social motivation and psychological motivation are not only the direct variables affecting the user's willingness to comment on the O2O catering platform, but also the intermediate variables of technical motivation. Li (2021) stated User's willingness to consume reviews directly affects the activity and effectiveness of the customer review system on the e-commerce platform, and ultimately affects the sales of commodity services on the platform. In-depth discussion of the different motivation configuration paths behind the participation of e-commerce platform users in consumer reviews has important theoretical and practical significance for optimizing the design and incentive mechanism of the customer review system on the platform.

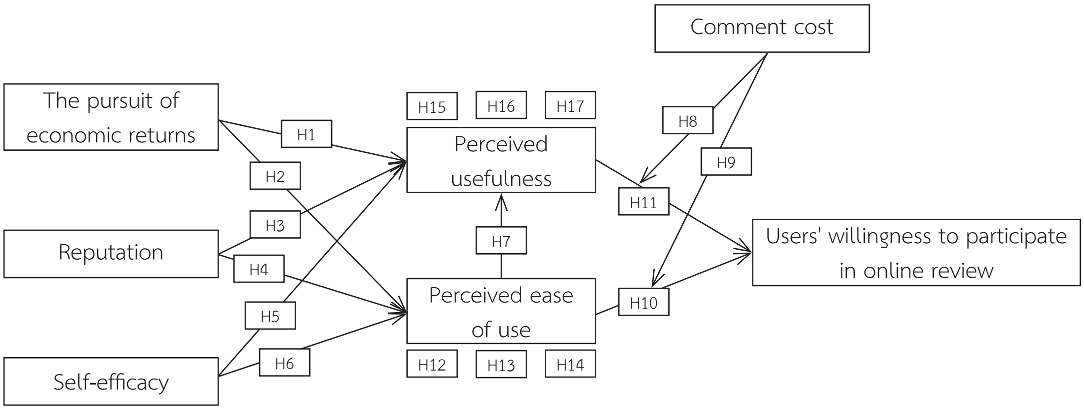

Figure 2: Conceptual Model of Research on Motivation of Users' Participation in Online Reviews on Catering 020 Platform.

Hypotheses:

H1 pursuit of economic return has a positive effect on perceived usefulness.

H2 pursuit of economic return has a positive effect on perceived ease of use.

H3 Reputation has a positive effect on perceived usefulness.

H4 Reputation has a positive effect on perceived ease of use.

H5 self-efficacy has a positive effect on perceived usefulness.

H6 self-efficacy has a positive effect on perceived ease of use.

H7 perceived ease of use has a positive effect on perceived usefulness.

H8 comment cost plays a significant moderating role in perceived usefulness and users' willingness to participate in online reviews.

H9 comment cost plays a significant moderating role in perceived ease of use and user willingness to participate in online reviews.

H10 perceived ease of use has a direct positive impact on users' willingness to participate in online reviews.

H11 Perceived Usefulness has a direct positive impact on users' willingness to participate in online reviews.

H12 perceived ease of use played a significant mediating role between the pursuit of economic returns and the willingness of users to participate in online reviews.

H13 perceived ease of use played a significant mediating role between reputation and users' willingness to participate in online reviews.

H14 perceived ease of use played a significant mediating role between self-efficacy and users' willingness to participate in online reviews.

H15 perceived usefulness plays a significant mediating role between the pursuit of economic returns and the willingness of users to participate in online reviews.

H16 perceived usefulness plays a significant mediating role between reputation and users' willingness to participate in online reviews.

H17 perceived usefulness played a significant mediating role between self-efficacy and users' willingness to participate in online reviews.

Research methodology

Research methods

Based on the main research objectives and contents of this paper, the main research means and methods used in this research are literature research, questionnaire survey.

Through the network questionnaire, 50 questionnaires were sent out to conduct a pre-test. After conducting data analysis on the pre-test survey questionnaire, both reliability and validity were found to be within an acceptable range. This indicates that the questionnaire items effectively reflect the purpose of this study, allowing for the commencement of formal testing. The questionnaire could be used. According to the suggestion of Tinsley and Tinsley (1987), the ratio of the number of items to the number of samples in factor test analysis should be between 1:5 and 1:10. At least 300 samples were collected and used in this study.

The research is carried out through the following research methods, as follows:

Literature research method: It mainly summarizes the research status and trends of users' self-efficacy, perceived usefulness, perceived ease of use, review cost and reputation between platforms, and pursuit of economic returns, focusing on their theoretical connotations, structural dimensions and measurement indicators, influencing factors, and correlations. And then construct the theoretical framework of this study.

Questionnaire Method: This study employs the Likert (1932) five-point scale design or measurement purposes. Respondents indicate their level of agreement with each question on a personal basis, using the following scale: "Strongly Disagree" (1 point), "Disagree" (2 points), "Neutral" (3 points), "Agree" (4 points), and "Strongly Agree" (5 points). A higher total score indicates a higher degree of agreement from respondents. Additionally, to maintain the authenticity of the measurement, the questionnaire items within each dimension are randomly arranged, preventing the influence of respondent answering habits. Based on the data collected from interviews and considering various factors, a questionnaire addressing repurchase intention is developed. After appropriate modifications, the questionnaire is distributed, and subsequently, SPSS statistical software is utilized to analyze the data, thereby testing the hypotheses and deriving final conclusions and recommendations.

Target populations

This study takes the consumers who have used the catering O2O platform and posted comments as the research objects. The study incorporates reviews from both 2021 and previous years. The researcher chooses the takeout groups through multiple WeChat groups, because most of the consumers are people who often order takeout and have more activities in online comments. By convenience sampling, researcher joined WeChat groups established by nearby catering businesses for their customer base. The participants in these groups had placed at least one takeaway order.

Measurement Scales

The scale used in this study is a questionnaire widely used and verified by scholars at home and abroad. All the scales adopted a 5-point scoring system, with 1-5 points representing "1-strongly disagree", "2-disagree", "3-no opinion", "4-agree" and "5-strongly agree" respectively, allowing respondents to make choices according to their true feelings. Specific scale sources are as follows:

Data analysis method

Based on the above research framework and assumptions, this study used SPSS version 23 to conduct narrative statistical analysis, reliability and validity analysis, correlation analysis, regression analysis and moderating analysis on the collected data. Data analysis is as follows:

(1) Sample descriptive statistics: First of all, analyze the demographic variables of the sample, and use SPSS to get the sample number and percentage of each variable, so as to understand the personal background information of the collected sample and the distribution of demographic variables related to work.

(2) Reliability and validity analysis: To ensure the stability and consistency of the questionnaire, reliability analysis was conducted. In this study, Cronbach's α coefficient is employed to assess the reliability of each variable in the questionnaire. A higher value of Cronbach's α indicates a stronger correlation between the items in the scale and the measured variables, thus reflecting higher internal consistency. The Cronbach's alpha is greater than 0.9 indicates very good reliability; values between 0.8 and 0.9 indicate good reliability; Values between 0.7 and 0.8 indicate acceptable reliability, values between 0.6 and 0.7 indicate need to be carefully considered, values between 0.5 and 0.6 indicate poor reliability, and values below 0.5 suggest deletion (George & Mallery, 2003); Validity analysis is used to examine whether the items can accurately measure the latent variables. Therefore, before the regression, exploratory factor analysis was used to test the validity of the construction. KMO sample test and Bartlett sphere test was used. The criterion was that the closer the KMO value was to 1 and the significance of Bartlett sphere test was less than or equal to 0.05, the more appropriate factor analysis was.

(3) Correlation between variables: Before studying formal validation of hypotheses, it is necessary to understand the correlation between variables. This study uses Pearson correlation analysis to explore the correlation between self-efficacy, reputation, perceived ease of use, perceived usefulness, review cost and pursuit of economic returns, and to observe whether the relationship conforms to the expected trend of this hypothesis.

(4) Amos Structure Equation Model (SEM): this study uses SEM to measure the model fit and test each hypothesis proposed in Chapter 2 as well as the tests for mediating and moderating effects.

Results and Discussion

Descriptive analysis

The questionnaire was conducted in the form of online questionnaire and distributed by questionnaire star software. After collecting the data, SPSS software is used for data analysis.

Descriptive statistics refers to the activities of using tabulation, classification, graphics and calculation of general data to describe the characteristics of data. When doing data analysis, it is generally necessary to make descriptive statistical analysis of the data first, so as to measure the various characteristics of each sample represents, and then make in-depth analysis. A total of 310 valid samples were collected in this paper, and the basic information of the respondents was described and analyzed from the aspects of gender, age, occupation, education, monthly income, catering O2O platform, frequency of use, and whether online comments will be conducted. See the following table for details.

Table 1: Description and analysis of basic information

Attribute	Category	Number	Percentage
Gender	Male	145	46.8
	Female	165	53.2
Age	Under 18 years old	5	1.6
	18~25	40	12.9
	26~30	47	15.2
	31~40	117	37.7
	41~50	101	32.6
Occupation	Full-time student	43	13.9
	Production personnel	1	0.3
	Salesperson	9	2.9
	Marketing/public relations personnel	105	33.9
	Customer service staff	107	34.5
	Administrative/logistics personnel	1	0.3
	Human resources personnel	1	0.3
	Finance/Audit Staff	2	0.6
	Civilian/clerical staff	2	0.6
	Technical/R&D personnel	1	0.3
	Management personnel	7	2.3
	Teacher	16	5.2
	Advisory/Consultancy	2	0.6
	Professionals	2	0.6
	Other	11	3.5
Academic qualifications	Junior college and below	12	3.9
	Undergraduate	21	6.8
	Master	161	51.9
	Doctor and higher	116	37.4

Table 1: Description and analysis of basic information (Continue)

Attribute	Category	Number	Percentage
Monthly income	Less than 2000 RMB	22	7.1
	2000-4000 RMB	22	7.1
	4000-6000 RMB	25	8.1
	6000-9000 RMB	123	39.7
	More than 9000 RMB	118	38.1
Catering O2O platform	Dianping	12	3.9
	Meituan/Meituan takeout	55	17.7
	Erlema	23	7.4
	WeChat Catering Mini Program	112	36.1
	Independent app for catering businesses	102	32.9
	Other	6	1.9
Frequency of use	3 or more times per day	7	2.3
	Once a day	23	7.4
	Once every 3 days	42	13.5
	Once every 5 days	113	36.5
	Once every 7 days	125	40.3
Will there be an online evaluation?	Every time	104	33.5
	Once in a while	182	58.7
	Never	24	7.7

Note: collated by the author of this study

It can be seen from the above table that the gender ratio of the respondents in this survey is 165 women, accounting for 53.2%, and 145 men, accounting for 46.8%, indicating that the proportion of men and women in this survey is relatively balanced.

The highest age ratio of the respondents in this survey is over 31 years old, with 218 people, accounting for 70.3%. According to the occupational proportion of the respondents in this survey, the largest number of occupations is customer service personnel, with 107 people, accounting for 34.5%, followed by marketing public relations personnel, with 105 people, accounting for 33.9%. In this survey, the largest number of respondents with master's degree is 161.The proportion reached 51.9%, and the least number was junior college and below, with 12 people, accounting for 3.9%. The highest proportion of monthly income of the respondents in this survey is 6000 - 9000 RMB, the number of people is 123, accounting for 39.7%, followed by more than 9000 RMB, the number of people is 118, accounting for 38.1%, the lowest proportion is less than 2000, the number is 22, accounting for 7.1%. Therefore, most of the respondents in this survey have a monthly income of more than 6000 RMB. Among the platforms chosen by the respondents in this survey, the highest proportion is WeChat catering application, with 112 people, accounting for 36.1%, followed by independent app, with 102 people, accounting for 32.9%. In this survey, the most frequent use of takeaway software was once every 7 days, with 125 respondents, accounting for 40.3%, and the least frequency was three or more times a day, with only 7 respondents, accounting for 2.3%. Among the respondents, the highest proportion was occasional, with 182 people, accounting for 58.7%, followed by every time, with 104 people, accounting for 33.5%, and the least was never participating in comments, with only 24 people, representing 7.7%, indicating that most of them would participate in comments and research on takeaway platforms, and only a few people never participated.

Normality test

According to H.-Y. Kim (2013), the following table can be obtained. The mean value of each measurement item is between 2.19 and 3.94, the standard deviation is between 0.88 and 1.365, and the absolute value of skewness is less than 2. The absolute value of kurtosis is less than 7. It shows that each measurement item conforms to normal distribution. See the following table for details.

Table 2: Description and analysis of each measurement topic

	N	Mean value	Standard deviation	Skewness	Kurtosis
R1	310	3.64	1.279	-0.897	-0.200
R2	310	3.62	1.213	-0.852	-0.053
R3	310	3.52	1.365	-0.699	-0.652
R4	310	3.66	1.333	-0.91	-0.315
SE1	310	3.52	1.187	-0.286	-0.894
SE2	310	3.51	1.114	-0.181	-0.827
SE3	310	3.53	1.248	-0.386	-0.906
PER1	310	3.68	1.139	-1.009	0.414
PER2	310	3.79	0.880	-0.523	0.079
PER3	310	3.64	1.279	-0.877	-0.171
CC1	310	2.19	1.064	0.604	-0.354
CC2	310	2.19	1.161	0.679	-0.504
CC3	310	2.21	1.182	0.819	-0.174
PU1	310	3.82	0.989	-0.27	-1.045
PU2	310	3.76	1.112	-0.449	-0.78
PU3	310	3.77	1.048	-0.441	-0.718
PU4	310	3.71	1.02	-0.451	-0.379
PEU1	310	3.93	1.066	-0.69	-0.269
PEU2	310	3.93	1.065	-0.57	-0.645
PEU3	310	3.85	1.121	-0.668	-0.228
PEU4	310	3.94	1.071	-0.665	-0.339
WTP1	310	3.73	1.100	-0.909	0.408
WTP2	310	3.85	1.023	-1.033	0.958
WTP3	310	3.84	1.012	-0.946	0.903
WTP4	310	3.8	1.188	-0.789	-0.112

Note: collated by the author of this study

Reliability analysis

Reliability Analysis uses Cronbach's (Cronbach's Alpha) reliability coefficient to check the consistency of the research variables of the questionnaire on each measurement item. It is generally believed that the Cronbach's Alpha coefficient must be greater than 0.7 for a variable to have good reliability.

Table 3: Reliability analysis

Dimension	Item	CITC	Cronbach's Alpha after the item was deleted.	Cronbach's Alpha
Reputation	R1	0.862	0.861	0.911
	R2	0.798	0.885	
	R3	0.751	0.902	
	R4	0.784	0.889	
Self-efficacy	SE1	0.687	0.81	0.846
	SE2	0.72	0.782	
	SE3	0.738	0.763	
The pursuit of econom-ic returns	PER1	0.688	0.727	0.816
	PER2	0.688	0.758	
	PER3	0.678	0.756	
Comment cost	CC1	0.755	0.821	0.872
	CC2	0.749	0.824	
	CC3	0.763	0.812	
Perceived usefulness	PU1	0.753	0.85	0.884
	PU2	0.721	0.863	
	PU3	0.782	0.838	
	PU4	0.74	0.854	
Perceived ease of use	PEU1	0.633	0.816	0.84
	PEU2	0.717	0.779	
	PEU3	0.681	0.795	
	PEU4	0.665	0.802	
Willingness to comment online	WTP1	0.819	0.844	0.894
	WTP2	0.78	0.86	
	WTP3	0.739	0.874	
	WTP4	0.739	0.877	

Note: collated by the author of this study

It can be seen from the above table that the Cronbach's Alpha coefficient of each dimension is greater than the standard of 0.7, indicating that the variables have good internal consistency reliability. CITC is greater than 0.5, indicating that the measurement items meet the requirements of the study. From the point of view of "deleting the Cronbach's Alpha value of the item", deleting any item will not cause the increase of the Cronbach's Alpha value, which also shows that the variable has good reliability.

Exploratory factor analysis

SPSS23.0 was used for exploratory factor analysis to conduct KMO and Bartlett's sphericity test on the scale. The results are shown in the following table:

Table 4: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.906
Bartlett's spherical test	Approximate chi-square	4708.684
	df	300
	Sig.	.000

Note: prepared by the author of this study

From the above table, it can be seen that KMO = 0.906, greater than 0.7, and the test value of Bartlett's sphericity is significant (Sig. < 0.001), indicating that the questionnaire data met the prerequisite requirements of factor analysis. Therefore, for further analysis, the principal component analysis method is used for factor extraction, and the common factor is extracted by taking the eigenvalue greater than 1 as the factor, and the factor rotation is analyzed by using the maximum variance orthogonal rotation. The analysis results are shown in the table below.

Table 5: Total variance interpretation

Ingredient	Initial eigenvalue			Extract the sum of the load squares			The sum of the squares of the rotating loads		
	Total	Percent variance	Cumulative percentage	Total	Percent variance	Cumulative percentage	Total	Percent variance	Cumulative percentage
1	9.224	36.898	36.898	9.224	36.898	36.898	3.224	12.897	12.897
2	2.121	8.486	45.384	2.121	8.486	45.384	3.079	12.318	25.215
3	1.850	7.400	52.783	1.850	7.400	52.783	2.869	11.478	36.693
4	1.594	6.374	59.158	1.594	6.374	59.158	2.753	11.010	47.703
5	1.568	6.270	65.428	1.568	6.270	65.428	2.466	9.865	57.568
6	1.436	5.745	71.173	1.436	5.745	71.173	2.331	9.324	66.892
7	1.220	4.880	76.053	1.220	4.880	76.053	2.290	9.161	76.053
8	.550	2.200	78.254						

Note: Extraction method: principal component analysis.
prepared by the author of this study.

Table 6: Results of factor analysis

	Ingredient						
	Reputation	Willingness to comment online	Perceived usefulness	Perceived ease of use	Comment cost	Self-efficacy	The pursuit of economic returns
R2	0.872						
R1	0.863						
R4	0.803						
R3	0.801						
WTP1		0.818					
WTP2		0.813					
WTP4		0.805					
WTP3		0.788					
PU3			0.788				

Table 6: Results of factor analysis (Continue)

	Ingredient						
	Reputation	Willingness to comment online	Perceived usefulness	Perceived ease of use	Comment cost	Self-efficacy	The pursuit of economic returns
PU2			0.77				
PU4			0.757				
PU1			0.734				
PEU2				0.764			
PEU4				0.763			
PEU3				0.729			
PEU1				0.702			
CC3					0.861		
CC1					0.855		
CC2					0.837		
SE3						0.841	
SE1						0.83	
SE2						0.776	
PER2							0.839
PER1							0.815
PER3							0.783

Note: collated by the author of this study

It can be seen from the above table that there are seven factors in total, and the total explanatory power reaches 75.013%, which is more than 50%, indicating that the seven factors selected have good representativeness. The factor load of each measurement item is greater than 0.5, and the cross load is less than 0.4, and each item falls into the corresponding factor.

Factor analysis of validation (convergent validity)

There are 7 dimensions in this paper, including 25 measurement items. After using Amos 23.0 to perform confirmatory factor analysis, the following figure and table are obtained.

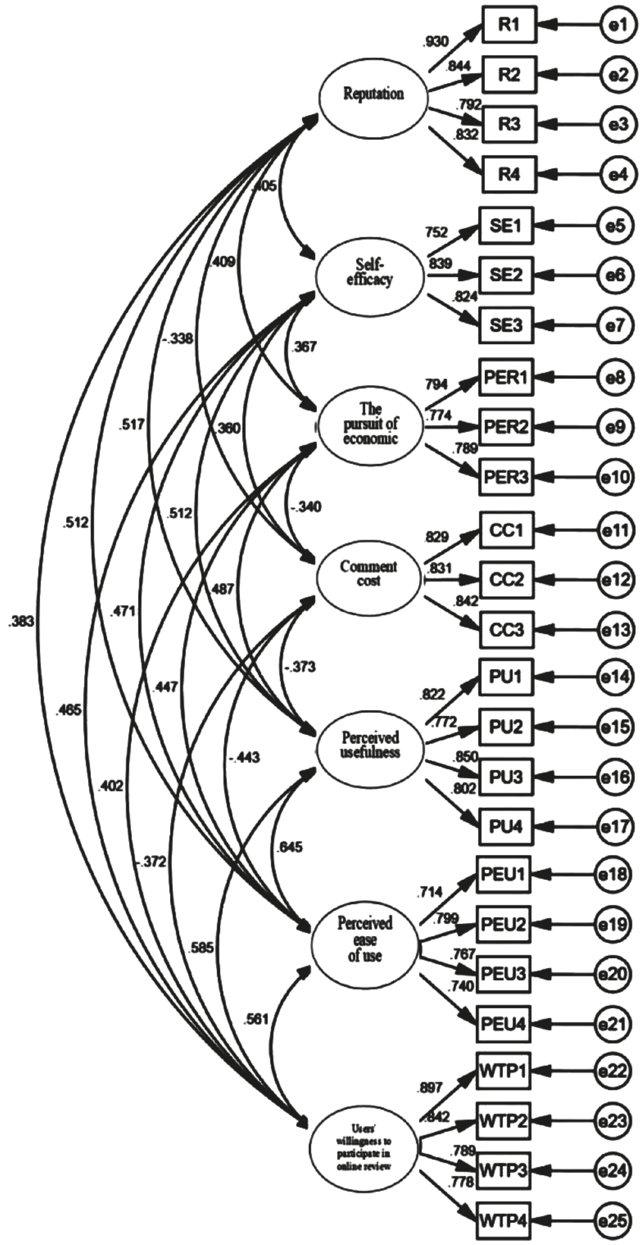

Figure 3: Confirmatory factor analysis.

Table 7: Validation of factor analysis results

Variables	Item	Factor load	CR	AVE
Reputation	R1	0.93	0.913	0.724
	R2	0.844		
	R3	0.792		
	R4	0.832		
Self-efficacy	SE1	0.752	0.847	0.649
	SE2	0.839		
	SE3	0.824		
The pursuit of economic returns	PER1	0.794	0.829	0.617
	PER2	0.774		
	PER3	0.789		
Comment cost	CC1	0.829	0.873	0.696
	CC2	0.831		
	CC3	0.842		
Perceived usefulness	PU1	0.822	0.885	0.659
	PU2	0.772		
	PU3	0.85		
	PU4	0.802		
Perceived ease of use	PEU1	0.714	0.842	0.571
	PEU2	0.799		
	PEU3	0.767		
	PEU4	0.74		
Willingness to comment online	WTP1	0.897	0.897	0.685
	WTP2	0.842		
	WTP3	0.789		
	WTP4	0.778		

Note: collated by the author of this study

It can be seen from the above table that the factor load of the measurement items of each variable is greater than 0.6, the component reliability (CR) is greater than 0.7, and the average extraction of variation (AVE) is greater than 0.5, indicating that each variable has convergent validity.

Discriminant validity

This study used the more rigorous AVE method to evaluate the discriminant validity (Fornell & Larcker, 1981), the AVE root of each factor must be greater than the correlation coefficient of each paired variable, indicating that the factors have discriminant validity. The AVE square root of each factor was greater than the standardized correlation coefficient outside the diagonal, so the study still had discriminant validity, and the oblique lower triangle was the correlation coefficient. See the following table for details:

Table 8: Discriminant validity

	Reputation	Self-efficacy	The pursuit of economic returns	Comment cost	Perceived usefulness	Perceived ease of use	Willingness to comment online
Reputation	0.851						
Self-efficacy	.349**	0.806					
The pursuit of economic returns	.372**	.302**	0.785				
Comment cost	-.315**	-.298**	-.292**	0.834			
Perceived usefulness	.456**	.441**	.418**	-.325**	0.812		
Perceived ease of use	.451**	.396**	.378**	-.383**	.558**	0.756	
Willingness to comment online	.338**	.397**	.359**	-.334**	.518**	.488**	0.828

Note: collated by the author of this study

Structural equation modeling

(1) Structural equation model analysis

The calculation is performed using AMOS23.0, and the estimation is performed using the maximum likelihood method, and the results are shown in the following figure.

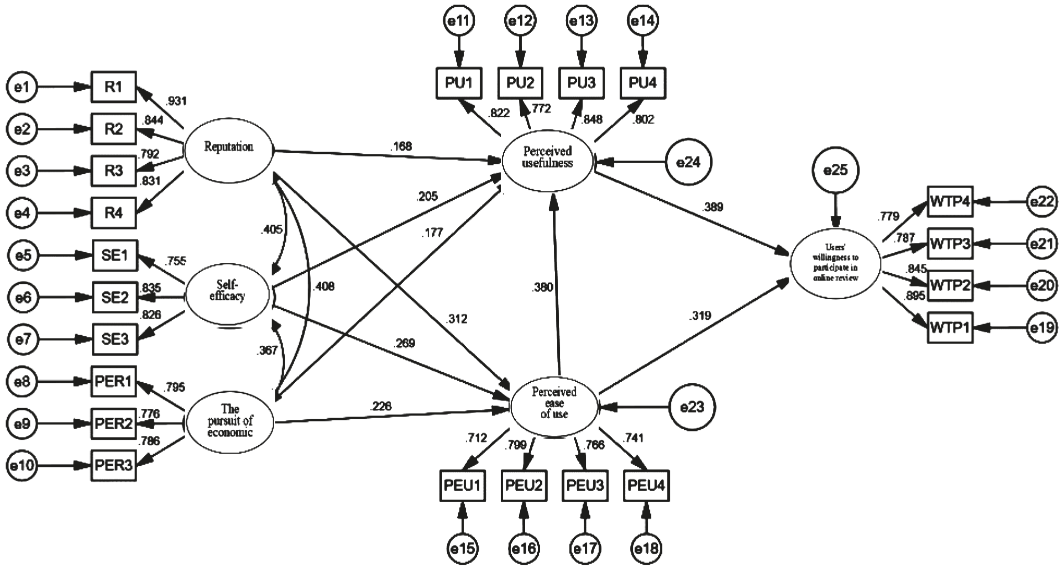

Figure 4: Structural Equation Model Analysis.

(2) Model fit

It can be seen from the following table that CMIN/DF is 1.195, which is less than the standard of 3, GFI, AGFI, NFI, TLI, IFI and CFI all reach the standard of 0.9 or more, RMR is 0.050, which is less than 0.08, RMSEA is 0.025 and less than 0.08, and all fitting indexes are in line with the general research standards. Therefore, it can be considered that this model is well matched.

Table 9: Structural model fit

Model fitting index	Optimal standard value	Statistical value	Fit the situation
CMIN/DF	<3	1.195	good
RMR	<0.08	0.050	good
GFI	>0.9	0.938	good
AGFI	>0.9	0.921	good
NFI	>0.9	0.944	good
IFI	>0.9	0.990	good
TLI	>0.9	0.989	good
CFI	>0.9	0.990	good
RMSEA	<0.08	0.025	good

Note: collated by the author of this study

3) Path coefficient

It can be seen from the following table that reputation has a significant positive impact on perceived ease of use (β = 0.312, $p < 0.05$), and the hypothesis is valid; self-efficacy has a significant positive impact on perceived ease of use (β = 0.269, $p < 0.05$), and the hypothesis is valid; The pursuit of economic return has a significant positive effect on perceived ease of use (β = 0.226, $p < 0.05$), and the hypothesis is valid;

Reputation has a significant positive effect on perceived usefulness (β=0.168, $p < 0.05$), the hypothesis holds; self-efficacy has a significant positive effect on perceived usefulness (β=0.205, $p< 0.05$), the hypothesis holds; the pursuit of economic rewards has a positive and significant effect on perceived utility (β=0. 177, $p <0$; Perceived ease of use has a significant positive effect on perceived usefulness (β=0.38, $p<0.05$), and the hypothesis is valid;

Perceived ease of use has a significant positive effect on online review intention (β = 0.319, $p < 0.05$), and perceived usefulness has a significant positive effect on online review intention (β = 0.389, $p < 0.05$);

Table 10: Path coefficient

Path			Normalization factor	Non-normalized coefficient	S.E.	C.R.	P	Hypotheses
Perceived ease of use	<---	Reputation	0.312	0.199	0.042	4.73	***	H4 Support
Perceived ease of use	<---	Self-efficacy	0.269	0.228	0.058	3.968	***	H6 Support
Perceived ease of use	<---	The pursuit of economic returns	0.226	0.189	0.057	3.332	***	H2 Support
Perceived usefulness	<---	Reputation	0.168	0.114	0.041	2.775	0.006	H3 Support
Perceived usefulness	<---	Self-efficacy	0.205	0.186	0.056	3.297	***	H5 Support
Perceived usefulness	<---	The pursuit of economic returns	0.177	0.159	0.055	2.865	0.004	H1 Support
Perceived usefulness	<---	Perceived ease of use	0.38	0.408	0.078	5.216	***	H7 Support
Willingness to comment online	<---	Perceived ease of use	0.319	0.414	0.101	4.096	***	H10 Support
Willingness to comment online	<---	Perceived usefulness	0.389	0.471	0.092	5.128	***	H11 Support

Note: prepared by the author of this study

Mediating effect

In this study, Bootstrapping was used to verify the mediating effect. Studies have shown that if the bootstrap confidence interval does not contain 0, the corresponding indirect effect exists.

The Bootstrap method was run 5000 times in AMOS23.0 to obtain the level values of Bias-Corrected and Percentile at 95% confidence, as shown in the following table.

Table 11: Mediating Effects' Test

	Standardized effect values	Bias-Corrected 95%CI		Percentile 95%CI	
		Lower	Upper	Lower	Upper
Total indirect effect					
Reputation_Willingness to comment online	0.211	0.141	0.296	0.138	0.292
Self-efficacy_Willingness to comment online	0.205	0.117	0.295	0.116	0.294
The pursuit of economic returns_ Willingness to comment online	0.174	0.093	0.266	0.092	0.264
Indirect effect					
Reputation_Perceived usefulness_ Willingness to comment online H16	0.065	0.019	0.132	0.014	0.124
Reputation_Perceived ease of use_ Willingness to comment online H13	0.1	0.047	0.172	0.045	0.169
Self-efficacy_Perceived usefulness_ Willingness to comment online H17	0.08	0.026	0.154	0.023	0.149
Self-efficacy_Perceived ease of use_Willingness to comment online H14	0.086	0.035	0.165	0.031	0.156
The pursuit of economic returns_ Perceived usefulness_Willingness to comment online H15	0.069	0.019	0.139	0.134	0.01
The pursuit of economic returns _ Perceived ease of use Willingness to comment online H12	0.072	0.023	0.15	0.144	0.003

Note: collated by the author of this study

It can be seen from the above table that the indirect effect value of reputation_ perceived usefulness_online review intention is 0.065, which does not include 0 in the Lower and Upper value intervals of Bias-Corrected and Percentile95% CI, indicating the existence of indirect effect; The indirect effect value of reputation_perceived ease of use_online review intention is 0.1, which does not include 0 in the Lower and Upper value intervals of Bias-Corrected and Percentile95% CI, indicating the existence of indirect effect; The indirect effect value of reputation_perceived ease of use_perceived usefulness_online review intention was 0.046, which did not include 0 in the Lower and Upper value intervals of Bias-Corrected and Percentile95% CI, indicating the existence of indirect effect;

The indirect effect value of self-efficacy, perceived usefulness, online review intention was 0.08, which did not include 0 in the Lower and Upper value intervals of Bias-Corrected and Percentile95% CI, indicating the existence of indirect effect; The indirect effect value of self-efficacy, perceived ease of use, online review intention was 0.086, which did not include 0 in the Lower and Upper value intervals of Bias-Corrected and Percentile 95% CI, indicating the existence of indirect effect; The indirect effect value of self-efficacy, perceived ease of use, perceived usefulness, online review intention was 0.04, which did not include 0 in the Lower and Upper value intervals of Bias-Corrected and Percentile95% CI, indicating the existence of indirect effect; The indirect effect value of pursuing economic return, perceived usefulness_online review intention is 0.069, which does not include 0 in the Lower and Upper value intervals of Bias-Corrected and Percentile 95% CI, indicating the existence of indirect effect;

The indirect effect value of pursuing economic reward, perceived ease of use, online review intention is 0.072, which is not included in the Lower and Upper value intervals of Bias-Corrected and Percentile95% CI. Indicating the existence of indirect effect; the indirect effect value of pursuing economic return, perceived ease of use, perceived usefulness, online review intention is 0.033, which does not include 0 in the Lower and Upper value intervals of Bias-Corrected and Percentile95% CI, indicating the existence of indirect effect.

In general, all hypotheses of mediating effects (H12, H13, H14, H15, H16, H17) are supported.

Moderating effect

(1) A test of the moderating effect of review cost on perceived usefulness on online review intention.

With gender, age, occupation, education, monthly income, catering O2O platform, frequency of use and whether online evaluation will be conducted as control variables, perceived usefulness as independent variable, review cost as adjustment variable and online review intention as dependent variable, SPSS is used to conduct adjustment test to obtain the following table.

Table 12: Moderating Effects' Test

	Willingness to comment online			
	M1	M2	M3	M4
	β	β	β	β
Gender	0.055	0.026	0.024	0.019
Age	0.097	0.055	0.049	0.067
Occupation	-0.117	-0.069	-0.06	-0.067
Academic qualifications	0.08	0.018	0.018	0.002
Monthly income	0.193*	0.1	0.101	0.111
Catering O2O platform	0.029	-0.011	-0.044	-0.034
Frequency of use	-0.08	-0.038	-0.025	-0.04
Will there be an online evaluation	-0.134*	-0.142*	-0.124*	-0.109*
Perceived usefulness		0.434***	0.404***	0.399***
Comment cost			-0.138**	-0.172**
Perceived usefulness * Comment cost				-0.164**
R2	0.165	0.318	0.334	0.359
R2 Change	0.165	0.153	0.015	0.025
F	7.441***	15.577***	14.975***	15.151***

Note. *p<0.05; **, p<0.01; ***, p<0.001
collated by the author of this study

It can be seen from the above table that perceived usefulness X comment cost has a significant positive effect on online comment intention (β= -0.164, $p < 0.05$), indicating that comment cost has a moderating effect on the effect of perceived usefulness on online comment intention, and the H8 hypothesis is true.

(2) A test of the moderating effect of review cost on perceived ease of use on online review intention.

With gender, age, occupation, education, monthly income, catering O2O platform, frequency of use, and whether online evaluation will be conducted as control variables, perceived ease of use as independent variables, review cost as adjustment variables, and online review willingness as dependent variables, the following table is obtained by using SPSS for moderating test.

Table 13: Moderating Effects' Test

	Willingness to comment online			
	M1	M2	M3	M4
	β	β	β	β
Gender	0.055	0.033	0.03	0.021
Age	0.097	0.046	0.042	0.058
Occupation	-0.117	-0.061	-0.053	-0.055
Academic qualifications	0.08	0.023	0.024	0.009
Monthly income	0.193*	0.137	0.136	0.134
Catering O2O platform	0.029	-0.019	-0.052	-0.011
Frequency of use	-0.08	-0.026	-0.015	-0.023
Will there be an online evaluation	-0.134*	-0.077	-0.064	-0.051
Perceived ease of use		0.384***	0.347***	0.313***
Comment cost			-0.147**	-0.184**
Perceived ease of use*Comment cost				-0.177**
R2	0.165	0.273	0.29	0.318
R2 Change	0.165	0.108	0.017	0.028
F	7.441***	12.523***	12.219***	12.627***

Note. *p<0.05;**, p<0.01; ***, p<0.001

Collated by the author of this study

It can be seen from the above table that perceived ease of use X review cost has a significant negative impact on online review intention (β = -0.177, $p < 0.05$), indicating that review cost has a moderating effect on the impact of perceived ease of use on online review intention, and the H9 hypothesis is true.

Conclusion

Research conclusion

This paper mainly discusses the impact of the pursuit of economic returns, reputation, self-efficacy, review cost, perceived ease of use and perceived usefulness on the willingness of O2O platform users to participate in online reviews. In this study, the following conclusions are drawn by combing the literature, building the theoretical model of the study, designing and collecting questionnaires, and analyzing the data.

(1) The variables of (pursuit of economic return, self-efficacy, cost of reputation review, perceived ease of use, perceived usefulness) have significant effects on the willingness of users to participate in online reviews.

(2) The pursuit of economic returns, reputation, self-efficacy, perceived ease of use, perceived usefulness, and cost of reviews) are the influencing factors of users' willingness to participate in online reviews, and there is a significant positive correlation between them. When these factors are higher, the significance of users' participation in online reviews is stronger.

(3) Perceived usefulness (Pursuit of economic reward, self-efficacy, reputation) plays a partial mediating role on users' willingness to participate in online reviews, perceived usefulness as a mediating variable will have a partial impact on (pursuit of economic reward, self-efficacy, reputation) and user's willingness to participate in online reviews, when the user's pursuit of economic rewards, self-efficacy and reputation is higher. The more intention the user's willingness to participate in online reviews.

(4) The perceived ease of use (In pursuit of economic returns, Self-efficacy, reputation) play a partial mediating role on users' willingness to participate in online reviews. As a mediating variable, it has a partial impact on the relationship between the independent variable and the dependent variable. When the independent variable is more positive, the dependent variable is more positive.

(5) The cost of comments plays a moderating role on users' willingness to participate in online reviews, and users who participate in online reviews will consider their review costs what effects their online review willingness.

Implications of the study

According to the research findings, several factors, namely the pursuit of economic returns, reputation, self-efficacy, review cost, perceived ease of use, and perceived usefulness, have an impact on users' participation in online reviews. Therefore, businesses should focus on these aspects to enhance users' willingness to engage in online reviews, gain insights into customer needs, and tailor their strategies accordingly to encourage maximum customer participation.

For instance, taking the pursuit of economic returns as an example, customers are concerned about whether engaging in online reviews will yield economic benefits. In response, businesses can offer incentives in the form of favorable reviews and rewards to customers who provide genuine feedback based on their real experiences. This approach also serves as a means of promoting the business, as customers often share their feedback on the platform. As customers' account levels gradually increase and they receive positive evaluations from existing customers, trust and recognition from the wider audience can be gained. This allows customers to establish a good reputation on the platform and derive a sense of value from their contributions.

Comment cost is another important factor influencing customer participation in online reviews. Given that online reviews primarily entail time cost, customers evaluate whether participating in reviews is simple and convenient, allowing them to avoid devoting excessive time and effort. If engaging in online reviews is perceived as a casual task that does not demand significant time investment, customers will be more inclined to participate. Additionally, providing benefits to customers further enhances their motivation to engage in online reviews. The activities, such as incentivizing with positive reviews and cashback, create a perception of simplicity, convenience, and utility among customers. Consequently, this significantly boosts customers' willingness to participate in online reviews. Platforms and merchants should therefore design effective activities to stimulate greater participation in platform reviews.

Research Limitation and Prospect

Firstly, convenience sampling used in sample selection may have certain limitations.

Secondly, this study employed specific measurement tools and data analysis techniques, which themselves may have inherent limitations such as variations in reliability and validity due to different measurement tools. Future research could explore more precise and effective measurement approaches to address these limitations.

Additionally, external validity limitations should be clearly acknowledged. The findings of this study may be limited to specific populations or contexts; thus, caution should be exercised when generalizing the results to other populations or contexts. Future research could enhance external validity by expanding the sample size and diversifying the study settings.

Finally, despite efforts made to ensure the accuracy of data collection and analysis procedures, errors and biases may still exist. Future research could employ stricter methods to validate and improve the reliability and validity of data.

In future studies, it is recommended to further investigate these limitations and provide insights for improvement, such as employing more precise measurement tools, increasing sample size and diversity, improving study designs, and expanding the scope of research.

The present study acknowledges the existence of certain limitations and aims to address these constraints and expand the scope of our research in future investigations.

For instance, long-term tracking studies could be considered to gain a better understanding of the long-term impact and trends of our research. This approach would facilitate the observation of changes and developments, providing more reliable and comprehensive empirical evidence to support the durability and stability of our research findings.

Future research endeavors may explore and apply novel technologies and methodologies to broaden the boundaries of the research field. For example, incorporating technologies such as artificial intelligence, big data analytics, and machine learning can unearth deeper insights and perspectives, offering fresh research perspectives.

By further extending and deepening the existing body of work, future studies aspire to contribute more significantly to the advancement of the field. This would aid in propelling knowledge progression and furnish valuable guidance and recommendations for decision-makers and professionals in relevant domains.

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A Survey on The Satisfaction of College General Education Network Courses

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Abstract

The use of network platform to carry out general education courses has become a more common way in China's general education. In the Internet era, how to effectively use network platform resources, better carry out general education courses, and improve the learning satisfaction of general education is an important issue that needs to be solved. Based on previous studies, this study takes three dimensions of self-efficacy, teacher guidance and curriculum quality as factors affecting learning satisfaction, and introduces learning engagement as a mediating variable. Using the method of empirical research, this paper adopts convenient sampling to select some students from 10 universities in Guangxi which offer online courses of general education.Through the sample data, it is verified that self-efficacy, teacher guidance and curriculum quality have significant positive effects on learning satisfaction. Learning engagement has a partial mediating effect.

Keywords: General Education, Online Course, Learning Satisfaction, Learning Engagemen

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การสำรวจความพึงพอใจของหลักสูตรเครือข่าย การศึกษาทั่วไปของวิทยาลัย

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บทคัดย่อ

การใช้แพลตฟอร์มเครือข่ายในการดำเนินการหลักสูตรการศึกษาทั่วไปได้กลายเป็นวิธี ที่ทั่วไปมากขึ้นในการศึกษาทั่วไปของจีนในยุคอินเทอร์เน็ตวิธีการใช้ทรัพยากรแพลตฟอร์มเครือข่ายอย่างมีประสิทธิภาพดำเนินการหลักสูตรการศึกษาทั่วไป และปรับปรุงความพึงพอใจในการเรียนรู้ของการศึกษาทั่วไปเป็นประเด็นสำคัญที่ต้องได้รับการแก้ไขจากการศึกษาก่อนหน้านี้ การศึกษานี้ ใช้สามมิติของประสิทธิภาพตนเอง คำแนะนำครู และคุณภาพหลักสูตรเป็นปัจจัย ที่ส่งผลกระทบต่อความพึงพอใจในการเรียนรู้ และแนะนำการมีส่วนร่วมในการเรียนรู้เป็นตัวแปร ที่มีความหลากหลายรายงานนี้ ได้รับการยกตัวอย่างที่สะดวกเพื่อเลือกนักเรียนบางส่วนจาก 10 มหาวิทยาลัยในกวางซี ที่มีหลักสูตรออนไลน์ของการศึกษาทั่วไปผ่านข้อมูลตัวอย่างจะได้รับการยืนยันว่า ประสิทธิภาพตัวเองคำแนะนำครู และคุณภาพของหลักสูตรมีผลในเชิงบวกต่อความพึงพอใจในการเรียนรู้การมีส่วนร่วมในการเรียนรู้มีผลต่อการไกล่เกลี่ยบางส่วน

คำสำคัญ: การศึกษาทั่วไป หลักสูตรออนไลน์ ความพึงพอใจในการเรียนรู้ การมีส่วนร่วมในการเรียนรู้

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Introduction

Colleges and universities shoulder the responsibility of delivering more high-level talents to the society, and general education plays a more important role in improving the quality of college talent training. Promoting general education is one of the important ways to improve the quality of college education and cultivate comprehensive talents (Xiang, 2020). Network technology guarantees the establishment of cross-university course selection, course sharing and course alliance, which brings opportunities to the teaching reform of China's general education. General education network courses can break through various restrictions and share high-quality course resources. General education network courses provide a new way to carry out general education (Gao et al., 2020). Universities are also constantly introducing high-quality online course platforms to promote the popularization and promotion of general education. The online course platform provides a wealth of general education online courses jointly with universities and social institutions, such as Chinese university MOOC, Super Star Erya and Wisdom Tree. As a brand new teaching model, general education online courses can not only make college students become the leader of learning, but also choose the courses they need to learn according to the needs of students, no longer subject to the restrictions of traditional general education courses. For example, in addition to high-quality teaching resources and auxiliary materials, online courses for general education also include a variety of disciplines and categories of online courses, which can provide students with a variety of course choices (L.Y. Zhao,2022). It can be seen that the promotion of general education network courses has played a great role in promoting the development of quality education in colleges and universities, and its importance is reflected in strengthening curriculum construction, optimizing structure, promoting education and teaching reform, improving teaching quality and promoting students' independent learning (Yao & H. B. Zhao, 2016).

The study of general education curriculum mainly focuses on curriculum quality, curriculum reform, learning satisfaction and its influencing factors.

A study on the curriculum quality of general education courses. Zhang & Gong (2021) follows up and evaluates curriculum quality from three steps and six links.G. Liu & Zou (2023) believed that the teaching ability and level of individual teachers need to be improved, and students' lack of understanding of the value of the curriculum leads to their neglect of the curriculum, which are the two main reasons for the low quality of the current curriculum.L.Li & H.Li (2022) put forward constructive suggestions on curriculum quality from the perspectives of effectively improving students' learning input, building high-quality courses, and dealing with the relationship between academic burden and learning mode transformation.

Research on curriculum reform of general education course. As for the direction of curriculum reform, Jiang(2022) should take the interests of students as the starting point, emphasize the dominant position of teachers in the classroom, and give full play to the initiative and creativity of students. Chen(2021) conducted a study on curriculum reform of general courses of aesthetic education in colleges and universities, and proposed reform strategies of clarifying teaching ideas, diversifying course content and professionalizing teaching staff. Jin (2022) from the perspective of following the law of education and teaching, put forward suggestions from three perspectives: building the teaching structure of general education courses, optimizing the curriculum setup, and reforming teaching methods.

A study on improving learning satisfaction and influencing factors in general education courses. L.M.Huang & Nan(2020) found that factors affecting undergraduates' satisfaction with general education courses include unreasonable assessment forms, conflict between general education courses and professional courses, etc. H.F.Huang et al. (2019) pointed out that the satisfaction of general education should be improved from the aspects of curriculum system and teaching content optimization, teaching methods improvement, strengthening course management and creating a good general education atmosphere. L.Wang (2018) pointed out that explanatory variables include course characteristics, personal characteristics and other variables when studying the influencing factors of MOOC learners' learning. Zhong (2015) pointed out that schools, teachers and students are the factors that affect the satisfaction of general education courses. J.Wang & C.X.Wang(2020) pointed out that the cognitive attitude, the appropriateness of content, the degree of achievement of educational goals, the heuristic of teaching methods, and the scientific nature of curriculum design and management of general education courses are the main factors influencing the satisfaction of general education courses. The evaluation of these aspects can promote the quality improvement of general education and the improvement of students' quality.

There are few researches on online courses of general education, and more researches focus on online learning satisfaction. L.Yang et al. (2019) believes that universities of science and technology need to build and introduce general education online courses. The research finds that the main factors affecting the satisfaction of general education online courses include teaching methods, assessment forms, course management and course content, and the impact of individual student differences is not significant. Ren (2021) takes some undergraduates of Y University as research objects and finds that students' satisfaction with online learning needs to be further improved. The research shows that students' learning expectation and perceived quality have an impact on perceived quality, learning satisfaction can affect their learning intention, and individual characteristics also affect satisfaction.

To sum up, there are few studies on the learning satisfaction of online courses of general education at present, which mainly focus on the quality of courses, curriculum reform, learning satisfaction and its influencing factors, etc. The relevant studies are mainly on the satisfaction of online courses, which provides a reference for us to study the learning satisfaction of online courses of general education. This research can analyze the current situation of general education online courses, understand the main factors affecting their learning satisfaction, and then put forward relevant opinions and suggestions to improve satisfaction, which is conducive to improving the overall quality of college students. General education is responsible for the main mission of cultivating a complete person in university education. Xie et al. (2018) believes that general education is a kind of human nature education, which reflects humanistic care and aims to promote interpersonal communication in cross-cultural and cross-social environments and cultivate all-round personality quality. In addition, general education is also a way of thinking education, emphasizing the training of students to analyze knowledge and scientific thinking methods, rather than just mastering the knowledge of a certain subject. As a part of general education, general education network courses are worthy of our research in their field. Xu et al. (2021) believes that general education network courses are aimed at cultivating students' overall quality, emotional intelligence and team responsibility, and shaping them to have a high sense of social responsibility, diversified knowledge structure and personality traits. Therefore, it has extremely important social significance. Then, the study on their learning satisfaction has found a breakthrough point for us to study general education online courses. Kanwar Anita et al. (2022) Students' learning and development is the core of higher education career, and students are indispensable stakeholders in any educational institution. Students' learning satisfaction can measure the teaching quality and effect of educational institutions, reflect whether educational institutions can meet the needs and expectations of students, and is also an important basis for the sustainable development of educational institutions.

Literature Review

General Education online courses

The digital form of general education provides a new path for the development of general education courses, and networking provides technical means for general education courses. Various colleges and universities introduce general education network courses one after another, and the degree of network courses is gradually improved, but the teaching effect of network courses still needs to be improved (Y.D.Li & Shao, 2021). Internet technology provides rich teaching resources and strong technical support for the effective penetration of general education concepts (M.Wen, 2022). General education in this context can fully solve the problem of insufficient knowledge of college students and promote the accumulation of rich cultural knowledge qualities of college students (L.L.Yang, 2023). In order to better promote the implementation of general education network courses in colleges and universities, it is necessary to strengthen the publicity of online general education, so that people can better understand the importance of general education to the development of students' comprehensive literacy, and thus better promote the implementation and development of general education in colleges and universities (X.R.Zhao,2022). It can be seen that the prevailing online courses of general education continue to expand the innovative teaching mode of colleges and universities and realize the diversity of higher education content (Zhan et al., 2022).

Customer satisfaction and learning satisfaction

It is generally recognized in the academic community that satisfaction is a psychological reaction, which refers to people's judgment on whether the quality of the products or services they receive can meet their needs and expectations, which has been defined in detail by Oliver (Tian,2021). When the theory of customer satisfaction was rapidly spread and applied in many countries, researchers began to introduce customer satisfaction into the field of education for research and application, and the United States was the first to study students' learning satisfaction (Qin, 2022). The concept of learning satisfaction is originally borrowed from "customer satisfaction". Simply put, learning satisfaction is a certain emotional state generated by comparing students' learning gains with expected results after a period of learning. (Ma, 2022). Improving online learning satisfaction is an important means to realize the substantial equivalence between online teaching and classroom teaching quality. The construction of the hypothesis model of online learning satisfaction, which comprehensively applies the theories such as customer satisfaction index model, technology acceptance model, system information continuous use model and self-determinism, involves multiple disciplines (F.Q.Sun, 2022). The research content of customer satisfaction in the commercial field is introduced to study the influencing factors of MOOC learners' satisfaction. Learners are the main body and users of the MOOC platform, and ensuring learners' satisfaction with the current MOOC platform is an important topic in the current development of MOOC (Y.Zhang, 2018). To sum up, customer satisfaction theory will be the main theoretical basis of this study. On the basis of customer satisfaction, there is learning satisfaction, and the level of learning satisfaction will affect students' learning interest and curriculum quality.

Hypotheses Development

About the learning satisfaction of learners in network general studies, this study puts forward Relevant assumptions.

X.J.Liu et al. (2023) pointed out that teachers' after-school tutoring for college students in online courses is an important factor affecting their course learning satisfaction. Effective tutoring can enhance college students' mastery of knowledge, answer questions and solve doubts for students, facilitate the communication between teachers and students, and contribute to the improvement of students' study satisfaction.L.W.Hu et al. (2022) pointed out that it is necessary to enhance the satisfaction of online learning and strengthen teachers' tutoring for students' after-school learning from the perspective of improving teachers' methods and methods. Wu (2023) found from the study of online learning in vocational education that teachers' guidance and control of courses, overall course design structure and students' autonomous learning ability all play a certain role in promoting students' learning participation. Especially in the area of teacher guidance, tutoring and tracking of lesson planning, communication, and process can promote student engagement in learning. Therefore, it can be inferred that teacher guidance is one of the influencing factors of learning satisfaction, so the hypothesis is proposed:

H1: Teacher guidance has a significant positive impact on learning satisfaction.

The influencing factors of students' self-learning efficacy and learning satisfaction are highly consistent. Colleges and universities should use various teaching means to enhance students' self-efficacy and continuously improve students' learning satisfaction (Y.L.Hu, 2018). Y.Y. Li et al. (2020) pointed out that self-efficacy affects college students' online learning satisfaction. When studying the relationship between academic self-efficacy and learning satisfaction, Tan (2016) proposed that there is a positive correlation between academic self-efficacy and learning satisfaction, so he proposed the following hypothesis:

H2: Students' self-efficacy has a significant positive impact on learning satisfaction.

curriculum quality is the reflection of students' learning experience and learning perception after they truly participate in professional learning, which is the real feeling of students combined with their own reality, and will have a direct impact on their learning satisfaction. Yin et al. (2023) studied the impact of curriculum quality perception on learning satisfaction from the perspective of curriculum quality. Through testing, the author found that curriculum quality had a significant impact on college students' online learning satisfaction. The research results have a certain reference significance for improving the quality of online courses for college students. Lu et al. (2022) pointed out that curriculum quality is the reflection of students' learning experience and learning perception after they truly participate in professional learning, which is the real feeling of students combined with their own reality, and will have a direct impact on their learning satisfaction. curriculum quality has a positive correlation with learning satisfaction (He et al., 2021). Therefore, the following hypothesis is proposed:

H3: curriculum quality has a significant positive impact on learning satisfaction.

Qi et al. (2021) studied the relationship between college students' participation, learning engagement and learning satisfaction in online learning. It is found that there is a significant positive correlation between learning engagement and learning satisfaction. It can be assumed that:

H4: Students' learning engagement has a significant positive impact on their learning satisfaction.

Students' learning engagement has a direct impact on teaching quality, and teacher guidance factors have the most obvious impact on learning engagement, including teacher-student interaction, teacher feedback and teaching activity arrangement (H.Y.Sun & Pan et al., 2022). R.W. Huang et al. (2019) pointed out that the factors affecting MOOC learning engagement can be summarized into six aspects: learner main factor, teacher guidance factor, platform support factor, curriculum construction factor, learner peer factor and policy support factor. Therefore, it can be inferred that teacher guidance is one of the factors affecting student participation, so the hypothesis is proposed:

H5: Teacher guidance has a significant positive impact on learning satisfaction through student engagement.

Ge (2021) found that high school students' online learning participation was positively correlated with self-efficacy. According to the research of Zimmerman et al. (2011), learning engagement belongs to the behavioral level, while self-efficacy belongs to the motivational level, both of which play a role in the learning process and outcome. In addition, Wen & C.L.Zhu (2021) found that there is a positive correlation between students' self-efficacy, learning satisfaction and learning engagement, and learning engagement plays an intermediary role between them. It can be assumed that:

H6: Student self-efficacy has a significant positive impact on learning satisfaction through student engagement.

In the online learning environment of MOOCs, the quality of MOOCs is one of the factors that affect the participation of MOOCs online learning (Guo, 2020).L.J. Qu & L.Sun (2019) pointed out that curriculum quality has a significant impact on the improvement of students' participation in course learning. It can be assumed that:

H7: curriculum quality has a significant positive impact on learning satisfaction through student participation.

Based on the above, this study takes teacher guidance, students' self-efficacy and curriculum quality as independent variables, students' learning engagement as intermediary variables, and learning satisfaction as outcome variables, to build a theoretical model of learning satisfaction for online courses of general education (as shown in Figure 1).

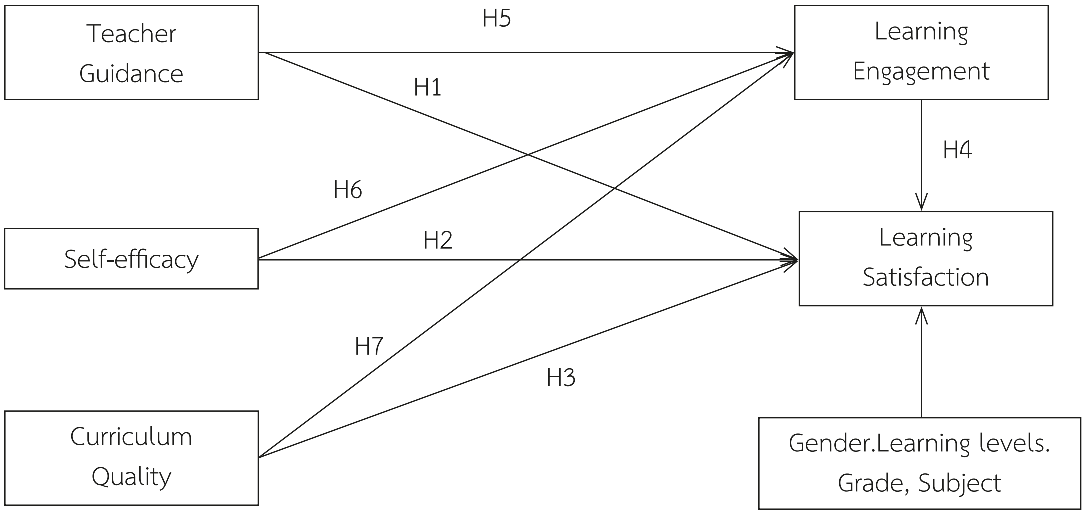

Figure 1: Proposed Hypothesized Model

Research Methodology

Research object

In this study, students in universities in Guangxi, which offer online courses of general education, will be selected as the research objects. Guangxi is located in the southwest ethnic minority region, and the development of higher education in Guangxi is slower than that in the central and eastern regions (Y. Huang, 2021). General education is a crucial part of higher education. Its positive role in improving the comprehensive quality of college students has been widely recognized in universities (Wei & H.Ding 2022). Therefore, this study takes college students in Guangxi as the research object, which has certain practical significance for studying the learning satisfaction of general education online courses in Guangxi colleges and universities, and can start from studying the learning satisfaction to find ways to improve the quality of general education online courses.

Sampling methods and sample collection

At present, there are 85 colleges and universities in Guangxi, among which 38 are undergraduate colleges and 47 are junior colleges. By the end of 2022, there will be 1.408 million undergraduate and junior college students (Education Department of Guangxi Zhuang Autonomous Region, 2023). Considering objective reasons such as time and cost, this study will use convenient sampling method to select research objects. Firstly, 10 universities in Guangxi that offer online courses of general education will be contacted through various channels as research samples. Secondly, a certain number of students are randomly selected as research objects in the contacted universities. Finally, according to the sampling results, the relevant statistical analysis is carried out.

According to Xiong & J.L.Liu (2022), the sample size of the questionnaire effectively recovered should be at least five times more than the number of questionnaire questions. The questionnaire in this study has 35 questions, so the sample size should be at least 175.

Instruments

In this study, quantitative methods are used to test the proposed model. An online self-filling questionnaire was used to collect data. The questionnaire was divided into two parts. The first part is the demographic data, including the student's gender, learning levels (undergraduate/junior college), grade, subject, whether they have participated in the study of General education network courses and the school they attended; In the second part, a 5-point Likert scale (from 1 = strongly disagree to 5 = strongly agree) was used to measure the psychological perception of the respondents, and 35 items were adjusted from Y.B.Li et al. (2021), Jessica Li et al. (2015), Shi et al. (2023). Fredricks et al. (2004) and C.L Wang (2020). In addition, after the questionnaire was designed, a small range of pre-test was conducted in Beihai Campus of Guilin University of Electronic Science and Technology, and 102 questionnaire data were collected. Among them, 9 points were students who had not participated in online courses of general education, so 93 effective pre-test questionnaires were collected. Cronbach's alpha test results showed that the reliability of all dimensions was greater than 0.8 (as shown in Table 1). KMO test and Bartlett sphericity test were used to test the validity of the scale (as shown in Table 2). The analysis found that KMO = 0.812 > 0.7 and Bartlett sphericity test was significant ($p < 0.001$), indicating that the overall validity of the scale was good.

Table 1: Reliability analysis

Variable	Number of terms	Cronbach's Alpha
Teacher guidance	6	0.897
Self-efficacy	6	0.941
Curriculum quality	7	0.923
Learning engagement	6	0.915
Learning satisfaction	4	0.926

Table 2: KMO and Bartlett tests

KMO		0.812
Bartlett sphericity test	Approximate chi-square	2448.695
	Degree of freedom (df)	406
	significance (p)	0.000

Results

Analysis of the Measurement Model

Before the structural model assessment, all the required criteria should be satisfied (Hair et al., 2019). The reliability and validity of the measurement model were measured as follows: the factor loadings, Cronbach's alpha (CA), composite reliability (CR), average variance extracted (AVE), and discriminant

validity as illustrated in Table 3 and Table 4.

Firstly, the reliability analysis is carried out. The reliability of each dimension of the sample data scale is greater than 0.8, so the scale has good stability and certain credibility.There are two important indicators of convergence validity, namely, combination reliability (CR) and mean variance extraction (AVE). When CR>0.7 and AVE>0.5, it indicates that the measurement dimension has good convergence validity. In general, the standardized factor load coefficient is used to express the variable relationship between the factor and the analysis item. If it is significant and the standardized factor load coefficient is greater than 0.6, it indicates a strong correlation. As can be seen from Table 2, CR values are both greater than 0.8, and AVE values are greater than 0.5, indicating that the sample data of this scale has good convergence validity.Discrimination validity requires that AVE square root value is greater than the correlation coefficient between this factor and other factors. As can be seen from the table, the arithmetic square root of AVE value of all variables is greater than the correlation coefficient between this factor and other factors, indicating that the sample data of this scale has good discrimination validity.

Table 3: Construct Reliability and Validity

		Factor load	CA	CR	AVE
A1	F1	0.717	0.881	0.886	0.566
A2	F1	0.767			
A3	F1	0.872			
A4	F1	0.817			
A5	F1	0.668			
A6	F1	0.648			
B1	F2	0.871	0.928	0.928	0.683
B2	F2	0.878			
B3	F2	0.769			
B4	F2	0.784			
B5	F2	0.827			
B6	F2	0.825			
C1	F3	0.825	0.951	0.951	0.734
C2	F3	0.756			
C3	F3	0.829			
C4	F3	0.909			
C5	F3	0.900			
C6	F3	0.893			
C7	F3	0.876			
D1	F4	0.852	0.929	0.929	0.687
D2	F4	0.771			
D3	F4	0.836			
D4	F4	0.821			
D5	F4	0.853			
D6	F4	0.838			
F1	F5	0.795	0.915	0.917	0.735
F2	F5	0.915			
F3	F5	0.897			
F4	F5	0.815			

Table 4: Discriminative validity

	1	2	3	4	5
Teacher guidance	0.752				
Self-efficacy	0.652**	0.827			
Curriculum quality	0.522**	0.628**	0.857		
Learning engagement	0.691**	0.762**	0.645**	0.829	
Learning satisfaction	0.510**	0.519**	0.455**	0.598**	0.857

Correlation analysis

Correlation analysis is used to show the strength of the relationship between two or more variables. Through correlation analysis, we can understand the correlation between variables. Since the scale data in this study met the normal distribution, Pearson correlation coefficient was used and its significance was marked, and the relevant results were shown in Table 5.Teacher guidance has a positive correlation with both learning engagement and learning satisfaction, and the correlation coefficients R are 0.691 and 0.510, respectively, and both are significant at $p<0.01$ level. Self-efficacy has a positive correlation with both learning engagement and learning satisfaction, and the correlation coefficients R are 0.762 and 0.519, respectively, and both are significant at $p<0.01$ level. curriculum quality has a positive correlation with learning participation and learning satisfaction, and the correlation coefficients R are 0.645 and 0.455, respectively, and both are significant at $p<0.01$ level. Learning engagement has a positive correlation with learning satisfaction, and the correlation coefficient R is 0.598, and all of them are significant at $p<0.01$ level. The above test results show that there is a strong correlation between the study variables

Table 5: Correlation analysis

	Teacher guidance	self-efficacy	Curriculum quality	Learning engagement	learning satisfaction
Teacher guidance	1				
Self-efficacy	0.652**	1			
Curriculum quality	0.522**	0.628**	1		
Learning engagement	0.691**	0.762**	0.645**	1	
Learning satisfaction	0.510**	0.519**	0.455**	0.598**	1

Regression analysis

The regression analysis of teacher guidance, self-efficacy and curriculum quality on learning satisfaction was conducted, and the results are shown in Table 6. In the equation obtained by regression of teacher guidance, self-efficacy and curriculum quality on learning satisfaction, F value is 33.973 and significance is 0.000 ($p<0.001$), indicating that the regression model constructed is significant. The standard regression coefficient of teacher guidance on learning satisfaction was 0.253, and the significance was 0.000 ($p<0.001$), indicating that teacher guidance had a positive impact on learning satisfaction, and the impact was significant. The standard regression coefficient of self-efficacy on learning satisfaction was 0.267, and the significance was 0.000 ($p<0.001$), indicating that self-efficacy had a positive impact on learning satisfaction, and the impact was significant. The standard regression coefficient of curriculum quality on learning satisfaction is 0.161, and the significance is 0.001 ($p<0.005$), indicating that self-efficacy has a positive impact on learning satisfaction, and this impact is also significant. Based on the above analysis, it is assumed that H1, H2 and H3 are all valid.

Table 6: Regression analysis of teacher guidance, self-efficacy and curriculum quality on learning satisfaction

Dependent variable	Independent variable	Standard regression coefficient	Sig.	VIF	R square	The adjusted R square	F	Sig.
Learning satisfaction	sex	0.007	0.858	1.139	0.342	0.332	33.973	0.000
	level	0.035	0.431	1.338				
	grade	-0.065	0.120	1.214				
	discipline	-0.023	0.592	1.261				
	Teacher guidance	0.253	0.000	1.835				
	Self-efficacy	0.267	0.000	2.325				
	Curriculum quality	0.161	0.001	1.727				

The regression analysis of teacher guidance, self-efficacy and curriculum quality on learning engagement is conducted, and the results are shown in Table 7. In the equation obtained by regression of teacher guidance, self-efficacy and curriculum quality on learning engagement, F-value is 136.181 and significance is 0.000 ($p<0.001$), indicating that the regression model constructed is significant. The standard regression coefficient of teacher guidance on learning participation was 0.291, and the significance was 0.000 ($p<0.001$), indicating that teacher guidance had a positive effect on learning participation, and this effect was significant. The standard regression coefficient of self-efficacy on learning satisfaction was 0.442, and the significance was 0.000 ($p<0.001$), indicating that self-efficacy had a positive impact on learning engagement, and the impact was significant. The standard regression coefficient of curriculum quality on learning engagement is 0.219, and the significance is 0.000 ($p<0.001$), indicating that self-efficacy has a positive impact on learning engagement, and this impact is also significant. Based on the above analysis, it is assumed that H5, H6 and H7 are all valid.

Table 7: Regression analysis of teacher guidance, self-efficacy and curriculum quality on learning engagement

Dependent variable	Independent variable	Standard regression coefficient	Sig.	VIF	R square	The adjusted R square	F	Sig.
Learning engagement	sex	0.034	0.232	1.139	0.676	0.671	136.181	0.000
	level	0.035	0.431	1.338				
	grade	-0.065	0.120	1.214				
	discipline	-0.023	0.592	1.261				
	Teacher guidance	0.253	0.000	1.835				
	Self-efficacy	0.267	0.000	2.325				
	Curriculum quality	0.161	0.001	1.727				

The regression analysis of learning engagement on learning satisfaction is carried out, and the results are shown in Table 8. In the equation obtained by regression of learning engagement to learning satisfaction, F value is 52.198 and significance is 0.000 ($p<0.001$), indicating that the regression model constructed is significant. The standard regression coefficient of learning participation on learning satisfaction is 0.601, and the significance is 0.000 ($p<0.001$), indicating that learning participation has a positive impact on learning satisfaction, and this impact is significant, so hypothesis 4 is valid.

Table 8: Regression analysis of learning engagement and learning satisfaction

Dependent variable	Independent variable	Standard regression coefficient	Sig.	VIF	R square	The adjusted R square	F	Sig.
Learning satisfaction	sex	-0.023	0.555	1.112	0.362	0.356	52.198	0.000
	level	0.035	0.431	1.338				
	grade	-0.065	0.120	1.214				
	discipline	-0.023	0.592	1.261				
	Learning engagement	0.253	0.000	1.835				

An examination of the mediating role of learning engagement

In order to more accurately compare the results of each effect size of the three groups of intermediary models, the process plug-in was used to calculate the direct and indirect effects of the model, and the bootstrap method was used to sample 5000 times for deviation correction. The calculation results show that the mediating effect sizes of teacher guidance, self-efficacy and curriculum quality on learning satisfaction through learning engagement are 0.3417, 0.3920 and 0.3547, respectively, and the 95% confidence intervals of direct effects and mediating effects in the three groups of paths do not contain 0, which further verifies the hypothesis of some mediating effects in the model.The results are shown in Table 9.

Table 9: Intermediate analysis result

Effector process	Effect coefficient	95% confidence interval	
		LLCI	ULCI
Direct effect (Teacher Guidance ⟶ Learning satisfaction)	0.1873	0.005	0.827
Indirect effect (Teacher guidance ⟶ Learning engagement ⟶ Learning satisfaction)	0.3417	0.2460	0.4355
Direct effect (Self-efficacy ⟶ Learning satisfaction)	0.1840	0.035	0.610
Indirect effect (Self-efficacy ⟶ Learning engagement ⟶ learning satisfaction)	0.3920	0.2530	0.5278
Direct effect (Curriculum quality ⟶ Learning satisfaction)	0.1275	0.0135	0.0264
Indirect effect (Curriculum quality ⟶ Learning engagement ⟶ Learning satisfaction)	0.3547	0.2640	0.445

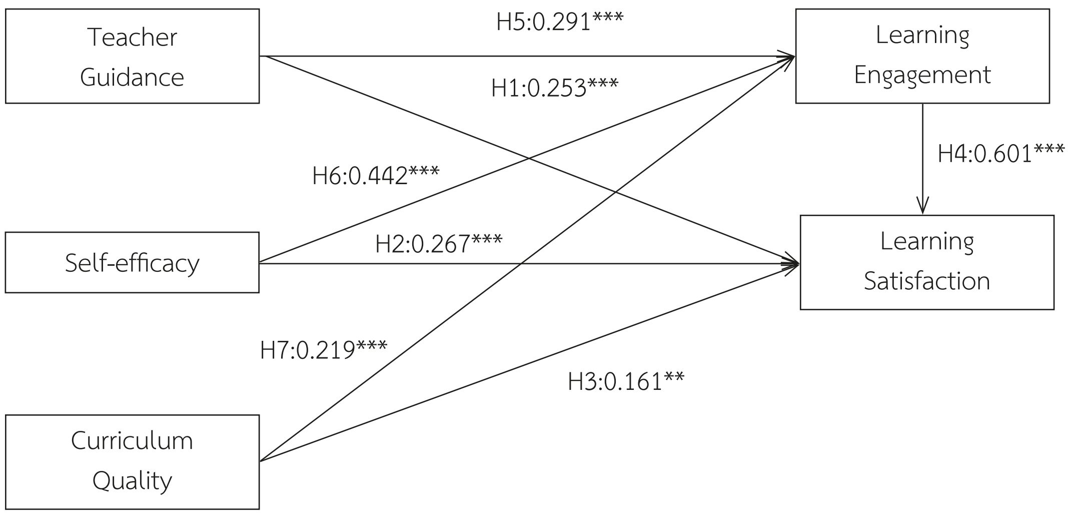

Figure 2: Path analysis result

Discussion and Conclusion

The sample data collected in this study were analyzed by statistical methods, and the following results were obtained:

Teacher guidance has a significant positive impact on learning satisfaction (the standard regression coefficient is 0.253, and $p<0.001$), indicating that there is a positive correlation between the two. This test result is consistent with the conclusion of Wu (2023). Students' self-efficacy has a significant positive impact on learning satisfaction (the standard regression coefficient is 0.267, and $p<0.001$), indicating a positive correlation between the two. This test result is consistent with the conclusion of Y.Y. Li et al.(2020).curriculum quality has a significant positive impact on learning satisfaction (the standard regression coefficient is 0.161, and $p<0.001$), indicating a positive correlation between the two. This test result is consistent with the conclusion of He et al. (2021).In conclusion, assuming that H1, H2 and H3 are supported, self-efficacy, teacher guidance and curriculum quality all have significant positive effects on learning satisfaction.

Teacher guidance has a significant positive impact on students' learning engagement (the standard regression coefficient is 0.291, and $p<0.001$), indicating a positive correlation between the two. This test result is consistent with the conclusion of R.W. Huang et al. (2019). Students' self-efficacy has a significant positive impact on students' learning engagement (the standard regression coefficient is 0.442 and $p<0.001$), indicating a positive correlation between the two. This test result is consistent with the conclusion of Wen & C.L.Zhu (2021). curriculum quality has a significant positive impact on students' learning engagement (the standard regression coefficient is 0.219, and $p<0.001$), indicating a positive correlation between the two. This test result is consistent with the conclusion of L.J. Qu & L.Sun (2019). In summary, assuming that H5, H6 and H7 are supported, self-efficacy, teacher guidance and curriculum quality all have significant positive effects on learning engagement.

Students' learning engagement has a significant positive impact on their learning satisfaction (the standard regression coefficient is 0.601, and $p<0.001$), indicating a positive correlation between the two. This test result is consistent with the conclusion of Qi et al. (2021) .

Limitations

Although this study has been proved by empirical evidence, there are still some deficiencies and limitations.

First, there are certain limitations in the selection of samples. This study only conveniently sampled 10 universities in Guangxi, and the number of undergraduate universities is more than that of junior colleges. At present, there are 38 undergraduate universities and 47 junior colleges in Guangxi, which may affect the representativeness of the samples to some extent.

The second is in the dimension of research. This study is conducted from three dimensions: learners, teachers and platform curriculum quality, but only studies self-efficacy at the learner level, without considering the influence of other factors of learners on learning satisfaction.

The third is the influence of other intermediaries. This study only considers the mediating effect of learning engagement on teacher guidance, self-efficacy, curriculum quality and learning satisfaction, and does not consider the influence of other mediating variables. The effects of other mediating variables on teacher guidance, self-efficacy and curriculum quality on learning satisfaction were ignored. Moreover, the influence of other mediating variables can not be ignored.

Fourth, the research depth is not enough. This study mainly refers to the core papers in China, with little reference to literatures from countries other than China. Moreover, there are few literatures specializing in the study of online courses of general education. The literatures mainly refer to literatures on learning satisfaction of online courses of general education, which are still different from those of online courses of general education.

Conclusion

This paper takes the learning satisfaction of the network course of general education in Guangxi university as the research object, and finds through the empirical study that: teacher guidance has a significant positive impact on the learning satisfaction; Students' self-efficacy has a significant positive impact on learning satisfaction. curriculum quality has a significant positive impact on learning satisfaction; Students' learning engagement has a significant positive impact on their learning satisfaction. Learning engagement plays an enhanced mediating role among teacher tutoring, self-efficacy, curriculum quality and learning satisfaction.

Suggestion

The learning engagement of general education network courses has an important influence on the learning satisfaction. In the online learning environment, learners usually need more autonomy and self-discipline, so the influence of learning engagement on learning satisfaction is particularly important. Universities should make efforts in learning engagement to improve learning satisfaction.

Self-efficacy has a certain influence on learning engagement. Colleges and universities can improve learners' learning engagement by stimulating their self-efficacy, for example, by providing support and encouragement, providing positive feedback, and cultivating learners' self-learning ability. At the same time, helping learners to establish and improve self-efficacy is also an important way to improve learners' learning participation and learning satisfaction.

The way and method of teachers' guidance in the study of general education network courses have a certain influence on students' learning participation. The learning environment of the general education network course is different from the traditional classroom, and students need more independent learning and self-management ability. Therefore, the ways and methods of teachers' tutoring need to be appropriately adjusted for the e-learning environment. By providing clear learning goals and feedback, creating interactive opportunities by using online tools, providing diversified learning resources and strategies, and personalized tutoring, students' learning participation can be effectively improved.

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