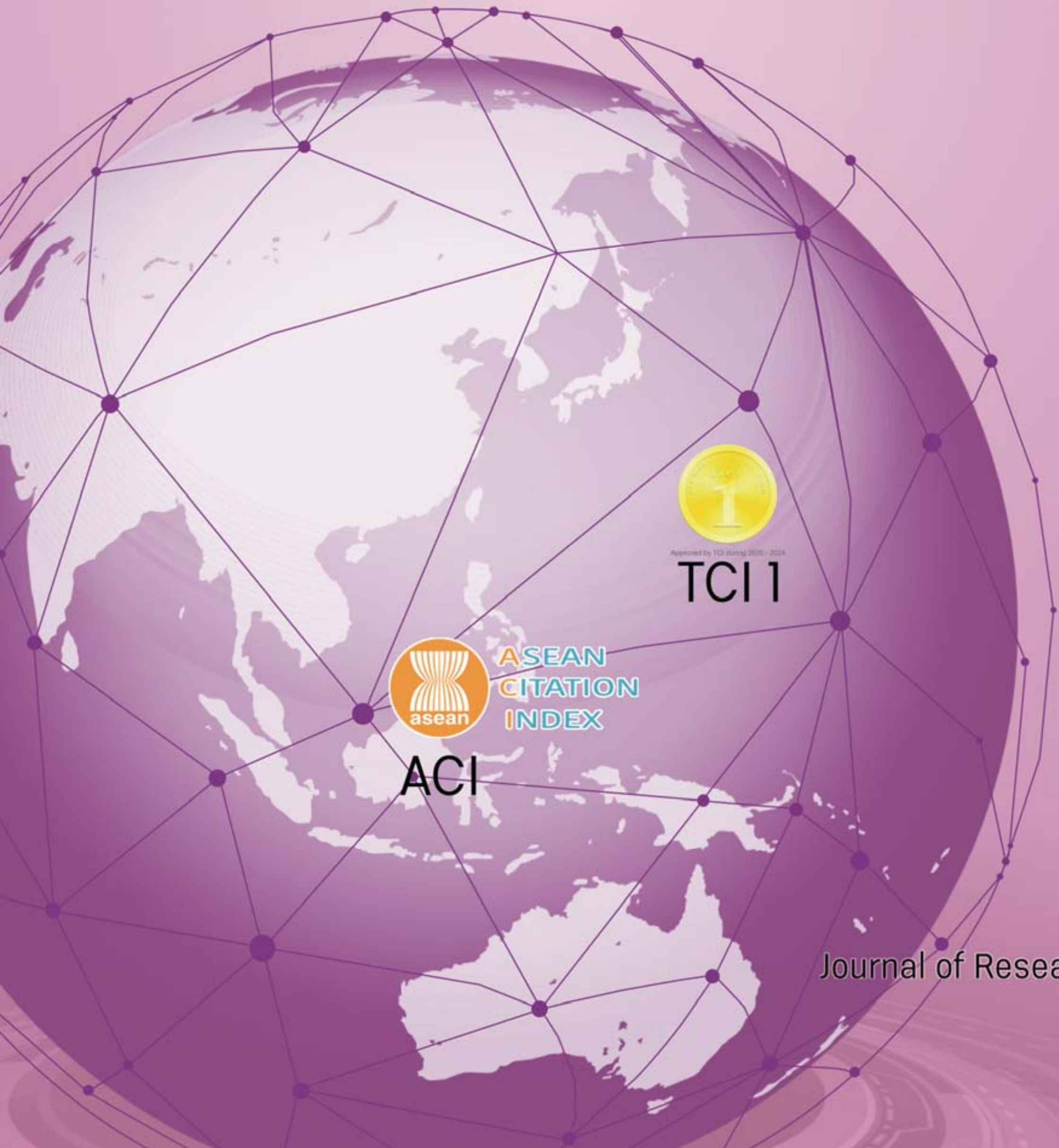
Rajabhat Chiang Mai Research Journal

วารสารวิจัยราชภัฏเชียงใหม่

Vol 24 No 3 September - December 2023



ISSN 1513-8410 (Print)
ISSN 2651-2068 (Online)

วารสารวิจัยเพื่อรับใช้สังคม
Journal of Research for Local Communities

RAJABHAT CHIANG MAI RESEARCH JOURNAL

Vol. 24 No. 3 September – December 2023

Institute of Research and Development Chiang Mai Rajabhat University

Institute of Research and Development Chiang Mai Rajabhat University, Mae Rim Center

180 Moo 7, Chotana Road (Chiang Mai-Fang),

Khi Lek Subdistrict, Mae Rim District, Chiang Mai Province 50180

Telephone +66 899533426 https://so05.tci-thaijo.org/index.php/cmruresearch/index

This journal has been certified by the Thai Journal Citation Index Center Group 1

and ASEAN Citation Index (ACI)

Table of contents

Rajabhat Chiang Mai Research Journal : RCMRJ
Vol. 24 No.3 September–December 2023 : TCI 1, ACI

Job Satisfaction and Teaching Effectiveness in Emergency Remote Teaching among Higher Education Faculty

Laurice E. Tolentino
College of Teacher Education, Batangas State University,
The National Engineering University, JPLPC Malvar, Malvar, Batangas, Philippines
E-mail: lauricetolentino36@yahoo.com
(Received: 21 May 2023, Revised: 11 June 2023, Accepted: 19 June 2023)
https://doi.org/10.57260/rcmrj.2023.265660

Abstract

Job satisfaction among teachers plays a crucial role in their ability to teach effectively. Hence, this study assessed the higher education faculty’s level of job satisfaction and teaching effectiveness in emergency remote teaching in one state university in Batangas Province, Philippines. By employing the correlational type of descriptive research with a self-made questionnaire and secondary data, this study found out that the faculty members are highly satisfied on their job during emergency remote teaching and majority of them have very satisfactory teaching effectiveness as evaluated by their students. Further, significant relationship exists between the respondents’ assessed level of job satisfaction and their teaching effectiveness. Consequently, this study offered course of action requiring the involvement of various authorities and ensures a collaborative approach towards achieving the stated objectives and expected outcomes.

Keywords: Job satisfaction, Teaching effectiveness, Emergency remote teaching, Higher education

Introduction

The COVID-19 pandemic has forced educational institutions worldwide to adopt emergency remote teaching as a means to ensure continued learning. This unprecedented transition has posed significant challenges for higher education faculty, requiring them to adapt their teaching methods and navigate unfamiliar technologies. As faculty members play a vital role in shaping students' learning experiences, it is crucial to assess their job satisfaction and teaching effectiveness during this challenging period.

Job satisfaction refers to an individual's subjective evaluation and emotional response to their job or work experience. It represents the level of contentment, fulfillment, and happiness that an employee derives from their work. Job satisfaction is influenced by various factors, including the nature of the job, the work environment, relationships with colleagues and superiors, compensation and benefits, opportunities for growth and development, work-life balance, and the alignment between personal values and organizational culture (Cranny et al. (1992).

According to Brenninger (2015), when employees are satisfied with their jobs, they tend to experience higher levels of motivation, engagement, and commitment. They are more likely to perform their tasks efficiently, exhibit positive attitudes, and contribute to the overall success of the organization. Hence, job satisfaction is not only important for individual well-being but also plays a significant role in organizational productivity, employee retention, and overall job performance. When teachers experience high levels of job satisfaction, they are more likely to be motivated, engaged, and committed to their profession. This positive mindset and emotional well-being directly impact their teaching practices and interactions with students (Judge et.al., 2001).

Satisfied teachers are more likely to be effective educators who inspire, motivate, and facilitate student learning. Wenglinsky (2000) defined teaching effectiveness, as to the faculty members' ability to engage students, facilitate learning, and achieve desired educational outcomes. Therefore, it is crucial to assess teaching effectiveness to ensure that students receive a quality education, even in the remote teaching environment.

While studies examining job satisfaction and teaching effectiveness in traditional face-to-face classroom settings abound (Tahir & Sajid, 2014; Churchwell, 2016; Javier et al., 2014), there is a notable research gap regarding these factors specifically in the context of emergency remote teaching. Limited research has explored how faculty members perceive their job satisfaction and teaching effectiveness during this challenging period. Furthermore, the relationship between job satisfaction and teaching effectiveness among higher education faculty in emergency remote teaching settings remains relatively unexplored. Understanding the interplay between these variables is crucial for informing institutional strategies and initiatives that promote faculty job satisfaction and enhance teaching effectiveness in the remote teaching environment.

By addressing this research gap, the present study aimed to determine the job satisfaction levels of higher education faculty and their teaching effectiveness during emergency remote teaching at one state university in Batangas Province, Philippines. The findings of this study will contribute to the existing body of knowledge and inform the development of targeted interventions and strategies to sustain faculty job satisfaction and enhance teaching effectiveness in emergency remote teaching settings.

Through this investigation, the researcher, who is teaching remotely, could gain additional insights on job satisfaction and teaching effectiveness in emergency remote teaching. By understanding these factors, she can make informed decisions about her career and well-being, identify areas for improvement, and enhance her teaching practices. Ultimately, the findings can contribute to a more engaging and effective remote learning environment for students.

Theoretical Framework

This study is based on Maslow's Theory of Job Satisfaction, which is anchored in the Hierarchy of Human Needs. According to this theory, human needs are structured in a hierarchical manner, starting with physiological needs and progressing through safety, love and belongingness, self-esteem, and self-actualization (Maslow,1943). This theory suggests that these needs must be satisfied in a specific order for them to have an impact. In other words, the satisfaction of lower order needs is necessary before higher order needs become relevant. For instance, physiological needs must be fulfilled before safety needs can be addressed.

In the context of this research on the job satisfaction of higher education faculty and teaching effectiveness in emergency remote teaching, the theoretical framework draws upon Maslow's Theory of Job Satisfaction. It recognizes that faculty members have various needs, and the fulfilment of these needs can influence their job satisfaction and effectiveness in teaching. By understanding and addressing these needs in the appropriate order, it is possible to enhance job satisfaction and improve teaching outcomes in the challenging context of emergency remote teaching.

Objectives

This study determined the job satisfaction level and teaching effectiveness in emergency remote teaching among higher education faculty at one state university in Batangas Province, Philippines during the Academic Year 2020-2021.

Specifically, the study sought answers to the following questions:

1. Assess the respondents' level of job satisfaction in terms of:
    1.1. Support from Administration;
    1.2. Salary and benefits;
    1.3. General working conditions; and
    1.4. Training and Development.
2. Determine the teaching effectiveness of the respondents.
3. Correlate the assessed level of satisfaction and teaching effectiveness.
4. Propose course of action to sustain job satisfaction and teaching effectiveness in emergency remote teaching among the higher education faculty.

Methodology

Research Design

This study utilized descriptive-correlational design since it determined the relationship between the assessed level of job satisfaction of the faculty members and their teaching effectiveness during emergency remote teaching. The study explored the potential relationships between the variables and assessed the strength of those associations.

Respondents

The study included a comprehensive sample of 34 faculty members from the College of Accountancy, Business, Economics, and International Hospitality Management, at Batangas State University-JPLPC Campus, Malvar, Batangas, Philippines. The researcher purposefully selected these professors and instructors who were engaged in remote teaching during the Academic Year 2020-2021.

Data Gathering Tool

After careful review of literatures relevant to the factors affecting job satisfaction and remote teaching, the researcher came up with a self-made questionnaire. This is composed of five (5) items per every parameter such as support from administration, salary and benefits, general working conditions and training and development. In sum, there are 40 items in the said questionnaire. In order to establish the validity and reliability of the instrument, the researcher sought the help of three experts, as well as a statistician. The resulting alpha coefficient of .841 indicates a high level of instrument reliability. To facilitate the interpretation of the computed mean for respondents' assessment on their pedagogical practices, the following mean ranges with their corresponding interpretations were used:

Scale	**Mean Ranges**	**Verbal Interpretation**
5	4.51 - 5.00	Highly Satisfied
4	3.51 - 4.50	Satisfied
3	2.51 - 3.50	Slightly Satisfied
2	1.51 - 2.50	Unsatisfied
1	1.0 1.50	Highly Not Satisfied

On the other hand, to gather data on the faculty members' teaching effectiveness along with commitment, subject knowledge, promotion of independent learning, and learning management, the researcher wrote a formal letter to the concerned authorities requesting permission to access the results of the students' performance evaluations for teaching effectiveness during the specified academic year. The researcher relied on secondary data for this purpose. The teaching effectiveness of the faculty members was categorized, presented, and analyzed according to the guidelines outlined in the university's Quality Manual. These guidelines served as the basis for classification, presentation, and interpretation of the data.

These are as follows:

Scale	**Rating Ranges**	**Descriptive Rating**
5	4.51 - 5.00	Outstanding
4	3.51 - 4.50	Very Satisfactory
3	2.51 - 3.50	Satisfactory
2	1.51 - 2.50	Fair
1	1.0 1.50	Poor

Data Collection Procedure and Treatment

A consent form was prepared to request permission from the faculty members to participate in the study. They were informed about the study's requirements and assured of the confidentiality of the information collected from them as participants.

A communication letter was also drafted to seek approval from higher authorities to distribute the research instrument. After receiving approval, the researcher consulted the department's secretary to schedule the administration of the questionnaire. Additionally, the researcher personally distributed and collected the questionnaires.

The gathered data underwent a thorough process of checking, tallying, scoring, and analysis using weighted mean, frequency and percentage, and Chi-Square. The careful interpretation and analysis of the data enabled the researcher to propose course of action to sustain job satisfaction and teaching effectiveness in emergency remote teaching among the higher education faculty.

Results

Based on the obtained data, the following tables are presented to establish and present the results relative to the specific objectives posed by the researcher. The tables provide a clear and structured presentation of the findings:

1. Respondents' Level of Job Satisfaction in Emergency Remote Teaching

This part presents the respondents' level of satisfaction in emergency remote teaching across different dimensions.

1.1. Support from the Administration

Table 1 Provides a summary of the faculty respondents' level of job satisfaction on the support provided by their superiors in the context of emergency remote teaching.

Table 1 Support from the Administration

Indicators	WM	VI
The administration…		
1. Provides timely and transparent communication regarding changes in policies, expectations, and procedures related to remote teaching.	4.48	Satisfied
2. Allocates resources such as necessary hardware, software, licenses, and access to online learning platforms or content repositories that facilitate remote instruction.	4.57	Highly Satisfied
3. Involves faculty in decision-making processes related to emergency remote teaching	4.62	Highly Satisfied
4. Provides resources and support for faculty members' emotional well-being during this challenging time	4.81	Highly Satisfied
5. Assigns dedicated IT support teams can address technical concerns promptly and minimize disruptions in teaching.	4.80	Highly Satisfied
Computed Mean	**4.66**	**Highly atisfied**

The results show that faculty members were highly satisfied with the administration's support in various aspects as revealed by the computed mean of 4.66. The findings indicate that the administration's support during emergency remote teaching was well-received by faculty members. Effective communication, resource allocation, involvement in decision-making, emotional support, and technical assistance contributed to highly satisfied faculty. These findings highlight the importance of supportive measures from the administration to ensure faculty's well-being and success in navigating the challenges of remote teaching.

Castillo & Cano (2004) mentioned that supportive administration creates a positive work environment that promotes faculty well-being and job satisfaction. When faculty members feel supported, valued, and appreciated by the administration, it contributes to their overall job satisfaction and motivation.

1.2. Salary and Benefits

Table 2 presents faculty's level of job satisfaction on salary and benefits during emergency remote teaching.

The table indicates that faculty members were highly satisfied with their salary, recognizing its alignment with market standards and their qualifications. They expressed high levels of satisfaction with additional payments to account for cost of living and increased workload, timely salary payments without errors, and the availability of health insurance and professional development funding.

As reflected by the computed mean of 4.60, faculty members were highly satisfied with the salary and benefits provided during remote teaching. This high satisfaction stemmed from the alignment of salary with market standards and qualifications, additional payments for cost of living and increased workload, timely and error-free salary payments, and the availability of health insurance and professional development funding. Chandrasekar (2011) said that faculty members were happy with the salary and additional benefits because it demonstrated recognition and value for their qualifications, experience, and expertise.

Table 2 Salary and Benefits

Indicators	WM	VI
During emergency remote teaching, I received…		
1. A salary that aligned with market standards and recognizes their qualifications, experience, and expertise.	4.46	Satisfied
2. Additional payment to consider cost of living, inflation, and any additional expenses incurred during remote teaching, such as technology or home office setup.	4.58	Highly Satisfied
3. My salary on a timely basis and without errors or delays, ensuring financial stability and reducing stress.	4.60	Highly Satisfied
4. Additional payment to reflect the increased workload and responsibilities associated with remote teaching.	4.59	Highly Satisfied
5. Health insurances and professional development funding.	4.78	Highly Satisfied
Computed Mean	**4.60**	**Highly Satisfied**

1.3. General working conditions

Table 3 shows the level of job satisfaction of the respondents on the general working conditions during emergency remote teaching.

Table 3 General working conditions

Indicators	WM	VI
During emergency remote teaching, I have...		
1. A comfortable and conducive workspace at home or alternative locations given by the university.	4.44	Satisfied
2. Adequate access to necessary technology and equipment for remote teaching	4.59	Highly Satisfied
3. Flexibility in managing work hours and balancing personal and professional responsibilities.	4.62	Highly Satisfied
4. Clear expectations and guidelines for remote teaching tasks and deliverables	4.61	Highly Satisfied
5. Supportive colleagues and collaborative work environment despite physical distance.	4.80	Highly Satisfied
Computed Mean	**4.61**	**Highly Satisfied**

The faculty members were highly satisfied with their general working conditions during emergency remote teaching. The computed mean of 4.61 indicates that faculty members expressed high satisfaction with having a comfortable and conducive workspace, adequate access to technology and equipment, flexibility in managing work hours, clear expectations and guidelines, and supportive colleagues in a collaborative work environment despite the physical distance.

The high satisfaction reported by faculty members regarding their general working conditions during emergency remote teaching suggests that the provided resources and support contributed to their overall positive experience. The availability of a comfortable workspace, adequate technology, and flexible work hours allowed faculty to effectively adapt to the remote teaching environment. Clear expectations and supportive colleagues further enhanced their productivity and engagement, creating a collaborative work environment despite the physical distance. Crossman & Harris (2006), highlight the importance of providing the necessary resources and a supportive work environment to ensure faculty satisfaction and success in teaching.

1.4. Training and Development

Table 4 illustrates the job satisfaction levels of the respondents regarding training and development during emergency remote teaching.

Table 4 Training and Development

Indicators	WM	VI
During emergency remote teaching, I received…		
1. Adequate training and support provided to effectively use online teaching platforms and tools.	4.44	Satisfied
2. Opportunities for professional development and upskilling in remote teaching methodologies.	4.43	Satisfied
3. Access to relevant resources and materials to enhance remote teaching practices.	4.42	Satisfied
4. Continuous guidance and feedback on improving remote teaching effectiveness.	4.63	Highly Satisfied
5. Guidelines of best practices that significantly contributed to enhancing the outcomes of remote teaching.	4.78	Highly Satisfied
Computed Mean	**4.54**	**Highly Satisfied**

The faculty members were highly satisfied with the training and development opportunities provided during emergency remote teaching, as indicated by the computed mean of 4.54. Nyamubi (2017) mentioned that the combination of comprehensive training, professional development opportunities, access to resources, guidance, and collaboration contributed to job happiness of the workers.

As seen in the table faculty members are satisfaction with adequate training and support for using online teaching platforms, opportunities for professional development in remote teaching methodologies, access to relevant resources. On the other hand, the faculty were highly satisfied with continuous guidance and feedback on improving remote teaching effectiveness and the guidelines of best practices, which significantly contributed to enhancing the outcomes of remote teaching.

These findings highlight the crucial role of comprehensive training and support programs in fostering faculty satisfaction and facilitating their success in emergency remote teaching. The availability of such programs ensures that faculty members have the necessary skills, resources, and guidance to navigate the challenges of remote teaching effectively. By investing in robust training and support initiatives, institutions can enhance faculty satisfaction and ultimately contribute to the overall success of emergency remote teaching endeavours.

2. Teaching Effectiveness

This section showcases the teaching effectiveness of faculty members as determined by the evaluation provided by the students.

Table 5 Teaching Effectiveness of the Faculty

Performance Evaluation for Teaching Effectiveness Results	f	%
Outstanding (4.51-5.00)	4	11.76
Very Satisfactory (3.51-4.50)	28	82.35
Fair (1.51-2.50)	2	5.88
Total	**34**	**100**

Majority of faculty members (82.35%) were rated as very satisfactory, reflecting a high level of teaching effectiveness among the evaluated faculty. However, it is worth noting that a small portion of faculty members (11.76%) received an outstanding rating, indicating their exceptional performance in teaching. There were also a few faculty members (5.88%) who received a fair rating, suggesting room for improvement in their teaching effectiveness. With these, the results highlight a positive trend in teaching effectiveness among the evaluated faculty, with a small scope for further enhancement. Spooren et al. (2006) reiterated that analyzing students' evaluation of teaching performance is considered a crucial instrument for gauging the effectiveness of teaching and enhancing the quality of instruction.

3. Correlational Analysis between the Assessed Level of Job Satisfaction and Teaching Effectiveness in Emergency Remote Teaching

Table 6 revealed that the computed Chi- square test statistic (x2) was used to examine the relationship between the assessed level of job satisfaction and teaching effectiveness. The computed value of the test statistic is 117.604. Additionally, the tabular value for the chi-square test at a significance level of 0.05 is 12.592.

Table 6 Correlational Analysis between the Assessed Level of Job Satisfaction and Teaching Effectiveness

Variables	**Computed value**	**Tabular Value (0.05)**	**Decision (Ho)**	**Verbal Interpretation**
Assessed Level of Job Satisfaction and Teaching Effectiveness	117.604	12.592	Reject	Significant Relationship

The decision is to reject the null hypothesis (Ho) because the computed value of the test statistic (117.604) exceeds the tabular value (12.592) at the 0.05 significance level. This suggests that there is a significant relationship between the assessed level of job satisfaction and teaching effectiveness.

The findings suggest a considerable relationship or correlation between job satisfaction and teaching efficacy, which can be expressed in verbal terms. This implies that the efficiency of teaching is influenced by one's level of job satisfaction.

This result may be attributed to the fact that higher satisfaction leads to increased engagement, motivation, and adaptability, resulting in improved instructional methods and student-centered approaches. Effective communication, collaboration, and confidence contribute to a positive learning environment, ultimately enhancing teaching effectiveness. This result is similar to the results of the study of Lualhati (2019) which reveals that the faculty members’ implementation of gender-sensitive pedagogy affects students’ evaluation.

4. Proposed Course of Action to Sustain Job Satisfaction and Teaching Effectives in Emergency Remote Teaching

The proposed course of action may be implemented to sustain the job satisfaction and teaching effectiveness of faculty members. This involves objectives, strategies, persons involved and expected outcomes reflected in Table 7.

Table 7 Proposed Course of Action to Sustain Job Satisfaction and Teaching Effectives in Emergency Remote Teaching

Objectives	Strategies	Persons Involved	Expected Outcomes
To foster a supportive environment by ensuring clear communication and active involvement of the administration	• Establish regular communication channels for faculty members to express concerns, seek guidance, and provide feedback. • Encourage administration to actively engage with faculty members, demonstrating understanding and empathy for the challenges faced in emergency remote teaching. • Collaborate with faculty representatives to voice concerns, advocate for necessary resources, and address issues related to remote teaching.	• Faculty representatives • Administration	Increased faculty morale, improved job satisfaction, and a sense of support and recognition from the administration, leading to higher teaching effectiveness.
To provide competitive compensation and attractive benefits to promote job satisfaction and retention of faculty members.	• Conduct regular salary reviews to ensure faculty members are compensated fairly for their efforts in emergency remote teaching. • Explore options for performance-based bonuses or incentives to reward exemplary teaching and student outcomes. • Offer attractive benefits packages, such as health insurance, retirement plans, and professional development funding.	• Human Resources department • Finance department • Faculty representatives	Enhanced job satisfaction, improved financial security, and increased motivation to deliver effective remote teaching.
To create a conducive and supportive work environment for faculty members during emergency remote teaching.	• Provide necessary resources and equipment (e.g., laptops, software, internet connectivity) to facilitate effective remote teaching. • Establish clear guidelines and expectations for remote teaching, including workload distribution and communication protocols. • Offer flexibility in scheduling and deadlines to accommodate personal and professional commitments.	• IT department • Administration • Faculty representatives	Reduced stress levels, improved work-life balance, and increased teaching effectiveness due to a supportive work environment.
To equip faculty members with the necessary skills and knowledge to excel in emergency remote teaching.	• Provide comprehensive training programs and workshops on remote teaching methodologies, online pedagogy, and technology tools. • Facilitate opportunities for faculty members to engage in professional development activities, such as conferences, webinars, and online courses. • Encourage collaboration and sharing of best practices among faculty members through online communities and discussion forums.	• Vice Chancellor for Academic Affairs • Dean and Program Chairpersons Faculty development team/ Human Resource Office • Administration	Increased confidence in remote teaching, enhanced instructional strategies, and improved teaching effectiveness.

The course of action outlined focuses on key areas to sustain job satisfaction and teaching effectiveness in emergency remote teaching. By fostering a supportive environment through clear communication and active involvement of the administration, faculty members can experience increased morale and recognition, ultimately leading to higher teaching effectiveness. Additionally, providing competitive compensation and attractive benefits, creating a conducive work environment, and offering comprehensive training and development opportunities contribute to improved job satisfaction, reduced stress levels, and enhanced instructional strategies, positively impacting teaching effectiveness in the remote teaching context. The involvement of various stakeholders, including faculty representatives, administration, and relevant departments, ensures a collaborative approach towards achieving these objectives and expected outcomes.

Discussions

Faculty members expressed high satisfaction with the support provided by the administration, salary and benefits, general working conditions, and training and development opportunities. These findings highlight the importance of supportive measures, adequate compensation, conducive working conditions, and comprehensive training programs in promoting faculty satisfaction in the remote teaching environment.

Furthermore, the evaluation of teaching effectiveness by students revealed that the majority of faculty members were rated as very satisfactory, indicating a high level of effectiveness in their teaching. This underscores the overall positive trend in teaching effectiveness among the evaluated faculty.

Importantly, there was a significant relationship between the assessed level of job satisfaction in emergency remote teaching and teaching effectiveness. This connection can be attributed to increased engagement, motivation, adaptability, effective communication, collaboration, and confidence, which contribute to a positive learning environment and enhanced teaching practices.

In general, the study emphasizes the significance of supporting faculty members in emergency remote teaching through various dimensions of job satisfaction. By providing necessary resources, support, fair compensation, and training opportunities, institutions can enhance faculty satisfaction and promote effective teaching practices, leading to a more successful remote learning environment.

Conclusion and suggestions

In conclusion, the research results indicate that faculty members are highly satisfied on their job during emergency remote teaching. This is due to the support provided by the administration, salary and benefits, general working conditions and training and development opportunities. On the other hand, majority of faculty members have very satisfactory teaching effectiveness as evaluated by their students. Significant relationship exists between the respondents' assessed level of job satisfaction and their teaching effectiveness.

In consonance with the above cited results, the researcher recommends the following:

The administration may continue providing timely and transparent communication, allocating necessary resources, involving faculty in decision-making processes, and offering emotional support. Strengthening these supportive measures will contribute to faculty job satisfaction and their ability to navigate the challenges of emergency remote teaching effectively. Further, the administration may consider additional payment or incentives to recognize the increased workload and responsibilities associated with remote teaching.

Provision of necessary resources and equipment to facilitate effective remote teaching, establish clear guidelines and expectations, and offer flexibility in scheduling and deadlines may be also considered.

The Vice Chancellor for Academic Affairs and the College Deans may encourage collaboration and the sharing of best practices among faculty members. Equipping faculty members with the necessary skills and knowledge will increase their confidence and improve instructional strategies, ultimately enhancing teaching effectiveness. Moreover, continuous evaluation of the faculty’s teaching effectiveness may be done to identify areas for improvement and provide targeted support and guidance to faculty members.

To ensure the maximum actualization of the proposed course of action, it is crucial for the concerned authorities to allocate sufficient resources, establish clear timelines and responsibilities, and foster effective communication and collaboration among all stakeholders involved. Lastly, a similar or a follow up study may be done exploring other variables.

New knowledge and the effects on society and communities

New knowledge regarding job satisfaction and teaching effectiveness in emergency remote teaching among higher education faculty has gained attention in recent years. The COVID-19 pandemic forced educational institutions to adopt emergency remote teaching, leading to a need for understanding how this shift impacted faculty members. Research has explored factors influencing job satisfaction in remote teaching contexts, such as technological competence, pedagogical support, work-life balance, and student engagement. Additionally, studies have investigated strategies and best practices for maintaining teaching effectiveness in emergency remote teaching.

The effects of this new knowledge on society, local communities, and higher education institutions are significant. Understanding the factors that contribute to job satisfaction among faculty members in remote teaching environments can inform institutional policies and support systems. It can help identify areas where interventions and resources are needed to improve faculty well-being, which in turn can enhance the quality of education provided to students.

Moreover, the research on teaching effectiveness in emergency remote teaching provides insights into how faculty can adapt their instructional practices to effectively engage and support students in online environments. This knowledge can inform the development of professional development programs, training initiatives, and institutional guidelines to enhance teaching quality and student learning outcomes.

By improving job satisfaction and teaching effectiveness, this new knowledge can positively impact the overall educational experience and outcomes for students. Engaged and satisfied faculty are more likely to be motivated, innovative, and dedicated to supporting student success. This, in turn, can contribute to the educational attainment and development of individuals within society, leading to positive social and economic impacts at the local and community levels.

While this summary provides a general overview of the potential effects of new knowledge on job satisfaction and teaching effectiveness in emergency remote teaching, it is important to note that specific research studies and recent developments in this field may yield more nuanced findings and insights.

References

Brenninger, H. J. (2015). *Employee satisfaction and its impact on company value, Doctoral thesis*. University Of Latvia, Faculty of Economics and Management, Riga Latvia.

Castillo, J. X., & Cano, J. (2004). Factors explaining job satisfaction among faculty. *Journal of Agricultural Education, 45(*3), 65-74. DOI:10.5032/jae.2004.03065

Chandrasekar, K. (2011). Workplace Environment and Its Impact Organizational Performance in Public Sector organizations. *International Journal of Enterprise Computing and Business Systems, 1*(1), 1-19. http://www.ijecbs.com/January2011/N4Jan2011.pdf

Churchwell, M. S. (2016). *A Study of Factors That Influence Job Satisfaction of Teachers at a Southeast Christian School.* (Order No. 10587683). Retrived from https://search.proquest.com/docview/1886443023?accountid=149218

Cranny C. J., Smith, P. C., & Stone, E. F. (1992). *Job Satisfaction: How people feel about their jobs and how it affects their performance*. New York: Maxwell Macmillan International.

Crossman, A., & Harris, P. (2006). Job satisfaction of secondary school teachers. *Educational Management Administration and Leadership, 34*(1), 29–46. https://doi.org/10.1177/2F1741143206059538

Javier, E. R., & Deligero, J. C. L. (2014). Job Satisfaction of the Teaching and Non-Teaching Staff of the Lyceum of the Philippines University—Batangas. *International Journal of Information, Business and Management, 6*(4), 1-10. https://search.proquest.com/docview/1552838173?accountid=149218

Judge, T. A., Thoresen, C. J., Bono, J. E., & Patton, G. K. (2001). The job satisfaction–job performance relationship: A qualitative and quantitative review. *Psychological Bulletin, 127*(3), 376-407. https://doi.org/10.1037/0033-2909.127.3.376

Lualhati, G. P. (2019). Gender Sensitizing: Examining Filipino Educators' Pedagogical Practices and Teaching Effectiveness. *Asia Pacific Journal of Multidisciplinary Research, 7*(1), 67-76. http://www.apjmr.com/wp-content/uploads/2019/01/APJMR-2019.7.1.2.08.pdf

Maslow, A. H. (1943). A Theory of Human Motivation. *Psychological Review, 50*(4), 370–396. https://doi.org/10.1037/h0054346

Nyamubi, G. J. (2017). Determinants of secondary school teachers' job satisfaction in Tanzania. Education Research International. Retrieved from https://www.hindawi.com/journals/ edri/2017/7282614/ref/

Spooren, P, & Mortelmans, D. (2006). Teacher professionalism and student evaluation of teaching:Will better teachers receive higher ratings and will better students give higher ratings?. *Educational Studies, 32*(2), 201–214. DOI:10.1080/03055690600631101

Tahir, S., & Sajid, S. M. (2014). Job satisfaction among college teachers: A comparative analysis. *IUP Journal of Organizational Behavior, 13*(1), 33-50. https://search.proquest.com/docview/1511117666?accountid=149218

Wenglinsky, H. (2000). How teaching matters: Bringing the classroom back into discussions of teacher quality. Retrieved from https://www.ets.org/research/policy_research_reports/publications/report/2000/idxn

Willingness to Pay Premium for Green Agricultural Products

Lu Suo and Yue Huang *
Doctoral Program, Graduate School, Stamford International University, Thailand
E-mail: suo.lu@stamford.edu and huangyue15877930213@gmail.com*
*Corresponding author
(Received: 29 April 2023, Revised: 27 June 2023, Accepted: 7 July 2023)
https://doi.org/10.57260/rcmrj.2023.264981

Abstract

From the perspective of green brand experience, this study classifies green brand experience into five dimensions: cognitive experience, product experience, communication experience, emotional experience, and association experience. The study aims to investigate the influence of these five dimensions on consumers' willingness to pay premium (WTPP) for green agricultural products. Meanwhile, the mediating effect of green brand attitude on the relationship between green brand experience and WTPP for green agricultural products was investigated as well. To collect data for this study, a quantitative research design was employed, and an online questionnaire was administered using Google Forms. The questionnaire was distributed to 444 Chinese consumers who are 18 years old or older and have made purchases of green agricultural products. The participants were conveniently sampled from four first-tier cities in China, namely Beijing, Shanghai, Guangzhou, and Shenzhen. The proposed model was tested using structural equation modeling (SEM) through AMOS 24. The research results show that cognitive experience, and communication experience, emotional experience, and association experience all had positive effects on WTPP; among them, association experience having the greatest influence on WTPP. Second, cognitive experience, product experience, communication experience, emotional experience, and association experience all have positive effects on green brand attitude. Additionally, green brand attitudes have a positive effect on WTPP; finally, green brand attitude partially mediates the relationship between cognitive experience, communication experience, emotional experience and association experience and WTPP, and fully mediates the relationship between product experience and WTPP. The results of this study can help businesses manage and promote the development of green agricultural products market, thus enhancing consumers' willingness to purchase.

Keywords: Green agricultural products, Green brand attitude, Green brand experience, WTPP

Introduction

With the rise of global green and health consciousness among consumers, there has been an increase in consumer interest in the "green living" movement and green products (Royne et al., 2011; Thøgersen et al., 2015). Moreover, the COVID-19 pandemic has further emphasized the importance of food safety and health, increasing the demand for green products. This has presented a business opportunity for businesses to innovate and gain a competitive advantage through green branding, which appeals to consumers' environmentally friendly preferences (Suki, 2016). The development of green brands has become a crucial aspect of embracing sustainable development and green marketing practices for businesses.

Green agricultural products are of primary concern to consumers in the green food industry. The entire process of producing, planting, processing, and distributing of green agricultural products is subject to strict standards. These criteria encompass various aspects of the product's lifecycle, including organic farming practices, genetic purity, hygienic processing, reliable distribution, and independent certification. These criteria collectively contribute to building consumer trust and confidence in the quality, safety, and environmental sustainability of green agricultural products (Lazaroiu et al., 2019). In China, the certification and development of green agricultural products have undergone a 30-year journey, resulting in 36,345 certified green foods and 15,984 certified enterprises as of December 2019 (Huang, 2021). China has the most active market for ecological products globally, with an annual growth rate of 30% (Kucher et al., 2019). However, the sales and popularity of green agricultural products in China are not yet fully mature, partly due to significantly higher pricing than ordinary or conventional agricultural products of the same sort (Huang, 2021). This pricing differential is the result of the stringent regulations over the production, development, certification, and marketing processes of green agricultural products (Food and Agriculture Organization of the United Nations, 2017). The high prices pose a significant barrier to the selling of green agricultural products, despite representing consumers' efforts to protect their environmental and food safety and health rights (Huang, 2021).

The experience economy has emerged as a crucial economic trend in the contemporary world. In this economy, brand experience has become a significant consideration for consumers, with experiences' perceived value frequently exceeding that of products and driving consumers to pay premium pricing (Li & Li, 2020). Companies across the product value chain are increasingly providing chances for consumers to engage in experiences and interactions. These experiences shape consumers' subjective and behavioral responses, influencing their future behavioral intentions through their long-term memory (Brakus et al., 2009).

The purpose of this study is to investigate the effect of green brand experience on consumers' willingness to pay a premium for green agricultural products. The study also investigates the mediating role of green brand attitude and the moderating role of food safety concern from the perspective of green brand experience. The findings aim to provide novel insights and practical recommendations for businesses and governments to promote the development of the green agricultural products market.

Theory of Planned Behavior (TPB)

TPB, first introduced by Ajzen in 1991 (Ajzen, 2001), proposes that individuals generate behavioral intentions prior to engaging in corresponding behaviors, making behavioral intention a crucial indicator for predicting consumer behavior. Within marketing, willingness to pay and willingness to buy are commonly used to predict consumers' consumption behavior for a specific product. However, the TPB suggests that willingness to act is not solely voluntary but influenced by a combination of internal and external factors. Among the internal factors is the consumer's personal attitude, which reflects their perception of a behavior. A more favorable attitude towards a behavior leads to a stronger willingness to engage in that behavior. External factors include subjective norms and perceived behavioral control, both of which significantly impact consumers' willingness to act. As the application of the TPB become more widespread, following scholars have refined and extended the theory. For instance, Hagger & Chatzisarantis (2005) established the concepts of "injunctive norms" and "descriptive norms" to better understand subjective norms. Greaves et al. (2013) and Conner & Armitage (1998) argued for the relationship between self-efficacy and perceived behavioral control. In the context of green consumption, Yadav & Pathak (2017) have explored the impact of the TPB on consumers' green consumption behavior, providing a solid theoretical foundation for investigating consumers' willingness to pay.

The Theory of Experiential Marketing

The concept of the "experience economy" was initially introduced by Pine and Gilmore in the late 1980s, and they further elaborated on this emerging economic paradigm in their book titled *The Experience Economy*, published in 1999 (Pine & Gilmore, 1999). This new economy is similar to the service economy but it focuses on the consumer's emotions rather than the product itself. Experience marketing has become increasingly important in the context of the experience economy, which focuses on providing a positive experience for consumers. Hauser (2011) defines experiential marketing as the actual customer experiences with a brand, product, or service that have the potential to drive sales and enhance brand image and awareness. Similarly, You-Ming (2010) emphasizes that experiential marketing is a face-to-face communication approach that aims to evoke customers' physical and emotional sensations. It involves creating experiences that are relevant, interactive, and immersive, allowing customers to feel and engage with a brand on a deeper level. In addition, Tynan & McKechnie (2009) assert that experience marketing can deliver sensory, emotional, cognitive, behavioral and relational value to customers, to which social and informational based value can be added. With changing consumer preferences, the satisfaction of the consumption process is no longer based solely on the functional attributes of the product, but also on intangible factors such as culture and values. The keys to experiential marketing are understanding what consumers desire and providing relevant products and services that foster positive consumer emotions (Schmitt, 2010). Therefore, this study applies the theory of experiential marketing to focus on consumer emotions across various dimensions. This includes capturing consumers' sensory experiences, such as visual, olfactory, and gustatory perceptions of products, as well as addressing the cognitive aspect of consumer identity, which involves establishing a fit between consumers and products during the consumption process, thereby influencing and shaping consumer behavior.

The Concept of Green Agricultural Products

With the emergence and development of green marketing and green consumption, the concept of green brand has become a significant consideration for consumers when it comes to brand switching behavior (Jing & Li, 2007). Wei (2017) argued that a green brand is an intangible asset that embodies the principles of green and sustainable development, offering consumers a positive green experience and generating value-added green experiences. In the agricultural market, green agricultural products are considered as part of the green brand concept. Green agricultural products are produced utilizing environmentally friendly green agriculture technologies and are properly certified. They adhere to strict environmental standards during cultivation and require the rational use of inputs such as pesticides, fertilizers, and additives to avoid chemical contamination of agricultural products (Ge & Zhang, 1997).

Hence, green agricultural products are subjected to a special certification process in the study. In this study, green agricultural products are those that are produced using environmentally sustainable practices and methods. They are usually associated with reduced or minimal use of chemical fertilizers, pesticides and other harmful substances that may have a negative impact on the environment and human health.

The Concept of Green Brand Experience

Brand experience is a crucial aspect of the experience economy, since it encompasses consumers' perceptions, feelings, and behaviors towards a brand. Brakus et al. (2009) identified four elements of brand experience: sensory, thinking, emotion, and behavior, while Song (2014) classified it into five dimensions: cognitive, product, communication, emotional, and association. This study applies Song's classification to green agricultural products, with cognitive experience referring to knowledge of the product's popularity, logo, and familiarity; product experience referring to the feeling of using the product's function and quality; communication experience referring to the indirect contact formed by the product's advertisement and word-of-mouth; emotional experience referring to the emotional reaction in consumers' use of the product; and association experience referring to the resonance between consumers' use of the product and society or group recognition.

The Concept of Green Brand Attitude

According to Blackwell et al. (2006), attitudes indicate what customers like and dislike. Liu et al. (2012) argue that brand attitude refers to the automatic emotional response of consumers to an object and is the subjective feeling of consumers towards the brand as a whole, while brand attitude is a key factor in determining brand value. As stated by He et al. (2016), brand attitude as an important indicator of the degree to which consumer needs are satisfied. Chen et al. (2014) et al. combined brand attitudes with the concept of environmental sustainability and defined green brand attitudes as consumers' overall assessment of a brand's green performance. In this study, green brand attitude is defined as the overall evaluation and rational judgment of consumers on green brands.

The Concept of Willingness to Pay a Premium for Green Agricultural Products (WTPP)

Green brands are often priced higher than traditional brands due to factors such as production costs, resource scarcity, and taxation (Dangelico & Vocalelli, 2017). The price premium is defined in economics as the price above the average profit, and the difference between the high and competitive pricing can be considered as a price premium (Rao & Monroe, 1996). In economics, a price premium is defined as the price over the average profit. The cost of green products is frequently perceived as a key deterrent by consumers (Han, 2013). Scholars typically use WTPP as a measure of whether consumers are willing to accept the premium or the level of acceptance of the premium. WTPP is not only an important indicator for accurately predicting consumers' purchasing behavior, but also a significant reference for companies when developing their product pricing strategies. In this study, WTPP represents consumers' willingness to pay a higher price for products that are perceived to be environmentally friendly, sustainable, or produced using eco-friendly practices.

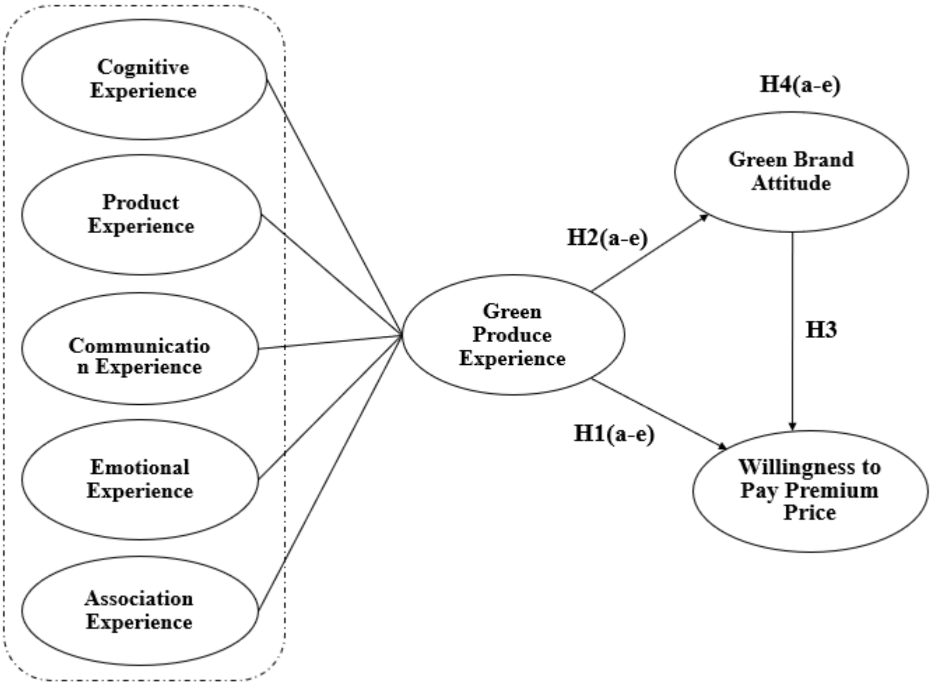


Figure 1 Conceptual Framework of the Research

Green Produce Experience and WTPP

Abstract concepts such as logos, identities, and supplier images of green agricultural products can form brand nodes in consumers' memories, which are often closely related to the environmental attributes, environmental commitments, and health commitments of the products (Laroche et al., 2001; Marcus & Fremeth, 2009). On the other hand, the consumers' cognitive experience of green brands is the accumulation of knowledge and familiarity with these memory nodes (Keller, 1993). Therefore, a positive cognitive experience can influence consumers' recognition and trust in brand promise and brand image, and improve their purchasing confidence. Consumers connect most directly with green agricultural goods when they buy and consume them, and they may intuitively understand the purchase service process, functional utility, and other unique qualities of the products. (Song, 2014). Positive communication activities related to the brand's green attributes can induce a more positive perception of the green brand and shape the consumer's communication experience. Especially in the information age, consumers often receive relevant information about brands either passively or unintentionally. In the case of incomplete consumer market information, the accumulation of brand information can simplify the consumer's purchase choice process and reduce consumer risk (Dawar, 2004). Often, consumers will feel a sense of identification with groups that share their values, environmental awareness, and health consciousness. The need for self-expression leads consumers to contribute to the group and enhance their image through certain behaviors, such as purchasing environmentally friendly products (Hwang & Choi, 2018). Green agricultural products can create brand associations in consumers' minds. The strong brand associations can lead to higher prices for products, whereas differentiated associations formed through comparison with other similar products can create unique perceived value for the products (Dwivedi et al., 2018). Consumers' willingness to pay increases when green products better express the pro-social behavior they associate with or better align with the image they want to project. The brand experience that is created throughout the consumption process helps to build and strengthen the connection between the consumer and the brand by stimulating the consumer's senses and triggering corresponding emotions. A positive and continuous relationship that consumers maintain with a branded product makes them less sensitive to the price of that brand (Thomson et al., 2005). Based on this, this paper proposes:

H1: Green product experience (cognitive experience, product experience, communication experience, emotional experience, association experience) positively influences consumers' WTPP.

Green Produce Experience and Green Brand Attitude

Keller (1993) documented that a consumer's brand experiences shape their brand perceptions. Positive consumer attitudes toward a brand are developed as a result of several favorable consumer experiences with the brand (Solomon et al., 2019). The influence of green brand experience on consumers' green brand attitudes is reflected in the fact that green brands reduce negative environmental impact and increase environmental concerns, thereby creating a positive impression on consumers (Hartmann & Ibáñez, 2006). Positive brand perception and brand familiarity can lead to positive brand attitudes. Brand experience creates a unique emotional and sensory connection between products and consumers, and can establish brand emotional attachments, which can further enhance brand image recognition and influence consumers' attitudes and willingness to buy (Thøgersen et al., 2015). Positive consumer attitudes toward green brands are expressed in terms of consumer trust in greenness and green satisfaction (Chen & Chang, 2012). In addition, Wu & Ai (2016) and Keng et al. (2013) also point out that the quality of consumers' experience with green brands affects consumers' experience satisfaction, which in turn affects their consumption behavior. Based on this, this paper proposes that:

H2: Green agricultural experience (cognitive experience, product experience, communication experience, emotional experience, association experience) positively influences consumers' attitude towards green brands.

Green Brand Attitude and WTPP

In social psychology, attitudes have long been recognized as an important predictor of individuals' behavioral intentions (Mostafa, 2006). As a result, attitudes are used in many consumer behavior research literatures to predict consumer behavior towards products or brands. The consumer-brand relationship can be maintained through the continuous accumulation of positive attitudes (Beerli et al., 2004). A positive consumer attitude toward a brand is a lasting good feeling and a key factor in the success of a branded product. Therefore, increasing consumers' attitude towards a brand is crucial in modern business marketing. Usually, when consumers like or trust a certain product, it motivates their behavior, i.e., they are more willing to buy a brand they like. Teng (2009) stated that consumers with positive attitudes towards a brand tend to have stronger purchase intentions for that brand. Suki (2016) confirmed that consumers' willingness to purchase green products is largely influenced by positive attitude. Similarly, Aulina & Yuliati (2017) found that consumers' attitudes affect their purchase intention to green products. Based on it, this paper proposes that:

H3: Green brand attitudes have a positive impact on WTPP for green agricultural products.

The Mediating Role of Green Brand Attitude

Attitudes are commonly used as mediating variables to reflect consumer responses to products or brands. In a study investigating the mediating effect of attitudes towards green brands, Huang et al. (2014) found that increased knowledge about green brands was associated with more positive attitudes towards green brands and higher purchase intentions. Similarly, Chen et al. (2020) examined the mediating effect of green brand attitude between green brand association and green purchase intention. Building on this literature, the present study argues that consumers' experiences with green agricultural products shape their WTPP by influencing their attitudes towards green brands. Therefore, this study proposes that:

H4: Green brand attitude mediates between green product experience (cognitive experience, product experience, communication experience, emotional experience, and association experience) and WTPP.

Methodology

Participants and Procedure

The population of this study consists of Chinese consumers who are 18 years old or older and have previous experience consuming green agricultural products, such as green vegetables, green fruits, green aquatic products, green poultry, and livestock products, etc. Non-probability convenience sampling was employed, as this method is rational and minimizes bias (Sekaran & Bougie, 2016). Participation in the study was entirely voluntary, and individuals aged 18 years or older who were interested in participating were allowed to complete the online questionnaire without any compensation. The responses were collected using Google Forms, a reliable online survey platform. The questionnaire link was posted on various online communities, including local BBS and forums, in four first-tier cities in China: Beijing, Shanghai, Guangzhou, and Shenzhen. These cities represent the most developed areas of the country with affluent and sophisticated consumers. They are large, densely populated urban metropolises that exert significant economic, cultural, and political influence in China, providing access to a large number of potential respondents for the study. To ensure that respondents belonged to the target audience for this study, two screening questions were included at the beginning of the survey to determine user eligibility (i.e., excluding consumers under the age of 18 and those with no experience purchasing green agricultural products). The sample size meets the minimum requirement of at least 384 samples, calculated using the Cochran (1953) formula for a sample with an unspecified population size, with a 95% confidence level and a 5% margin of error. Data collection took place in March 2023, and a total of 473 questionnaires were collected. A subset of 444 sampling replies was taken into consideration for analysis after false or incomplete answers were eliminated.

Measurement

The measurement items employed in this study were obtained through an extensive review of the relevant literature. The questionnaire was created using the multiple-item approach, where each item was evaluated on a five-point Likert scale that ranged from "1=strongly disagree" to "5=strongly agree". Table 1 outlines how measurements from various researchers were modified to fit the objectives of this research.

Table 1 Measurement item of questionnaire

Variable	Items	Source
Cognitive Experience (CNE)	Green agricultural products have high visibility. I know the logo of green agricultural products. I know the supplier of the green produce. I know the origin of this green produce.	Schmitt (1999); Brakus et al. (2009); Song (2014)
Product Experience (PE)	The green produce looks very original. Easy and convenient cleaning and consumption of green produce. Green agricultural products have higher nutritional and safety functions. The quality of green agricultural products is guaranteed in the industry.	
Communication Experience (CME)	I often see advertisements for green produce. Green agricultural products have a good reputation in the market. I often follow the official website and official store of this green produce. I like the environment and atmosphere of the green produce store.	
Emotional Experience (EE)	Eating green produce can arouse my interest and good emotions. Eating green produce will make me feel at ease and committed. I think green agricultural products are not just a logo, but have feelings. I'm emotionally attracted to green produce.	
Association Experience (AE)	I feel like I have a similar attitude and outlook on life as other people who buy green produce. I feel like I have something in common with other people who buy green produce. I would be more inclined to interact and engage with people who like to buy green produce. Buying and eating green produce can create an image of me as environmentally friendly and healthy in the eyes of others.	
Green Brand Attitude (GBA)	I think green produce has a solid reputation for environmental protection and food safety. I think the environmental and safety performance of green agricultural products are generally reliable. I think the environmental and health claims of green produce are generally trustworthy. The concern and performance of green produce for the environment and consumer health meets my expectations. Green agricultural products keep their environmental and food safety commitments and fulfill their environmental and food safety responsibilities.	Suki (2016)
Willingness To Pay Premium (WTPP)	I would spend more money on green produce than other produce. In my opinion, despite the high price of green produce, it is worth buying. I am willing to buy green produce at a high price.	Dwivedi et al. (2018)

Data Analysis Methods

In the data analysis process, SPSS 26 and AMOS 24 were utilized to answer the research questions and test the hypotheses. Firstly, SPSS 26.0 was utilized for descriptive analysis to analyze the results of the participants' demographic characteristics. Furthermore, confirmatory factor analysis (CFA) was conducted using AMOS 24 to evaluate the reliability, validity, and model fit of the measurement items. Finally, structural equation modeling (SEM) was employed to test all the hypotheses and mediation effect in the study.

Results

Descriptive Statistics

From the results of 444 completed questionnaires (Table 2), it was found that the proportion of male and female respondents was close, with males accounting for 51.58% of the total and females accounting for 48.42%. The highest proportion of respondents were between the ages of 18 and 25, accounting for 43.47% of the total. In terms of education level, the majority of participants had obtained a university bachelor's degree, accounting for 46.40% of the total. The largest proportion of respondents reported a monthly income between 3001 and 6000 Yuan, accounting for 44.59%.

Table 2 Demographic profile

Variable		Frequency	% (n=444)
Gender	Male	229	51.58
	Female	215	48.42
Average age	18-25	193	43.47
	26-30	152	34.23
	31-40	64	14.41
	41-50	25	5.63
	51 and above	10	2.25
Educational attainment	High school or below	41	9.23
	Diploma	82	18.47
	Bachelor's degree	206	46.40
	Master's degree	110	24.77
	Doctoral degree	5	1.13
Average monthly income (Chinese Yuan)	≤3,000	29	6.53
	3,001-6,000	198	44.59
	6,001-8,000	149	33.56
	8,001-10,000	41	9.23
	≥10,001	27	6.08

Measurement Model

Before measuring the model, it is crucial to perform reliability and validity analysis. According to Nunnally (1978), Cronbach's alpha and combined reliability (CR) are important reliability indicators. The scales' reliability was examined using SPSS 25 analysis, and it was found to be good as Cronbach's alpha and CR were greater than 0.7 for each construct, in line with the suggestions of Hair et al. (2010). Convergent validity was assessed using the average extracted variance (AVE), with values greater than 0.5 indicating good convergent validity. To assess discriminant validity, the square root of AVE was compared with the correlation coefficient of each construct, following the guidelines of Fornell & Larcker (1981). The study results, presented in Table 3, show that each variable's standardized factor loadings for each question item were greater than 0.7, and AVE values for all potential variables were well above 0.5, indicating good convergent validity. Table 4 further indicates that the AVE square root values were greater than the correlation coefficients for each variable, implying good discriminant validity among the variables.

Table 3 Results of validity and reliability analysis

Construct	Items	Factor Loadings	CR	AVE	Alpha
Cognitive Experience (CNE)	**CNE1**	0.804	0.884	0.655	0.884
	CNE2	0.766			
	CNE3	0.833			
	CNE4	0.833			
Product Experience (PE)	**PE1**	0.697	0.824	0.540	0.825
	PE2	0.772			
	PE3	0.758			
	PE4	0.709			
Communication Experience (CME)	**CME1**	0.799	0.841	0.572	0.842
	CME2	0.607			
	CME3	0.848			
	CME4	0.751			
Emotional Experience (EE)	**EE1**	0.783	0.915	0.731	0.915
	EE2	0.900			
	EE3	0.892			
	EE4	0.839			
Association Experience (AE)	**AE1**	0.843	0.893	0.678	0.893
	AE2	0.744			
	AE3	0.784			
	AE4	0.913			
Green Brand Attitude (GBA)	**GBA1**	0.812	0.904	0.701	0.905
	GBA2	0.791			
	GBA3	0.882			
	GBA4	0.862			
Willingness To Pay Premium Price (WTPP)	**WTPP1**	0.904	0.876	0.703	0.876
	WTPP2	0.856			
	WTPP3	0.748			

Table 4 Discriminant validity

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1) CNE	**0.809**						
(2) PE	0.482	**0.735**					
(3) CME	0.539	0.402	**0.756**				
(4) EE	0.462	0.571	0.438	**0.855**			
(5) AE	0.558	0.614	0.319	0.492	**0.823**		
(6) GBA	0.439	0.496	0.622	0.435	0.549	**0.837**	
(7) WTPP	0.527	0.588	0.574	0.617	0.663	0.609	**0.838**

Note: CNE= Cognitive Experience, PE= Product Experience, CME= Communication Experience, EE= Emotional Experience, AE= Association Experience, GBA=Green Brand Attitude, WTPP= Willingness to Pay Premium

Structural Model

Six key indices were used to evaluate the adequacy of the model fit. The results of these indices, as presented in Table 5, indicate that all threshold values were met, suggesting a satisfactory fit of the model and supporting the acceptability of the structural model.

Table 5 Fit Indices of Measurement and structural models

Fit indices	$\chi2$ /df	GFI	AGFI	IFI	NFI	CFI	RMSEA
Recommended	<3	>0.9	>0.8	>0.9	>0.9	>0.9	<0.08
Structural Model	2.897	0.928	0.901	0.935	0.927	0.935	0.059

Note: $\chi2$= chi-square, df= Degrees of Freedom, GFI= Goodness-of-fit Index, AGFI=Adjusted goodness-of-fit, IFI=Incremental Fit Index, NFI=Normed Fit Index, CFI= Comparative Fit Index, RMSEA=Root Mean Square Error of Approximation

Hypothesis Testing

Table 6 revealed that cognitive experience (β=0.160, $p<0.001$), communication experience (β=0.161, $p<0.001$), emotional experience (β=0.660, $p<0.001$), and associative experience (β=0.764, $p<0.001$) had a significant positive impact on consumers' WTPP, supporting H1a, H1c, H1d, and H1e. However, product experience (β=0.012, $p>0.05$) did not significantly affect consumers' WTPP, rejecting H1b. H2a, H2b, H2c, H2d, and H2e are confirmed as all five dimensions of green brand experience, including cognitive experience (β=0.466, $p<0.001$), product experience (β=0.715, $p<0.001$), communication experience (β=0.724, $p< 0.001$), emotional experience (β=0.807, $p<0.001$), and association experience (β=0.762, $p<0.001$), had significant positive effects on consumers' attitudes toward green brands. H3 is supported as green brand attitude (β=0.685, $p<0.001$) was found to have a significant positive effect on WTPP.

Table 6 Result of hypothesis test

Hypothesis	Path	β	Unstd.	S.E.	C.R.	p	Result
H1a	CNE→WTPP	0.160	0.167	0.049	3.413	***	Accepted
H1b	PE→WTPP	0.012	0.016	0.067	0.241	0.809	Rejected
H1c	CME→WTPP	0.161	0.190	0.040	4.723	***	Accepted
H1d	EE→WTPP	0.660	0.427	0.038	11.103	***	Accepted
H1e	AE→WTPP	0.746	0.895	0.055	16.271	***	Accepted
H2a	CNE→GBA	0.466	0.495	0.051	9.700	***	Accepted
H2b	PE→GBA	0.715	0.863	0.049	17.426	***	Accepted
H2c	CME→GBA	0.724	1.380	0.107	12.856	***	Accepted
H2d	EE→GBA	0.807	0.997	0.058	17.148	***	Accepted
H2e	AE→GBA	0.762	0.800	0.042	19.223	***	Accepted
H3	GBA→WTPP	0.685	0.706	0.040	17.763	***	Accepted

Note: CNE= Cognitive Experience, PE= Product Experience, CME= Communication Experience, EE= Emotional Experience, AE= Association Experience, GBA=Green Brand Attitude, WTPP= Willingness to Pay Premium
**P< 0.05; **P<0.01; ***P<0.001*

Mediation Effect

Table 7 displays the results of a mediation analysis that aimed to examine the role of green brand attitude as a mediator between the green product experience (including cognitive experience, product experience, communication experience, emotional experience, and association experience) and WTPP. The bootstrapping process, a widely accepted method for testing mediation and other intervening effects (Biesanz et al., 2010), was employed to evaluate the mediation effects. A total of 5000 samples were randomly selected to estimate the bias-corrected bootstrapping confidence interval at a 95% level of confidence. The presence of a mediating effect was established by checking if the confidence interval of the estimated effect excluded zero, which indicates significance (Hayes, 2009).The findings from both Table 7 and Table 6 reveal that green brand attitudes play a partially mediated role in the relationship between cognitive experience (effect: .319, 95% CI [0.305,0.579]), communication experience (effect: .496, 95% CI [0.069,0.223]), affective experience (effect: .553, 95% CI [0.286,0.539]) and associative experience (effect: .522, 95% CI [0.196,0.384]) and willingness to pay premium, while fully mediated between product experience (effect: .490, 95% CI [0.246,0.517]) and WTPP. Therefore, hypotheses H4a, H4b, H4c, H4d, and H4e are all accepted.

Table 7 Analysis of mediating effect

Paths	Effect	Bias-corrected 95% CI		Whether Mediating?
		Lower	Upper	
H4a: CNE→GBA→WTPP	0.319	0.305	0.579	Yes (partially mediating)
H4b: PE→GBA→WTPP	0.490	0.246	0.517	Yes (fully mediating)
H4c: CME→GBA→WTPP	0.496	0.069	0.223	Yes (partially mediating)
H4d: EE→GBA→WTPP	0.553	0.286	0.539	Yes (partially mediating)
H4e: AE→GBA→WTPP	0.522	0.196	0.384	Yes (partially mediating)

Discussions

This study investigates the influence of green brand experience on consumers' WTPP for green agricultural products. Data is collected through an online questionnaire survey to understand consumers' consumption behavior of green agricultural products and explore the mediating role of green brand attitude. Based on the analysis of the findings, the following conclusions are drawn:

The results of this study indicate that the four dimensions of green brand experience, including cognitive experience, communication experience, emotional experience, and association experience, significantly and positively impact consumers' WTPP for green agricultural products. The result is consistent with Hwang & Choi (2018); Dwivedi et al. (2018). Among these dimensions, association experience was found to have the strongest effect on WTPP. Association experience goes beyond sensory and emotional experiences, involving a deeper connection between consumers and social systems, establishing personal connections with ideal self, others, or culture (Schmitt, 1999). Drawing on the hierarchy of needs theory, a positive association experience helps consumers establish a favorable image in their social group, gain reputation, image, and status, thereby fulfilling their need for respect. As a result, association experience has the greatest influence on consumers' WTPP for green agricultural products.

Second, product experience in green brand experience was shown to have insignificant direct impact on consumers' WTPP. It is line with Huang (2021). One possible explanation for this could be the low perceived utility of consumers' product experience with green agricultural products. Previous research has also pointed out that low perceived utility is a main factor contributing to the inconsistency between consumers' words and actions in the green produce market (Sun et al., 2015). In general, there may be little noticeable difference in appearance between green and ordinary agricultural products, and consumers may not accurately perceive the short-term positive effects of consuming green agricultural products. Moreover, the positive effects of green agricultural products on the environment and society may be even less perceived by consumers. As a result, consumers might thus have greater confidence in and be more willing to purchase green agricultural products that have a good reputation in terms of communication or are more familiar to them. Furthermore, the proliferation of eco-labels in the agricultural market has led to consumer skepticism about the quality and utility of green agricultural products, which has negatively impacted consumer trust and willingness to purchase green foods (Yang, 2014; Brécard, 2014).

Third, the results of this study indicated that all five dimensions of green brand experience, namely cognitive experience, communication experience, emotional experience, association experience, and product experience, positively affect consumers' green brand attitudes. This implies that increasing each dimension of consumers' brand experience can lead to improved positive attitudes toward green agricultural products. It is line with Huang (2021) and Thøgersen et al. (2015). Among these dimensions, the emotional experience had the greatest impact on consumers' green brand attitudes. Specifically, emotional experience was found to evoke feelings of happiness and joy in the process of consuming green agricultural products, which directly influenced consumers' subjective feelings and led to more positive attitudes toward green agricultural products. Therefore, it can be concluded that a positive emotional experience can foster a stronger affinity and positive attitude toward green agricultural products among consumers.

Finally, the findings of this study suggest that green brand attitude plays a significant role in mediating the relationship between various dimensions of green brand experience and consumers' WTPP for green products. This is supported by Huang (2021) and Chen et al. (2020). Specifically, cognitive experience, communication experience, emotional experience and association experience were found to partially mediate the relationship with WTPP, whereas product experience was found to fully mediate the relationship. This means that cognitive experience, communication experience, emotional and association experience influence consumers' WTPP by increasing their positive attitudes toward these products through the mediating effect of green brand attitude. On the other hand, product experience directly affects consumers' WTPP through its impact on green brand attitude. In other words, consumers' positive product experience with green agricultural products leads to a more favorable attitude toward these products, which in turn increases their WTPP. Overall, these findings highlight the important role of green brand attitude as a mediator between consumers' brand experience and their WTPP.

Conclusion and suggestions

This study serves as a complementary addition to existing research on the factors influencing consumers' WTPP. Previous studies have primarily focused on demographic variables, environmental attitudes, perceived value, and green perceptions as influencing factors, with limited attention given to the role of green brand experience. This study examines the influence of brand experience theory across five aspects on customers' WTPP. Furthermore, while previous research has primarily examined the influence of consumers' brand attitudes on consumer behavior, there has been limited investigation into the mediating effect of green brand attitudes on the relationship between consumers' brand experience and WTPP. This paper introduces the mediating variable of green brand attitude into the relationship model to provide a more comprehensive understanding of the mechanism by which green brand experience impacts consumers' WTPP.

This study also has some managerial insights and suggestions. Firstly, companies should focus on building and enhancing consumers' holistic brand experience, particularly emphasizing association experience, which has the greatest influence on consumers' WTPP. Enterprises should emphasize the role of green agricultural products in promoting a green and healthy image, highlighting environmental protection, safety, and health attributes. By shaping consumers' perception of green agricultural products as embodiments of health, fashion, and self-esteem, companies can evoke emotional connections and foster positive brand associations. Furthermore, facilitating communication among customer groups through various social media platforms can expand the scope of consumer groups with green lifestyles, encouraging them to discuss and engage with green agricultural products. Additionally, the government has a major influence on guiding the concept of green life for the public. The government should also continuously strengthen the guidance and propaganda of green lifestyle for the public, so as to promote the formation of green life values for the whole society.

Secondly, companies should also focus on strengthening consumers' cognitive experience and improving their knowledge of green cognition and green agricultural products. Providing accessible information about environmental conditions, production processes, and farming practices can enhance consumers' understanding. Opening production and planting bases to consumers and utilizing modern media and offline marketing campaigns can further enhance consumers' product knowledge. Documentaries showcasing the planting process, providing origin and certification information, and highlighting manufacturers or sales stores associated with green agricultural products can effectively communicate the production process, certification procedures, and essential information to consumers.

Additionally, companies should prioritize advertising efforts for green agricultural products to enhance consumers' communication experience. Organizing offline promotional activities, such as volume-based discounts, product trials, and distributing consumption coupons or shopping cards, can increase consumer participation. Utilizing television and mobile platforms for advertising and promotion can amplify brand awareness and exposure.

Finally, fostering consumers' emotional experience is crucial. Companies should establish ongoing communication channels to develop emotional connections between customers and green agricultural products. Online trading platforms can facilitate direct communication and interaction. Promptly attending to consumers' emotional feedback and responding to their needs is essential. Involving consumers in the planting process, allowing them to experience the authentic ecological life associated with green agricultural products, can deepen their emotional attachment to the brand.

New knowledge and the effects on society and communities

To promote sustainable development and green development methods, it is essential to develop green agricultural products. This study proposes management insights and policy recommendations from the perspectives of green brand experience and green brand attitude. The goal is to increase consumers' WTPP for green agricultural products, which will not only boost the market for green agricultural products, but also increase the sales profits of green agricultural production enterprises. Consumer behavior is greatly influenced by their WTPP, which is an important indicator of their purchasing habits. An increase in consumers' WTPP for green agricultural products will lead to a significant increase in their purchases, promoting the development of green purchasing habits and a greener lifestyle for society as a whole.

References

Ajzen, I. (2001). Nature and Operation of Attitude. *Annual Review of Psychology, 52*(1), 27-58. https://doi.org/10.1146/annurev.psych.52.1.27

Aulina, L., & Yuliati, E. (2017). The Effects of Green Brand Positioning, Green Brand Knowledge, and Attitude towards Green Brand on Green Products Purchase Intention. *International Conference on Business and Management Research (ICBMR-17).* https://doi.org/10.2991/icbmr-17.2017.50

Beerli, A., Martin, J. D., & Quintana, A. (2004). A Model of Customer Loyalty in the Retail Banking Market. *European Journal of Marketing, 38*(1/2), 253-275. https://doi.org/10.1108/03090560410511221

Biesanz, J. C., Falk C. F., & Savalei, V. (2010) Assessing Mediational Models: Testing and interval estimation for indirect effects. *Multivariate Behavioral Research, 45*(4), 661-701. http://dx.doi.org/10.1080/00273171.2010.498292

Blackwell, R. D., Miniard, P. W., & Engel, J. F. (2006). *Consumer Behavior.* Thomson South-Western.

Brakus, J. J., Schmitt, B. H., & Zarantonello, L. (2009). Brand Experience: What Is It? How Is It Measured? Does It Affect Loyalty? *Journal of Marketing, 73*(3), 52-68. https://doi.org/10.1509/jmkg.73.3.52

Brécard, D. (2014). Consumer confusion over the profusion of eco-labels: lessons from a double differentiation model. *Resource and Energy Economics, 37*, 64-84. https://doi.org/10.1016/J.RESENEECO.2013.10.002

Chen, J., Wang, Y., & Wang, F. H. (2014). A study on the difference of the influence of brand attitude on consumers' purchase intention in different product categories. *Modern Management Science, 2,* 12-14.
Chen, Y. S., & Chang, C. H. (2012). Enhance green purchase intentions: The roles of green perceived value, green perceived risk, and green trust. *Management Decision, 50*(3), 502–520. https://doi.org/10.1108/00251741211216250
Chen, Y., Chang, T., Li, H., & Chen, Y. (2020). The Influence of Green Brand Affect on Green Purchase Intentions: The Mediation Effects of Green Brand Associations and Green Brand Attitude. *International Journal of Environmental Research and Public Health, 17*(11), 4089. https://doi.org/10.3390/ijerph17114089
Conner, M., & Armitage, C. (1998). Extending the Theory of Planned Behavior: A Review and Avenues for Further Research. *Journal of applied social psychology, 28*(15), 1429-1464. http://dx.doi.org/10.1111/j.1559-1816.1998.tb01685.x
Dangelico, R. M., & Vocalelli, D. (2017). "Green Marketing": An analysis of definitions, strategy steps, and tools through a systematic review of the literature. *Journal of Cleaner Production, 165* (1), 1263-1279. https://doi.org/10.1016/j.jclepro.2017.07.184
Dawar, N. (2004), 'What are brands good for?', *MIT Sloan Management Review*, 46(1), 31–37.
Dwivedi, A., Nayeem, T., & Murshed, F. (2018). Brand experience and consumers' willingness-to-pay (WTP) a price premium: Mediating role of brand credibility and perceived uniqueness. *Journal of Retailing and Consumer Services*, *44*, 100-107. https://doi.org/10.1016/j.jretconser.2018.06.009
Food and Agriculture Organization of the United Nations. (2017). *The future of food and agriculture Trends and challenges.* Rome.
Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research, 18(*1), 39–50. https://doi.org/10.2307/3151312
Ge, X. G., & Zhang, Z. M. (1997). *Green vegetable production.* China Agricultural Press.
Greaves, M., Zibarras, L. D., & Stride, C. (2013). Using the theory of planned behavior to explore environmental behavioral intentions in the workplace. *Journal of Environmental Psychology, 34*, 109–120. https://doi.org/10.1016/j.jenvp.2013.02.003
Hagger, M. S., & Chatzisarantis, N. L. (2005). First- and higher-order models of attitudes, normative influence, and perceived behavioural control in the theory of planned behaviour. The British journal of social psychology, *44* (Pt 4), 513-35. https://doi.org/10.1348/014466604X16219
Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate Data Analysis.* 7th ed., Pearson, New York.
Han, Z. B. (2013). Analysis of urban consumers' willingness to purchase organic agricultural products: a study of organic rice consumption. *Economy and Management, 7*, 40-45.
Hartmann, P., & Ibáñez, V. (2006). Green value added. *Marketing Intelligence & Planning, 24*(6/7), 673-680. https://doi.org/10.1108/02634500610711842
Hauser, E. (2011). *Experiential Marketing Forum*. Retrieved from http://www.experientialforum.com
Hayes, A. F. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *Communication Monographs, 76*(4), 408–420. https://doi.org/10.1080/03637750903310360
He, A. Z., Cai, L., & Gao, J. (2016). Research on the impact of branded self-media content marketing on consumers' brand attitude. *Journal of Management, 13*(10), 1534-1545.

Huang, H. (2021). *Study on the Effect of Green Brand Experience on the Willingness to Pay Premium for Green Agricultural Products. Thesis.* Chengdu: Xihua University.

Huang, Y. C., Yang, M. L., & Wang, Y. C. (2014). Effects of green brand on green purchase intention. *Marketing Intelligence & Planning, 32*(3), 250-268. https://doi.org/10.1108/MIP-10-2012-0105

Hwang, J., & Choi, J. K. (2018). An Investigation of Passengers' Psychological Benefits from Green Brands in an Environmentally Friendly Airline Context: The Moderating Role of Gender. Sustainability, 10(1), 80. https://doi.org/10.3390/su10010080

Jing, S. P., & Li, Y. D. (2007). Consumer brand switching behavior and green marketing. *Management World, 12*, 166-167.

Keller, K. L. (1993). Conceptualizing, Measuring, and Managing Customer-Based Brand Equity. *Journal of Marketing, 57*(1), 1–22. https://doi.org/10.2307/1252054

Keng, C., Tran, V. D., & Thi, T. L. (2013). Relationships among Brand Experience, Brand Personality, And Customer Experiential Value. *Contemporary Management Research, 9*, 247-262. https://doi.org/10.7903/CMR.11086

Kucher, A., Hełdak, M., Kucher, L., Fedorchenko, O., & Yurchenko, Y. (2019). Consumer willingness to pay a price premium for ecological goods: a case study from Ukraine. *Environmental & Socio-economic Studies, 7*(1), 38 - 49. https://doi.org/10.2478/environ-2019-0004

Laroche, M., Bergeron, J., & Barbaro-Forleo, G. (2001). Targeting Consumers Who Are Willing to Pay More for Environmentally Friendly Products. *Journal of Consumer Marketing, 18*(6), 503-520. http://dx.doi.org/10.1108/EUM0000000006155

Lazaroiu, G., Andronie, M., Uţă, C., & Hurloiu, I. (2019). Trust Management in Organic Agriculture: Sustainable Consumption Behavior, Environmentally Conscious Purchase Intention, and Healthy Food Choices. *Frontier in Public Health, 7*, 1-7. doi: 10.3389/fpubh.2019.00340

Li, H. S., & Li, Y. (2020). The understanding of the new shape of the economy: A microeconomic perspective. *China Industrial Economy, 12*,159-177.

Liu, F., Li, J., Mizerski, D., & Soh, H. C. (2012). Self-congruity, brand attitude, and brand loyalty: a study on luxury brands. *European Journal of Marketing, 46*(7/8), 922-937. https://doi.org/10.1108/03090561211230098

Marcus, A. A., & Fremeth, A. R. (2009). Green Management Matters Regardless. *Academy of Management Perspectives, 23*(3), 17–26. http://www.jstor.org/stable/27747523

Mostafa, M. M. (2006). A Hierarchical Analysis of the Green Consciousness of the Egyptian Consumer. *Psychology & Marketing, 24*(5), 455-473. https://doi.org/10.1002/mar.20168

Nunnally, J. C. (1978). *Psychometric Theory.* 2nd ed.. McGraw-Hill, New York.

Pine, B. J., & Gilmore, J. H. (1999). *The Experience Economy.* Edward Elgar.

Rao, A. R., & Monroe, K. B. (1996). Causes and Consequences of Price Premiums. *The Journal of Business, 69*(4), 511–535. http://www.jstor.org/stable/2353407

Royne, M. B., Levy, M., & Martinez, J. D. (2011). The Public Health Implications of Consumers' Environmental Concern and Their Willingness to Pay for an Eco-Friendly Product. *Journal of Consumer Affairs, 45*(2), 329-343. http://www.jstor.org/stable/23859819

Schmitt, B. (2010). Experience Marketing: Concepts, Frameworks and Consumer Insights. *Foundations and Trends in Marketing, 5*(2), 55–112. http://dx.doi.org/10.1561/1700000027

Schmitt, B. H. (1999). *Experiential Marketing. How to Get Customers to Sense, Feel, Think, Act, Relate to Your Company and Brands.* The Free Press, New York.

Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach.* John Wiley & Sons.

Solomon, M. R., Russell-Bennet, R., & Previte, J. (2019). *Consumer Behaviour: Buying, Having, and Being.* Pearson Australia.

Song, M. Y. (2014). *Research on the influence of brand experience on consumers' purchase intention - taking the smartphone industry as an example. Dissertation.* Dalian: Dalian University of Technology.

Suki, N. M. (2016). Green product purchase intention: impact of green brands, attitude, and knowledge. *British Food Journal, 18*(12), 2893-2910. https://doi.org/10.1108/BFJ-06-2016-0295

Sun, J., Li, J. J., & Yang, X. R. (2015). Why consumers do not match their words with their deeds: An investigation of the impediments to green consumption behavior. *Journal of Huazhong Agricultural University (Social Science Edition),* 5, 72-81.

Teng, L. (2009). A comparison of two types of price discounts in shifting consumers' attitudes and purchase intentions. *Journal of Business Research, 62*(1), 14-21. https://doi.org/10.1016/J.JBUSRES.2007.11.014

Thøgersen, J., Barcellos, M. D., Perin, M. G., & Zhou, Y. (2015). Consumer buying motives and attitudes towards organic food in two emerging markets. *International Marketing Review, 32*(3/4), 389-413. https://doi.org/10.1108/IMR-06-2013-0123

Thomson, M., MacInnis, D. J., & Park, C. W. (2005). The Ties That Bind: Measuring the Strength of Consumers' Emotional Attachments to Brands. *Journal of Consumer Psychology, 15*(1), 77-91. http://dx.doi.org/10.1207/s15327663jcp1501_10

Tynan, C., & McKechnie, S. (2009). Experience Marketing: A Review and Reassessment. *Journal of Marketing Management, 25*(5), 501-517. https://doi.org/10.1362/026725709X461821

Wei, X. M. (2017). Green brands and their assets: concepts, influencing factors and strategies. *Technology and Economic Market*, 96-97.

Wu, H., & Ai, C. (2016). Synthesizing the effects of experiential quality, excitement, equity, experiential satisfaction on experiential loyalty for the golf industry: The case of Hainan Island. *Journal of Hospitality and Tourism Management, 29*, 41-59. https://doi.org/10.1016/J.JHTM.2016.05.005

Yadav, R., & Pathak, G. S. (2017). Determinants of Consumers' Green Purchase Behavior in a Developing Nation: Applying and Extending the Theory of Planned Behavior. *Ecological Economics, 134*, 114-122. https://doi.org/10.1016/j.ecolecon.2016.12.019

Yang, B. (2014). *The problem of greenwashing in consumer goods market and its governance.* Beijing: Social Science Literature Press.

You-Ming, C. (2010). Study On the Impacts of Experiential Marketing and Customers' Satisfaction Based on Relationship Quality. *International Journal of Organizational Innovation, 3* (1), 189-209. https://www.ijoi-online.org/index.php/back-issues/23-volume-2-number-4-spring-2010

Netizens at Odds with the Education Department: Analysis of Impoliteness Strategies on an Online Platform

Christian Jay R. Pasana
Fishing Village Comprehensive National High School, Department of Education, Philippines
Henry E. Lemana II*
School of Languages and General Education, Walailak University, Thailand
Virgion H. Mamonong
College of Teacher Education/ Graduate School,
University of the Immaculate Conception, Philippines
E-mail: pasanachristian2@gmail.com, henry.le@wu.ac.th* and vmamonong@uic.edu.ph
*Corresponding author
(Received: 10 April 2023, Revised: 3 July 2023, Accepted: 7 July 2023)
https://doi.org/10.57260/rcmrj.2023.264796

Abstract

The COVID-19 pandemic has prompted the Philippines, along with other nations, to restructure its educational framework to meet the evolving needs and challenges of the time. Consequently, this reorganization has led to changes in the learning delivery modalities (LDMs). The Philippine Department of Education (DepEd) has faced significant criticism on social media regarding issues related to preparation, flawed materials, and implementation. By employing a pragmatic analysis approach based on Culpeper's theory of impoliteness strategies, this study examines fifty Facebook comments criticizing the said department and its new LDMs. The findings reveal that critics employed various impoliteness strategies, including bald-on-record impoliteness, positive impoliteness, negative impoliteness, off-record impoliteness, withhold politeness, and impoliteness meta-strategy. The study's outcomes suggest that analyzing impoliteness strategies in online comments can provide insights into how such remarks serve as social actions. Researchers working with these textual forms, as well as those specializing in the study of genres and languages, can benefit from the findings of this study. The implications of the findings are discussed for policymakers, educators, and students within the Philippine education system.

Keywords: Impoliteness strategies, Philippine education department, Online comments, Learning delivery modalities, Pandemic

Introduction

Following the worldwide spread of COVID-19, both public and private educational institutions were compelled to revise their teaching strategies to accommodate the ongoing educational needs and issues. With that, many people had something unpleasant to say about how the curriculum had been changed and the introduction of new learning delivery modalities (LDMs), i.e., modular, online, television/radio-based instruction, and blended learning approaches. For example, in India, as students experience issues with depression, anxiety, poor internet connectivity, and an unsuitable study environment at home, varied opinions have been stated on the application of their learning modalities (Kapasia, et.al, 2020). Similarly, American parents lashed out at teachers and officials during the pandemic for failing to adequately address challenges related to the aforementioned juggling act, learner motivation, accessibility, and learning results (Garbe et al., 2020). Similarly, the attempt to combat the pandemic by homeschooling, i.e., learning from home, as the best remedy to continue education has been criticized by those who want to continue face-to-face schooling in government schools (DeAngelis, 2020).

In the Philippine context, news articles (see Lalu, 2020; Magsambol, 2020; Malipot, 2020) have emphasized Filipinos' perspectives on how the Department of Education (DepEd) addressed concerns in distance education. In line with that, the DepEd secretary has also received insults for promoting the resumption of courses with newly introduced modalities during the pandemic (Lalu, 2020). She noted that there has been a great deal of negative press over the continuation of lessons; nonetheless, the fact that DepEd has made preparations for the resumption of school nullifies all attempts to malign their work. In the meantime, three weeks after schools reopened, the public began to express their displeasure with the Department of Education due to errors discovered in their online learning modules, in addition to concerns such as a lack of preparation, numerous inaccuracies in the purported lessons, and uninformed regional officers (Adonis, 2020; Malipot, 2020).

Evidently, netizens made themselves impolite with their online comments criticizing the department and its institutions, stating that, despite a worldwide learning crisis, they could have done more to ensure that students acquire essential life skills (Reimers et al., 2020). Categorically, the dissemination of these remarks and complaints on online platforms has led to the unraveling of the pandemic-related impoliteness directed toward the education system. Therefore, it is argued by this paper that social media platforms are a breeding ground for these critiques, which in turn generate texts characterized by language impoliteness. Hence, an examination of these impolite complaints and criticisms in the form of online comments from a linguistic, theoretical, and empirical perspective is warranted.

Impoliteness Strategies

Culpeper (1996) categorizes impoliteness strategies into six types: bald on-record, positive politeness, negative politeness, off-record politeness (indirect), withhold politeness, and impoliteness meta-strategy/sarcasm or mock politeness. These strategies, proposed by Culpeper (1996) and partly resembling the politeness strategies of Brown and Levinson (1987), can be defined as follows:

1. Bald on-record impoliteness: This strategy involves directly and clearly performing a face-threatening act without minimizing its impact. It aims to shock or embarrass the addressee and is typically used in close relationships such as family or close friends (Mohammed & Abbas, 2015).
2. Positive impoliteness: This strategy aims to harm the addressee's positive face wants. It includes actions such as disregarding and manipulating the other person, dismissing others from activities, showing disinterest or indifference, using incorrect identifying indicators, employing secretive language, seeking disagreement, making others uncomfortable, using taboo words, and using insulting language (Culpeper, 1996).
3. Negative impoliteness: This strategy aims to undermine the addressee's negative face wants. It includes actions such as instilling fear, showing disdain or ridicule, being impolite or insincere, mocking others, attacking personal space, and using condescension, threats, curses, or bad wishes (Culpeper, 1996).
4. Off-record impoliteness: This strategy involves performing a face-threatening act indirectly through implicature, where one intended meaning outweighs others. It often manifests as

insinuations, innuendos, casting dispersions, digs, or snide remarks (Culpeper & Hardaker, 2015).

5. Withhold politeness: This strategy refers to the absence of expected politeness work. For instance, deliberately failing to acknowledge a present can be interpreted as impoliteness (Culpeper, 1996). It relies on direct language and avoids imposing on the speaker.
6. Impoliteness meta-strategy: This type of impoliteness strategy involves using deceitful politeness strategies, where the face-threatening act is concealed beneath surface realizations. It relies on convention-driven implicational impoliteness, which can be internal or external (Ardila, 2019).

In essence, impoliteness, as characterized by Culpeper (2005), refers to communicative strategies that attack face and cause social conflict and disharmony. It is perceived by listeners as a threat to their face or social identity, breaching norms of appropriate behavior in specific contexts and with specific interlocutors (Holmes et al., 2008). This study aims to examine impolite language in online comments targeting the Department of Education during the implementation of LDMs amid the pandemic in the Philippines.

While some studies have explored impoliteness in online communication (e.g., Chung & Tang, 2022; Sharif et al., 2019; Ranalan, 2020; Zhang, 2022), no relevant work has been found regarding impolite language directed at a government agency like the Department of Education. This research gap emphasizes the need for linguistic investigation in the new normal pedagogical context. Hence, in light of the context of the study, this investigation is guided by the following research question:

What types of impoliteness strategies linguistically are observed in online comments against the Philippine Department of Education in the implementation of learning delivery modalities during the pandemic? How are these types employed in such comments?

Methodology

Design and Data Sources

As a descriptive-qualitative study, it made use of screenshots taken from Facebook, including online negative remarks on DepEd. Despite the fact that there have been multiple cases in which DepEd has been criticized on various social media platforms, Facebook was selected for this study because, according to Arora et al. (2019), Facebook is the most popular social media network that is used in the Philippines. As a result, 50 of these rude comments were randomly taken (screenshot) from Facebook between the months of July 2020 and May 2021, which corresponds to the period of time when the groundwork and implementation of LDMs in the new regular set-up of education in the Philippines took place. According to Braun & Clarke (2013), a sufficient amount of corpus materials for analysis is between 10 and 100 samples. The number of corpora that were examined in this study complied with this condition.

Data Collection

The researchers used Facebook to compile comments received by DepEd online. To safeguard their anonymity, the names and photos of the people who posted negative reviews and comments online were erased. Researchers then combed through screenshots of online criticisms to find those that were relevant to the study.

Data Analysis

Based on the assumptions of Grice (1989), Austin (1962), and Searle(1969) regarding how people accomplish things with words and how they understand what others are doing when they speak, the method of this study falls under pragmatic analysis. The study utilized Culpeper's (1996) framework of impoliteness methods in order to identify the impoliteness strategies deployed in the online comments against DepEd. The researchers analyzed the data using Miles and Huberman's (1984) procedures for descriptive analysis, which included data reduction, data presentation, conclusion, and verification.

Following an extensive analysis of the collected data, the study underwent a process known as peer debriefing. During this phase, a group of linguistic experts was involved in examining the findings and the categorization of the data. The debriefers carefully scrutinized the specifics of the analysis to ensure the accuracy and validity of the study's conclusions. This peer debriefing process serves as a quality control measure, as it allows independent experts to assess the methodology, interpretations, and conclusions drawn from the data analysis. It helps to minimize bias and increase confidence in the study's findings, as they have been subject to rigorous scrutiny and evaluation by knowledgeable peers in the field of linguistics.

Ethical Considerations

Human participants were not used in this study. However, online badmouths and comments that came from Facebook were considered. The University of the Immaculate Conception's Research Ethics Committee (REC) has issued a clearance certificate with protocol number AF-GC29-12-2020. Also, the researchers deliberately removed all the names of individuals in the comments; hence, each comment analyzed in this study was given a code like OC1, OC2, up to OC50. This was done to protect these individuals from public scrutiny and malicious adjudication.

Results

The analysis of the data uncovered all six impoliteness strategies employed by online critics in their criticism against the Philippine Department of Education in its implementation of the learning delivery modalities during the pandemic. These strategies cover bald-on-record impoliteness, positive impoliteness, negative impoliteness, off-record impoliteness, withhold politeness and impoliteness meta-strategy. Further, this section delves into a detailed explanation of how these strategies were utilized in the comments.

Bald-on Record Impoliteness

Bald-on-record impoliteness is a strategy of communication where a person performs a face-threatening act in a direct, clear, unambiguous, and concise manner without minimizing its impact. It involves expressing one's intentions openly without any attempt to soften or mitigate the potential offense caused. This strategy aims to shock or embarrass the addressee. This impoliteness strategy was revealed in one subcategory: imposing on a target while failing to recognize a face relevance in them.

Table 1 Bald-on Record Impoliteness in the Online Comments

Type of Impoliteness Strategy	Indicator	Sample Statement	Corpus Code
Bald-on Record impoliteness	Imposing on a target while failing to recognize a face relevance in them	Maybe Briones [the Secretary of the Department] is out of her mind. She always thinks about modules. She is very insensitive. It'd be nice to have her eaten up!	OC14
		Just let Briones leave their house and evade the Zoom meeting. It is also better to let her experience the bitter-sweet experience of implementing the modalities. It is just another senseless idea.	OC43

Imposing on a target while failing to recognize a face relevance in them. OC14 includes personal attacks and insults towards Briones. The statement questioning her sanity and referring to her as "out of her mind" is disrespectful. Additionally, expressing the desire to have her "eaten up" is an extreme and offensive remark. Meanwhile, OC43 suggests avoiding the Secretary's presence and implies that it would be better for her to face difficulties and negative experiences. The tone is dismissive and belittling, undermining her decisions and ideas by labeling them as "senseless." Overall, these comments display impoliteness by attacking the person's character, making derogatory statements, and expressing disrespectful wishes towards Briones, regardless of whether they recognize her face relevance or not.

Positive Impoliteness

Positive impoliteness refers to a deliberate communication strategy where individuals utilize language or behavior that is direct, assertive, and disrespectful with the intention of achieving a specific objective or establishing social dominance. The findings show that online comments exemplify this strategy, where critics employ various tactics such as displaying disinterest, indifference, or insensitivity; using inappropriate identity markers; making others feel uncomfortable; resorting to abusive or disrespectful language; and fostering a belief that their actions will cause harm to the target individual.

Table 2 Positive Impoliteness in the Online Comments

Type of Impoliteness Strategy	Indicator	Sample Statement	Corpus Code
Positive Impoliteness	Being disinterested, indifferent, and insensitive.	Oh, it is so tiring!	OC4
		We do not like to venture into what you wanted us to do. It is so annoying.	OC33
	Making the other feel uncomfortable	You are not really ready, DepEd. Do not fool us!	OC22
		This is too much. It degrades a mother's reputation.	OC25
	Using abusive or disrespectful language.	The system is trash!	OC1
		The modules are useless because the students don't apprehend them.	OC11
		Of course, there is no assistance from DepEd. DepEd is inefficient. They did not even allocate funds.	OC46
	Inculcating a belief that action damaging to the other will arise.	There is another suicide victim because of stress and module. What's up DepEd? How many years would you want to come before you will approve the academic freeze?	OC13
		The move will be very risky.	OC34

Being disinterested, indifferent, and insensitive. OC4 and OC33 demonstrate elements of positive impoliteness by showcasing disinterest, indifference, and insensitivity towards the topic or request at hand. The statement "Oh, it is so tiring!" conveys a lack of enthusiasm or interest. By expressing that the topic or task is exhausting, the commenter is implying that they find it uninteresting and burdensome. This conveys a dismissive and uncooperative attitude. Moreover, the phrase "We do not like to venture into what you wanted us to do" reflects a sense of indifference. By stating that they have no inclination or desire to engage in the requested activity, the commenter is displaying a lack of concern for the interests or expectations of the other person. This indifference suggests a disregard for the other person's desires or needs. Additionally, the comment "It is so annoying" reflects insensitivity by expressing annoyance or frustration without considering the feelings of the other person. By labeling the request as annoying, the commenter shows a lack of empathy or consideration for how their words might affect the other person's emotions. This disregard for the impact of their statement demonstrates insensitivity. Generally, these comments employ elements of positive impoliteness by intentionally using language that disregards the topic, dismisses the request, and conveys a lack of sensitivity toward the other person's feelings or perspective.

Making the other feel uncomfortable. OC22 statement directly challenges the readiness of the Department and implies that they are not adequately prepared. By using the phrase "You are not really ready," the commenter questions DepEd's competence and suggests that they may be attempting to deceive or mislead others. This accusation creates discomfort by undermining the credibility and integrity of DepEd. In OC25, the speaker expresses disapproval or offense towards a specific situation. By stating "This is too much," they convey a sense of being overwhelmed or offended by the circumstances. The following statement, "It degrades a mother's reputation," implies that the situation reflects negatively on mothers as a whole. This accusation insinuates that the actions being discussed harm the reputation of mothers, which can cause discomfort by generalizing and potentially stigmatizing an entire group. These comments utilize direct language that challenges or criticizes the target, intentionally aiming to make them feel uncomfortable. By questioning DepEd's readiness or suggesting that an action degrades the reputation of mothers, these comments employ confrontational tones that can elicit discomfort and defensive reactions in the individuals or organizations being addressed.

Using abusive or disrespectful language. OC1 employs derogatory language by referring to the system as "trash." By using such a derogatory term, the commenter displays disrespect and extreme negativity toward the system. This abusive language serves to belittle and devalue the system, expressing a strong negative opinion in a demeaning manner. In OC11, the phrase "modules are useless" presents a negative judgment about the effectiveness of the learning materials. The following statement, "because the students don't apprehend them," places blame on the students, implying that their lack of understanding is the reason for the modules' perceived uselessness. While this comment may not contain explicit profanity, it uses disrespectful language by assigning blame and implying incompetence on the part of the students. Meanwhile, OC46 includes multiple instances of using disrespectful language towards DepEd (Department of Education). Phrases such as "no assistance," "inefficient," and "did not even allocate funds" express a negative judgment and criticize the organization's performance. The language used implies incompetence and accuses DepEd of not fulfilling its responsibilities. This disrespectful tone and accusatory language contribute to the manifestation of positive impoliteness. In these comments, the language employed is intentionally disrespectful, derogatory, and abusive toward the subjects being discussed. Such language disregards the principles of polite communication and aims to express strong negative opinions in a confrontational and disrespectful manner.

Inculcating a belief that action damaging to the other will arise. OC13 suggests a correlation between the stress caused by the educational modules and tragic outcomes such as suicide. By highlighting the existence of a suicide victim and attributing it to the stress and modules, the commenter implies that the actions or negligence of DepEd (Department of Education) have resulted in harm and potentially fatal consequences. This inculcates a belief that DepEd's actions or policies are directly responsible for damaging outcomes. The comment also contains a critical question directed at DepEd that expresses frustration or discontent with the organization. By asking how many years it would take for DepEd to approve the academic freeze, the commenter implies that the delay or hesitation in making this decision is harmful or detrimental. This statement inculcates a belief that DepEd's perceived inaction or delay is causing negative consequences or damage. OC34 shows that a specific action or decision being discussed carries a high degree of risk. By emphasizing the potential risks, the commenter implies that this action could have adverse consequences or cause harm. This inculcates a belief that the proposed move is dangerous and damaging. In these comments, there is a deliberate attempt to associate negative outcomes, harm, or potential damage with the actions or inactions of DepEd. By highlighting these connections, the comments foster a belief that the actions or decisions being discussed will result in negative consequences or harm to individuals or the education system as a whole.

Negative Impoliteness

Negative impoliteness strategies are employed to undermine the addressee's negative face wants. the research findings indicate that certain comments fall under this category, including disdaining, scorning, or ridiculing; cursing/mocking the other; and digging remarks.

Table 3 Negative Impoliteness in the Online Comments

Type of Impoliteness Strategy	Indicator	Sample Statement	Corpus Code
Negative Impoliteness	Disdaining, scorning, or ridiculing like accentuating relative power	This woman should be replaced! DepEd has become insensitive and inconsiderate under her.	OC6
		What is up DepEd? What happened to the grammar and giving answers against exercising democratic rights?	OC12
	Cursing/mocking the other	Fuck the one who made the DepEd modules; her (referring to Briones) being slut is taught to the children. Trash!	OC2
		What the f*ck, Briones!	OC1
	Digging remarks	It came from the first teacher’s guide of DepEd during the first batch of the SHS. I don’t know why they did not check it.	OC3
		We do not have efficient modules because of the incompetent writers that you have chosen.	OC26

Disdaining, scorning, or ridiculing like accentuating relative power. In OC6, the phrase "This woman should be replaced!" displays disdain and suggests that the person in question is inadequate or incompetent. By stating that DepEd (Department of Education) has become insensitive and inconsiderate under her leadership, the commenter implies that the woman in charge is responsible for these negative qualities. This statement accentuates relative power by asserting a belief that someone else would be more suitable or capable in the position. Meanwhile, OC12 employs a scornful tone and rhetorical questions to express disapproval and ridicule. The phrase "What is up DepEd?" conveys a sense of mockery and implies that there are significant issues or shortcomings within the organization. The following question, "What happened to the grammar and giving answers against exercising democratic rights?" suggests that DepEd has failed to maintain proper grammar and inhibit the exercise of democratic rights, further emphasizing perceived incompetence or negligence. This statement ridicules DepEd by highlighting specific areas of criticism and implies a sense of superiority or higher standards on the part of the commenter. In both comments, there is a deliberate use of language that disdains, scorns or ridicules the target (either an individual or DepEd as an organization), accentuating relative power dynamics. These comments aim to demean or belittle the person or entity being criticized, suggesting that they are inadequate or have failed in their responsibilities. This manifestation of negative impoliteness seeks to assert superiority or express contempt by highlighting perceived weaknesses or shortcomings.

Cursing/mocking the other. OC2 contains offensive language and a derogatory term ("slut") used to demean the person being referred to (Briones), who is associated with the creation of the DepEd modules. By using profanity and derogatory language, the commenter is expressing strong disapproval and resorting to insults to mock and belittle the person. The use of derogatory terms and explicit cursing intensifies the disrespectful and offensive nature of the comment. Likewise, OC1 includes a vulgar expression directed at Briones. By using such explicit language, the commenter is expressing anger, frustration, or disbelief toward Briones. The tone and choice of words serve to mock and criticize the person, showing a lack of respect or consideration. In both comments, the language used is explicitly offensive and disrespectful. The use of profanity, derogatory terms, and vulgar expressions serves to mock, insult, and belittle the person being referred to.

Digging remarks. OC3 contains a subtle dig by suggesting that the content or quality of the teacher's guide from DepEd's first batch of the Senior High School (SHS) program was not adequately checked or reviewed. The use of phrases like "I don't know why they did not check it" implies negligence or incompetence on the part of the responsible individuals or department. This remark indirectly criticizes the competency of those involved and suggests that their oversight or lack of attention has led to undesirable consequences. In OC26, there is a direct accusation of incompetence toward the writers selected by the addressee (presumably DepEd). The remark implies that the modules currently available are inefficient, and this inefficiency is attributed to the incompetence of the writers. By specifically mentioning the writers and their alleged incompetence, the commenter directly criticizes their abilities and indirectly questions the competence of the addressee in selecting capable individuals. By making these digging remarks, the commenters aim to highlight perceived shortcomings or mistakes, often in a critical and derogatory manner, as a form of negative impoliteness.

Off-record Impoliteness

Off-record impoliteness is performed by means of an implicature but in such a way that one attributable intention clearly offsets others. In this study, this strategy was indicated through insinuations in online comments.

Table 4 Off-record Impoliteness in the Online Comments

Type of Impoliteness Strategy	Indicator	Sample Statement	Corpus Code
Off-record Impoliteness	Insinuation	We will be the ones to adjust. Hayst!	OC23
		I will just be quiet on DepEd programs.	OC29
		I will just be silent. DepEd has done nothing right in this pandemic. Hayst!	*OC41*

Insinuation. OC23 utilizes an insinuation by suggesting that the burden of adjustment or responsibility falls on the speaker or their group. The use of the expression "hayst!" implies a sense of frustration or disappointment, indirectly conveying the sentiment that others (possibly DepEd) have not fulfilled their responsibilities or obligations. The insinuation is that the speaker's group is left to shoulder the burden, which can be seen as a subtle criticism of DepEd without directly stating it. OC29, likewise, insinuates that the speaker has reservations or negative opinions about DepEd programs. By choosing to remain silent, the commenter implies that there are issues or concerns that they are intentionally not expressing openly. The insinuation is that there are problems or inadequacies with DepEd programs without explicitly stating them. In the same vein, OC41 combines the use of insinuation with a sigh of exasperation. By stating that they will be silent, the commenter suggests that they hold negative views or judgments about DepEd's actions during the pandemic. The insinuation is that DepEd's efforts or decisions have been largely ineffective or unsuccessful. The inclusion of the sigh further emphasizes a sense of disappointment or frustration. In all these comments, there is a deliberate use of insinuation to indirectly convey negative opinions or criticisms about DepEd without explicitly stating them. By leaving certain aspects unsaid or implied, the commenters subtly express their discontent or disapproval, making use of off-record impoliteness.

Withhold Politeness

This impoliteness strategy uses direct language and puts the speaker from the potential to be imposing. Withhold politeness is observable in the comments through the use of teasing or sarcasm.

Table 5 Withhold Impoliteness in the Online Comments

Type of Impoliteness Strategy	Indicator	Sample Statement	Corpus Code
Withhold Politeness	Teasing or sarcasm	But it is too much that an owl will become an ostrich. Our common sense will tell us that before disseminating this one, the person in authority of the module maker should have checked this.	OC5
		The one who made the module is a genius.	OC19

Teasing or sarcasm. OC5 employs teasing or sarcasm by using the comparison of an owl becoming an ostrich. The statement suggests that the content of the module is so illogical or nonsensical that it is akin to an absurd transformation. The use of phrases like "Our common sense will tell us" and mentioning the need for the person in authority to have checked it implies that such a mistake is obvious and should have been avoided. This teasing remark indirectly criticizes the module maker's oversight or lack of attention to logical inconsistencies. OC19 uses sarcasm to express the opposite of its literal meaning. By referring to the module maker as a "genius," the commenter is employing irony or teasing to suggest the opposite—that the module maker is not actually a genius. This remark may be intended to convey a sense of disbelief or dissatisfaction with the module's quality or content. Both comments make use of teasing or sarcasm to indirectly express criticism or skepticism. By employing irony or teasing language, the commenters subtly convey their negative opinions about the module maker or the quality of the modules themselves. This teasing or sarcastic tone allows the commenters to express their disapproval in a somewhat playful or indirect manner while still conveying their point of view.

Impoliteness Meta-strategy

This type of impoliteness strategy is performed with the use of the obviously deceitful act and thus remains surface realizations. Samples of this strategy are harsh or bitter jokes and humor.

Table 6 Impoliteness Meta-strategy in the Online Comments

Type of Impoliteness Strategy	Indicator	Sample Statement	Corpus Code
Impoliteness Meta-strategy	Throwing harsh or bitter jokes and humor.	The one who made the module is bright hahaha! (OC 20)	OC20
		Briones' idiocy! She should have been a [profanity] so I can swallow her easily!	OC36

Throwing harsh or bitter jokes and humor. OC20 utilizes bitter humor or sarcasm to convey the opposite of its literal meaning. By stating that the module maker is "bright" while including laughter ("hahaha"), the commenter employs irony or sarcastic humor to suggest the opposite—that the module maker is not actually bright. This remark may be intended to mock or criticize the module maker's intelligence or competence, using humor as a vehicle for expressing dissatisfaction or disapproval. Likewise, OC36 includes harsh language and a bitter joke aimed at Briones. The phrase "Briones' idiocy!" directly insults Briones by implying a lack of intelligence. The following remark about her being something vulgar and swallowable is a metaphorical expression of contempt and aggression. This comment demonstrates a particularly strong level of impoliteness, combining insults, derogatory language, and a bitter joke to convey a negative view of Briones. In both comments, there is a deliberate use of harsh or bitter jokes and humor to express criticism, mockery, or disdain. The humor employed serves as a cover for expressing negative opinions or insults in a somewhat veiled manner. By utilizing bitter jokes and sarcastic humor, the commenters employ the Impoliteness Meta-strategy to convey their discontent or disapproval in a way that may elicit amusement from some while simultaneously expressing their negative views.

Discussions

Based on the findings, six impoliteness strategies with indicators and subcategories that pinpoint the types of impoliteness perceptible in the statements, which are bald-on record, positive impoliteness, negative impoliteness, off-record impoliteness, withhold politeness, and impoliteness meta-strategy.

Bald-on record Impoliteness. In the comments analyzed, it is evident that critics resorted to this impoliteness strategy that involves imposing negative attributes and undesirable features onto various learning delivery modalities without considering the relevance to the situation (Culpeper & Hardaker, 2015; Scarantino, 2017). By disregarding the face-saving aspect of communication, such behavior can be perceived as socially unacceptable and impolite. Furthermore, the online comments express discontent and disillusionment with the teaching modalities implemented by the department, prompting the critics to impose their own proposed programs before others. In doing so, these critics impose pessimism on the LDMs, engaging in what can be termed as face-threatening acts (FTAs). These acts threaten the negative face of the hearer by restricting their personal freedom (Brown & Levinson, 1987). Overall, the use of this impoliteness strategy in the comments reflects the critics' intention to assert their negative opinions without regard for the potential consequences or the impact on the face of the hearer.

Positive Impoliteness. The findings evidence the use of positive impoliteness strategies in online comments criticizing the DepEd and its LDM implementation. The findings suggest that critics employ positive impoliteness to damage DepEd's reputation and name. This strategy involves showing disapproval, indifference, and callousness. Bousfield & McIntyre (2018) argue that this strategy harms the hearer's need for acceptance and a good self-image. Magnifico & Defrancq (2016) claim that criticizing the hearer's actions can damage their good image and undermine their pleasant face. Critics also aim to make DepEd feel uncomfortable through their impolite statements, which can cause emotional and physical discomfort (Zeff, 2016). Mohammed & Abbas (2015) suggest that making others feel uncomfortable indicates positive impoliteness and damages the desire for acceptance. The use of abusive and disrespectful language is another indicator of positive impoliteness, belittling DepEd, and expressing criticism (Wiegand et al., 2018). Finally, critics inculcate a belief that actions damaging to DepEd will arise, initiating setbacks and impediments to DepEd's implementation of LDMs. This inculcation of beliefs can cause uneasiness and discomfort (Bousfield & McIntyre, 2018; Karttunen, 2016; Polyzou, 2015). More so, these positive impoliteness strategies threaten the positive face and self-image of the hearer and restrict their personal freedom (Kamalu & Fasasi, 2018; Mollin, 2018).

Negative Impoliteness. Critics have expressed their dissatisfaction with the interventions implemented by the Department of Education (DepEd) to rectify grammar and content errors found in various learning delivery modalities. These criticisms often take the form of negative impoliteness, characterized by a disdainful, scornful, or ridiculous tone aimed at asserting relative power dynamics (Thielemann & Kosta, 2013). By employing such strategies, the critics aim to challenge the hearer's negative face wants, which refer to the desire to be free from imposition (Thielemann & Kosta, 2013). It is worth noting that some of the critics might feel entitled to mock and ridicule the DepEd due to perceived mistakes and shortcomings in the implementation of the learning delivery modalities. Yet, cursing, mocking, and digging remarks definitively cause offense and negatively impact communication climate (Haugh, 2017; Culpeper & Hardaker, 2015; Lim, 2017). These actions threaten the positive face and professional identity of the department and teachers (Kamalu & Fasasi, 2018; Kopecky & Szotkowski, 2017). As Taylor (2016) explains, ridiculing someone serves to undermine their credibility and dignity. In the context of online comments, the use of ridicule by these critics serves to threaten the negative face of the hearer, restricting their personal freedom by expressing orders, reminding them of their duties, and suggesting negative actions (Brown & Levinson, 1987). The manifestation of negative impoliteness in online comments serves as a means for critics to assert their discontent and exert power over the perceived shortcomings of the department. By employing ridicule and expressing their dissatisfaction, these critics challenge the department's credibility and attempt to restrict the freedom of the DepEd and its stakeholders.

Off-record Impoliteness. This study reveals the presence of off-record impoliteness in online comments, where attributable intention deliberately outweighs other intentions (Culpeper & Hardaker, 2015). Insinuation emerges as an indicator of off-record impoliteness, characterized by the expression of unpleasant hints or suggestions regarding DepEd's implementation of learning delivery modalities. An insinuation is employed by speakers to make addressees believe them without being held accountable for their statements (Papi, 2014). Online comments demonstrate critics expressing weariness and annoyance towards DepEd's ineffective programs while evading accountability for their expressions. Camp (2018) highlights that insinuation offers a unique rhetorical advantage by mitigating communicative risk by leaving certain contents unstated. The critics leave harsh comments, provoking harsh and inhospitable reactions from the public. Consequently, the positive face of the hearer is threatened, as the critics negatively express DepEd's positive face by voicing criticism and complaints. Chen & Lu (2017) argue that the positive face wants of the hearer are undermined when the speaker disapproves by stating or implying that the hearer is mistaken, irrational, or misguided.

Withhold Politeness. This research reveals the utilization of a strategy that employs direct language to avoid imposition. This strategy is evident in online comments through the use of teasing and sarcasm. Teasing, as described by Trotzke et al. (2020), involves playfully provoking or making fun of someone. In the context of online comments, teasing and sarcasm are directed towards DepEd's implementation of learning delivery modalities. These sub-strategies may appear superficially acceptable but carry an underlying meaning that opposes the surface level (Bousfield, 2008; Thielemann & Kosta, 2013). The comments indicate that critics employ these strategies to challenge the perceived incompetence of DepEd. With the presence of flaws and errors in the learning modules, the critics vent their frustrations regarding the ineffectiveness and inadequacy of DepEd in addressing the problems associated with each learning modality. This conflict serves as a catalyst for creativity (Huang et al., 2015; Rajadesingan et al., 2015). Consequently, the positive face of the hearer is threatened in the online comments, as criticism and sarcasm are directed toward the errors present in the modules. As highlighted by Chen & Lu (2017), the positive face wants of the hearer are undermined when the speaker expresses sarcasm and indifference towards them.

Impoliteness Meta-strategy. The findings of this research highlight another type of impoliteness strategy that involves obviously deceitful acts, and maintaining surface-level appearances (Culpeper & Hardaker, 2015). In the context of online comments, this impoliteness meta-strategy is evident through the critics' utilization of harsh or bitter jokes and humor to express their dissatisfaction and disapproval of DepEd's interventions concerning the learning delivery modalities. The comments indicate that the critics aimed to insult the department by mocking its mistakes and shortcomings, using symbolic violations of identities and social norms to entertain other internet users. Culpeper (1996) suggests that creativity is a key characteristic of this form of impoliteness, often observed in competitive environments. Frustrated and angered critics resort to online humor as a means of garnering attention from the department. Savage et al. (2017) argue that employing jokes and a sense of humor can serve as a defense mechanism for coping with stress, frustration, and anger. Additionally, the online comments' FTAs pose a threat to the positive face and self-image of the hearer, as they involve negative evaluations of the DepEd secretary and complaints about the module writers' shortcomings, leading to damage to the reputation of these officials and teachers. According to Brown and Levinson (1987), the positive face of the hearer is undermined when the speaker directly or indirectly employs bitter jokes targeting the hearer's attributes, actions, and desires.

Conclusion and suggestions

The study identifies six impoliteness strategies, including bald-on record, positive impoliteness, negative impoliteness, off-record impoliteness, withhold politeness, and impoliteness meta-strategy. These findings make significant contributions to our understanding of impoliteness in online comments. It sheds light on the various forms of impoliteness that can be observed on social media platforms, alerting users to the potential for negative and disrespectful discourse. By identifying impoliteness strategies, the study provides a comprehensive framework for categorizing and analyzing impolite behavior in online communication. Hence, the study suggests practical implications for educational institutions and individuals. It calls for the Department of Education to be more meticulous in its decision-making processes, policies, and production of learning delivery modalities to mitigate situations that elicit impoliteness. Quality assurance committees can be established to ensure the dependability and integrity of educational programs and initiatives. Furthermore, implementing values-related interventions can help reduce rudeness among students, teachers, parents, and the general population, fostering a more respectful communication environment. The study also highlights the moral and social obligations of individuals in online communication. It reminds users that impoliteness directed at others reflects their own character and ethics, potentially harming not only the recipient's face but also their own reputation. By understanding how impoliteness is manifested in online comments, society can gain insights into building remarks that do not disgrace or injure others, promoting more considerate and respectful communication practices. In essence, this study's contribution lies in its identification and characterization of impoliteness strategies in online comments and its practical implications for educational institutions and individuals. By increasing awareness and understanding of impoliteness, the study paves the way for fostering a more respectful and constructive online communication environment.

The study offers valuable insights and practical implications for impoliteness in online comments. However, it has limitations in terms of sample representativeness, subjective coding, contextual factors, and focus on specific forms of online communication. Further research is needed to address these limitations and enhance our understanding of online impoliteness. This includes exploring the prevalence and effectiveness of impoliteness strategies in different online contexts, as well as developing and evaluating interventions to reduce impoliteness, especially in educational settings. Evaluating the effectiveness of interventions can contribute to evidence-based strategies for fostering respectful online communication. Exploring politeness in addition to impoliteness strategies in the study is of paramount importance as it offers a more well-rounded and nuanced analysis of the communication dynamics surrounding DepEd and its officials during the implementation of new learning delivery modalities. Most importantly, it is essential to acknowledge that this focus on online critics and their criticisms brings about certain limitations to the research. It is recommended to conduct additional research that explores the sentiments and counter-strategies of DepEd officials and employees regarding online criticism. This research can be conducted through interviews, surveys, or focus groups with relevant stakeholders within the organization. By examining both sides of the communication dynamic, the study will provide a more comprehensive understanding of the issues, leading to more effective policy recommendations and practical implications for improving educational messaging and implementation during challenging times like the pandemic.

New knowledge and the effects on society and communities

The COVID-19 pandemic has prompted the Philippines, along with other nations, to restructure its educational framework to meet the evolving needs and challenges of the time. Consequently, this reorganization has led to changes in the learning delivery modalities (LDMs). The study's outcomes suggest that analyzing impoliteness strategies in online comments can provide insights into how such remarks serve as social actions. Researchers working with these textual forms, as well as those specializing in the study of genres and languages, can benefit from the findings of this study. The implications of the findings are discussed for policymakers, educators, and students within the Philippine education system.

References

Adonis, M. (2020). *Errors found in DepEd learning modules, TV lesso*n. Inquirer.Net. Retrived from https://newsinfo.inquirer.net/1346930/errors-found-in-modules-tv

Ardila, J. G. (2019). Impoliteness as a rhetorical strategy in Spain's politics. *Journal of Pragmatics*, *140*, 160-170. https://doi.org/10.1016/j.pragma.2018.11.017

Arora, A., Bansal, S., Kandpal, C., Aswani, R., & Dwivedi, Y. (2020). Measuring social media influencer index-insights from Facebook, Twitter and Instagram. *Journal of Retailing and Consumer Services*, *49(1)*, 86-101. https://doi.org/10.1016/j.jretconser.2019.03.012

Bousfield, D. (2008). *Impoliteness in interaction* (Vol. 167). Benjamins.

Bousfield, D., & McIntyre, D. (2018). Creative linguistic impoliteness as aggression in Stanley Kubrick's Full Metal Jacket. *Journal of Literary Semantics*, *47*(1), 43-65. DOI:10.1515/jls-2018-0003

Braun, V., & Clarke, V. (2013). *Successful qualitative research: A practical guide for beginners*. SAGE Publication.

Brown, P., & Levinson, S.C. (1987). *Politeness: Some universals in language usage* (Vol. 4). Cambridge university press.

Camp, E. (2018). Insinuation, Common Ground, and the Conversational Record. In D. Fogal, D.W. Harris, & M. Moss (Eds.), *New Work on Speech Acts (pp. 40-60).* Oxford Academic. https://doi.org/10.1093/oso/9780198738831.003.0002

Chen, G. M., & Lu, S. (2017). Online political discourse: Exploring differences in effects of civil and uncivil disagreement in news website comments. *Journal of Broadcasting & Electronic Media*, *61*(1), 108-125. https://doi.org/10.1080/08838151.2016.1273922

Chung, E., & Tang, E. (2022). Understanding politeness in an online community of practice for Chinese ESL teachers: Implications for sustainable professional development in the digital era. *Sustainability*, *14*, 11183. https://doi.org/10.3390/su141811183

Culpeper, J. (1996). Impoliteness revisited: With special reference to dynamic and prosodic aspects. *Journal of pragmatics*, *35*(10-11), 1545-1579. https://doi.org/10.1016/S0378-2166(02)00118-2

Culpeper, J. (2005). Impoliteness and entertainment in the television quiz show: The Weakest Link. *Journal of Politeness Research: Language, Behaviour, Culture*, *1*, 35-72. DOI:10.1515/jplr.2005.1.1.35

Culpeper, J., & Hardaker, C. (2015). Impoliteness. In J. Culpeper, M. Haugh, & D. Kadar (Eds.), *The Palgrave handbook of linguistic (im)politeness* (pp. 199-225). Palgrave Macmillan.

DeAngelis, C., (2020, April 30). *The coronavirus pandemic's impact on education and the defenders of the status quo*. Reason Foundation. Retrived from https://reason.org/commentary/the-coronavirus-pandemics-impact-on-education-and-the-defenders-of-the-status-quo/

Garbe, A., Ogurlu, U., Logan, N., & Cook, P. (2020). Parents' experiences with remote education during COVID-19 school closures. *American Journal of Qualitative Research*, *4*(3), 45-65. https://doi.org/10.29333/ajqr/8471

Haugh, M. (2017) Teasing. In S. Attardo (Ed.), *Handbook of language and humour* (pp. 204-218). Routledge.

Holmes, J., Marra, M., & Schnurr, S. (2008). Impoliteness and ethnicity: Māori and Pākehā discourse in New Zealand workplaces. *Journal of Politeness Research*, *4*(2), 193-219. https://doi.org/10.1515/JPLR.2008.010

Huang, L., Gino, F., & Galinsky, A. D. (2015). The highest form of intelligence: Sarcasm increases creativity for both expressers and recipients. *Organizational Behavior and Human Decision Processes*, *131*, 162-177. https://doi.org/10.1016/j.obhdp.2015.07.001

Kamalu, I., & Fasasi, K. (2018). Impoliteness and face-threatening acts as conversational strategies among undergraduates of state universities in southwest Nigeria. *Language Matters*, *49*(2), 23-38. http://dx.doi.org/10.1080/10228195.2018.1467478

Kapasia, N., Paul, P., Roy, A., Saha, J., Zaveri, A., Mallick, R., Barman, B., Das, P., & Chouhan, P. (2020). Impact of lockdown on learning status of undergraduate and postgraduate students during COVID-19 pandemic in West Bengal, India. *Children and Youth Services Review*, *116*(1), 105194. https://doi.org/10.1016/j.childyouth.2020.105194

Karttunen, L. (2016). Presupposition: what went wrong? *Proceedings of SALT, 26*(1), 705–731. https://doi.org/10.3765/salt.v26i0.3954

Kopecky, K., & Szotkowski, R. (2017). Cyberbullying, cyber aggression and their impact on the victim–The teacher. *Telematics and Informatics*, *34*(2), 506-517. https://doi.org/10.1016/j.tele.2016.08.014

Lalu, G. P. (2020). Briones says students' badmouthing of her proves the need to continue classes. *Inquirer.Net.* Retrived from https://newsinfo.inquirer.net/1345902/briones-says-students-badmouthing-of-her-proves-the-need-to-continue-classes

Lim, J. S. (2017). How a paracrisis situation is instigated by an online firestorm and visual mockery. Computers in Human Behaviors, *67*(1), 252-263. https://doi.org/10.1016/j.chb.2016.10.032

Magnifico, C., & Defrancq, B. (2016). *Translation and Interpreting*, *8*(2), 26- 45. http://dx.doi.org/10.12807/ti.108202.2016.a03

Magsambol, B. (2020). 30 errors found in DepEd's learning modules. *Rappler*. Retrived from https://www.rappler.com/nation/errors-identified-deped-learning-modules-distance-learning/

Malipot, M. H. (2020). DepEd apologizes for new error in TV lesson. *Manila Bulletin.* Retrived from https://mb.com.ph/2020/10/07/deped-apologizes-for-new-error-in-tv-lesson/

Mohammed, H., & Abbas, N. (2015). Pragmatics of impoliteness and rudeness. *American International Journal of Social Science*, *4*(6), 195- 205. https://www.aijssnet.com/journals/Vol_4_No_6_December_2015/24.pdf

Mollin, S. (2018). The use of face-threatening acts in the construction of in- and out-group identities in British parliamentary debates. In B. Bos, S. Kleinke, S. Mollin, and N. Hernandez (Eds.), *The Discursive construction of identities on- and offline: Personal-group- collective* (pp. 205-226). John Benjamins Publishing Company. https://doi.org/10.1075/dapsac.78.09mol

Papi, M. B. (2014). The pragmatics of insinuation. *Intercultural Pragmatics*, *11*(1), 1-29. https://doi.org/10.1515/ip-2014-0001

Polyzou, A. (2015). Presupposition in discourse. *Critical Discourse Studies*, *12*(2), 123-138. https://doi.org/10.1080/17405904.2014.991796

Rajadesingan, A., Zafarani, R., & Liu, H. (2015, February). Sarcasm detection on Twitter: A behavioral modeling approach. In *Proceedings of the eighth ACM international conference on web search and data mining* (pp. 97-106). https://doi.org/10.1145/2684822.2685316

Ranalan, R. (2020). Linguistic politeness in online discussion boards: Animé fandom as virtual speech communities. *Linguistics and the Human Sciences*, *14*(2), 99-122. https://doi.org/10.1558/lhs.34949

Reimers, F., Schleicher, A., Saavedra, J., & Tuominen, S. (2020). Supporting the continuation of teaching and learning during the COVID-19 Pandemic. *The Organization for Economic Cooperation and Development*, *1*(1), 1-38. https://www.oecd.org/education/Supporting-the-continuation-of-teaching-and-learning-during-the-COVID-19-pandemic.pdf

Savage, B. M., Lujan, H. L., Thipparthi, R. R., & DiCarlo, S. E. (2017). Humor, laughter, learning, and health! A brief review. *Advances in physiology education*. *41*, 341-347. https://doi.org/10.1152/advan.00030.2017

Scarantino, A. (2017). How to do things with emotional expressions: The theory of affective pragmatics. *Psychological Inquiry*, *28*(2-3), 165-185. https://doi.org/10.1080/1047840X.2017.1328951

Sharif, T., Noor, M., & Omar, S. (2019). Politeness in online communication: Retailer-client interaction. *Humanities and Social Sciences Reviews*, *7*(2), 233-239. https://doi.org/10.18510/hssr.2019.7226

Taylor, C. (2016). *The language animal*. Harvard University Press.

Thielemann, N. & Kosta, P. (2013). *Approaches to Slavic interaction*. John Benjamins Publishing Company.

Trotzke, A., Bidese, E., & Moroni, M. C. (2020). German discourse particles in the second language classroom: Teasing apart learning problems at the syntax-pragmatics interface. *Pedagogical Linguistics*, *1*(2), 184-210. http://dx.doi.org/10.1075/pl.20008.tro

Wiegand, M., Ruppenhofer, J., Schmidt, A., & Greenberg, C. (2018). Inducing a lexicon of abusive words – a feature-based approach. *In Proceedings of the 2018 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies, Volume 1 (Long Papers),* pages 1046–1056, New Orleans, Louisiana. Association for Computational Linguistics.

Zeff, B. (2016). The pragmatics of greetings: teaching speech acts in the EFL classroom. *English Teaching Forum*, *54*(1), 2-11. http://files.eric.ed.gov/fulltext/EJ1094818.pdf

Zhang, Q. (2022). Politeness in online educational discourse: Exploring relational work strategies in online teacher-student interactions. *Open Journal of Social Sciences*, *10*(7), 245-261. https://doi.org/10.4236/jss.2022.107021

Connecting Integrated Tourism Networks Post COVID-19 Scenario with Geoinformatics Innovation in Prachuap Khiri Khan Province for Thai Tourists

Aungkana Jattamart, Paingruthai Nusawat,
Noppadol Saikatikorn and Achaporn Kwangsawad*
Department of Business Information Technology, Faculty of Business Administration
Rajamangala University of Technology Rattanakosin, Wang Klai Kangwon Campus, Thailand
E-mail: aungkana.jat@rmutr.ac.th, paingruthai.nus@rmutr.ac.th,
noppadol.sai@rmutr.ac.th and achaporn.kwa@rmutr.ac.th*
*Corresponding author
(Received: 24 March 2023, Revised: 14 June 2023, Accepted: 18 June 2023)
https://doi.org/10.57260/rcmrj.2023.264429

Abstract

Adapting to survive the post-COVID-19 pandemic is challenging for tourism and hospitality businesses. Government agencies play a significant role in assisting entrepreneurs in overcoming crises. The objectives of this study were to examine the situation of the tourism industry in Prachuap Khiri Khan Province, develop integrated tourism innovations utilizing geo-informatics technology to connect tourism networks and evaluate the satisfaction of tourism innovations. This study utilised mixed research methods. The study instruments consisted of an open-ended questionnaire and in-depth interviews to examine the state of the tourism industry in the region, the ArcGIS Online software for developing innovations in geospatial tourism, and an online questionnaire to assess satisfaction with innovation. The questionnaire results were analyzed using descriptive statistics. The sample group for the satisfaction evaluation was comprised of 410 Thai tourists. The results of the study found that 1) there was a problem with the lack of connection of tourism database systems within the province, making it difficult for tourists to access information, 2) innovations developed to become a central database that collects information on tourism businesses sectors in the prototype area and interactive data analysis tools for users at any time and 3) the satisfaction assessment results indicated that tourists were satisfied with the database.

Keywords: Tourism innovation, Integrated tourism, Geographic information system, Regional tourism network, Post Covid-19 Scenario

Introduction

The COVID-19 outbreak has affected the economy, society and people's minds. The tourism and hospitality industry is the most affected as it is related and relies heavily on travel (Dube et al., 2021). Specifically, the government's lockdown order aims to prevent the spread of COVID-19. Instead, it causes rapid and severe damage to the tourism and hospitality industry (Sheresheva et al., 2021). International travel restrictions had an immediate impact on the tourism industry, including the disruption of the aviation industry, the cancellation of tour sales and hotel reservations, the sharp decline in leisure and entertainment establishments and the lowest drop in tourist demand for tourism-related services (Ntounis et al., 2022; Tsionas, 2021). As stated previously, 30 to 40 percent of the global travel and service market is forced to shut down because their expenses exceed their income (Haywood, 2020).

After measures and restrictions were relaxed, stakeholders involved in the tourism industry had to adapt to new social distancing guidelines. Especially in the small and medium-sized business sector, it is challenging to adapt to survive the COVID-19 pandemic. Most countries have used economic stimulus measures from the government to maintain their tourism economy (Huynh et al., 2022). World Trade Organization (WTO) has outlined four measures that most countries worldwide are taking action in response to the COVID-19 pandemic, consisting of 1) financial support measures, 2) measures for employment and skills training, 3) measures to create marketing alliances and 4) to restart the tourism industry (UNWTO, 2020). These measures aim to revitalize tourism and encourage tourists to visit again. It shows that the government and agencies are essential in supporting more effective proactive crisis resolution.

Thailand's tourism and hospitality industry has also been severely affected by the COVID-19 pandemic, including a massive loss of tourism revenue and a sharp drop in foreign tourists. The sharp decline in Thai and foreign tourists in 2021 has significantly impacted Prachuap Khiri Khan Province, the country's tourism hub. In 2021, there were 2,673,519 Thai tourists and 3,597 foreign tourists. While in 2019, it was found that there were 5,924,708 Thai tourists and 1,243,443 foreign tourists (Manager Online, 2020). However, it is anticipated that when the COVID-19 epidemic subsides, tourists will pay greater attention to tourism standards and hygiene safety in Thailand (Parliamentary Budget Office, 2020). Travelers will turn to digital technology and travel platforms for their travel planning. Online travel market trends will significantly influence the tourism and hospitality industry's potential centred on travel technology. The strategy of conducting business in a digital environment, known as digital marketing, has spawned a new business model in the tourism industry (Palos-Sanchez et al., 2021). Internet-connected electronic devices are utilised to aid tourists during their travels. It also resulted in the creation of an integrated social media platform and tourism website to increase economic opportunities within the local community (Jattamart et al., 2023; Saura, 2021; Zhou et al., 2020).

Rural tourism has become a strategy for revitalising rural regions' economies because it can generate jobs, incomes, and improvements in the quality of life for the community's residents (Ariyani & Fauzi, 2023; Gohori & van der Merwe, 2020). Tourism integration is a new and innovative business model that aims to provide users with a positive travel experience, given the increasing popularity of Internet use while travelling and engaging in tourism-related activities. Tourism industry stakeholders should develop the concept of developing alternative tourism and utilising technological innovation to satisfy tourists following the context of the area. It will lead to the development a sustainable tourism industry by utilising technology effectively.

This study is designed to fill the study gap to develop an innovative geospatial integrated geospatial to connect the tourism network of Prachuap Khiri Khan Province after the COVID-19 situation. This study focuses on the involvement of many sectors, including local government agencies, namely sub-district local governments, the private sector in tourism and small-scale services to link tourism. The distribution of popularity and attraction of tourists from Hua-Hin Subdistrict considered the primary tourist destination of Pak Nam Pran Subdistrict, results in a plan to develop tourist attractions in the region to support the expansion of tourism links throughout Prachuap Khiri Khan Province. The highlight of the developed tourism innovation is a tool to recommend travel routes and tools to analyze and search for resorts and restaurants according to desired conditions. It also displays the location, information and pictures of the place online. This will help tourists plan their trips and make decisions more conveniently. It also helps solve problems for the small private sector to survive in the post-COVID-19 situation.

Objectives

1. To examine the situation of the tourism industry in Prachuap Khiri Khan province.
2. To develop tourism innovation integrated with geo-informatics technology to connect the tourism network in Prachuap Khiri Khan Province.
3. To evaluate the satisfaction with integrated tourism innovation utilizing geo-informatics to connect the tourism network in Prachuap Khiri Khan Province.

Literature and theoretical background

Challenges facing businesses during the COVID-19 pandemic

With the global economy slowing down and long-term affected by the COVID-19 pandemic, the tourism and hospitality industries are inevitably affected directly (Crick & Crick, 2020). Especially the businesses that were affected before other businesses, namely the tourism business, accommodation and restaurants (Anusonphat, 2020). Experts suggest that the pandemic is more likely to affect small businesses than large ones (Bartik et al., 2020; Juergensen et al., 2020; Shafi et al., 2020). This is because small companies have limitations in managing risks such as lack of capital and liquidity, fixed costs but reduced or no revenue, decreased customer demand and technology limitations. At the same time, the smallest businesses are trying to adapt to survive this crisis by postponing investment, reducing labor costs through forced reductions in staff or wages, cutting costs, and changing marketing strategies, including the use of digital technology to increase market opportunities (Anthony & Abbas, 2021; Priyono et al., 2020). It has responded to the crisis by seeking cooperation with all sectors to improve the potential of community tourism by promoting both local and private sectors, sharing local resources, and increasing community tourism standards to build tourists' confidence. Developing and expanding the community's competitiveness will help local tourism adapt sustainably.

Changing travel behavior of tourists

In efforts to revitalize the tourism and hospitality industry, all sectors must understand the tourism behavior of tourists in the post-COVID-19 situation. Research has found that planned travel behavior after the pandemic relates to traveler perceptions. The travel intent primarily focuses on the facility's safety and hygiene standards, such as hotel hygiene and privacy (Kourgiantakis et al., 2021; J. Li, Nguyen, & Coca-Stefaniak, 2020), or favoring less interactive forms of tourism such as nature and adventure tourism (Cristina-Andrada et al., 2020). In addition, the quality of service is another factor in creating satisfaction and an experience that meets the expectations of tourists. There are 5 components: 1) attractions and nearby areas, 2) facilities and services, 3) accessibility, 4) destination image, and 5) price (Schlesinger et al., 2020). Therefore, if all sectors understand the perceptions and expectations of tourists and use them to improve services that align with each area's critical situation and specific context. It will help tourists be satisfied with the service, affect the loyalty to use the service in the future and lead to the foundation of sustainable tourism.

Technological innovation and the recovery of the tourism and service industry

Technological innovation plays a crucial role in recovering the tourism and hospitality industry during the COVID-19 pandemic, starting with users turning to social media to find health information (Z. Li, Wang, Abbas, Hassan, & Mubeen, 2022). While the business sector has introduced technological innovations to reduce the interaction between users and employees to confirm safety and hygiene standards in providing services (Shin & Kang, 2020) or implementation of web technologies, development of applications using artificial intelligence (AI), application of IOT (Internet of Things) technologies for intelligent services (Orîndaru et al., 2021). The goal is to want to recover the tourism and service industries. However, using technological innovations to improve services will not be problematic for medium and large enterprises without financial constraints. Adopting innovative technology may not be worth the cost if it is a small business sector with many fragmented operations. In addition, the inability to accept new technologies for service use is a significant obstacle in service development (Sung et al., 2020).

Therefore, helping small tourism and service businesses to recover after the COVID-19 crisis requires cooperation from all sectors. Starting with government agencies in the area to explore the situation of the tourism industry in the area, gather information about establishments that operate tourism and service businesses, and develop technological innovations to create a tourism database suitable for the site. This will help facilitate today's tourists who use digital technology and travel platforms to plan their trips. It also increases market opportunities for the small business sector to compete with medium and large business sectors. Meanwhile, the private sector should participate in marketing promotion activities organized by local government agencies in response to sustainable economic recovery strategies in the area.

Methodology

This research employed mixed methods research as follows: Qualitative research describes objective 1, an examination of the situation of the tourism industry in Prachuap Khiri Khan province. Quantitative research describes Objective 3, which evaluates the satisfaction with the developed innovations. The research methodology was developed within the system development life cycle (SDLC) framework, partitioning the research process into three phases, as depicted in Figure 1.

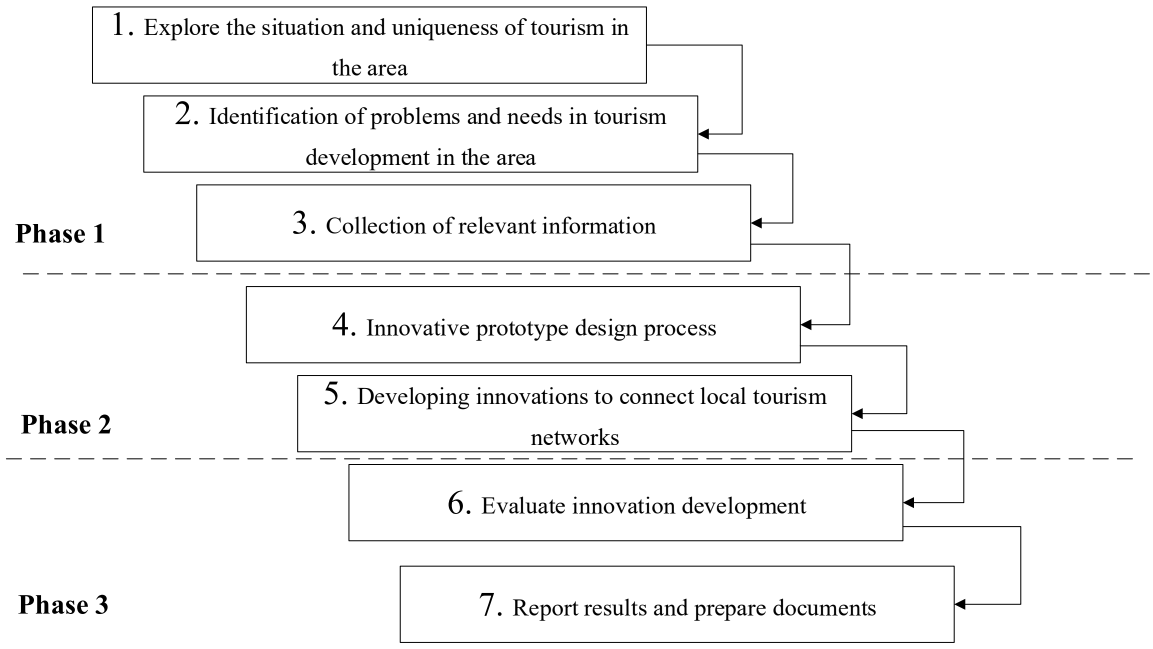


Figure 1 Research process
(Source: Researcher, 2023)

Phase 1: Surveying and collecting data on tourism situations

1. Explore the situation and uniqueness of tourism in the area

Entering the prototype area is Pak Nam Pran Subdistrict Pranburi District Prachuap Khiri Khan Province to explore the situation and uniqueness of tourism in the area. The northern boundary of the Pak Nam Pran sub-district connects to Nong Kae Sub-district, Hua-Hin District, along with a 12-kilometer-long beach line. Pak Nam Pran Subdistrict is a popular tourist destination with numerous hotels and other tourism-related business investments. Make individuals work as farmers, fishermen, merchants, contractors, and business owners, among other occupations.

2. Identification of problems and needs in tourism development in the area

The research team met with administrators and related persons of Pak Nam Pran Subdistrict Administrative Organization to clarify the project's objectives and inquire about the problems and needs of tourism development in the area through an open-ended questionnaire. Additionally, The Pak Nam Pran Subdistrict Administrative Organization will help contact and publicize resort accommodation operators, pool villas and restaurants the local people operate to join the project. The Pak Nam Pran Subdistrict Administrative Organization clarified the reasons for public relations only to resort accommodation operators, as follows:

- Resort and pool villa operators are small operators who are directly affected and affect the employment of people in the community. Therefore, it should help support and give importance to small entrepreneurs to be able to operate their businesses to survive in the COVID-19 outbreak situation as a priority.

- Consistent with the tourism development strategy of Pak Nam Pran Subdistrict Administrative Organization in the first approach: developing, supporting and promoting tourism promotion activities, and the third approach: community development for conservation and tourism.

The reasons for Pak Nam Pran Subdistrict Administrative Organization above it align with the research project's objectives with the concept of focusing on the stakeholders in the area to get the most benefit from the research results. Therefore, it concludes the data collection issue by collecting data from accommodation operators such as resorts, pool villas and restaurants operated by local people who voluntarily participate in the research project and will collect data in the next step.

Figure 2 Consult with the administrators of the Pak Nam Pran Subdistrict Administrative Organization (Source: Researcher, 2023)

3. Collection of relevant information

The research team traveled to the area depicted in Figure 3 to collect data for the project.

Figure 3 Visit the area to collect data with entrepreneurs (Source: Researcher, 2023)

4. Innovative prototype design process

Use Case Diagrams are used for designing innovations to 1) summarize the capabilities of the system, 2) present the internal components of the system and 3) describe the interactions between the operators of the system and the activities of the system as a whole. The use case diagram of the innovative design is shown in Figure 4.

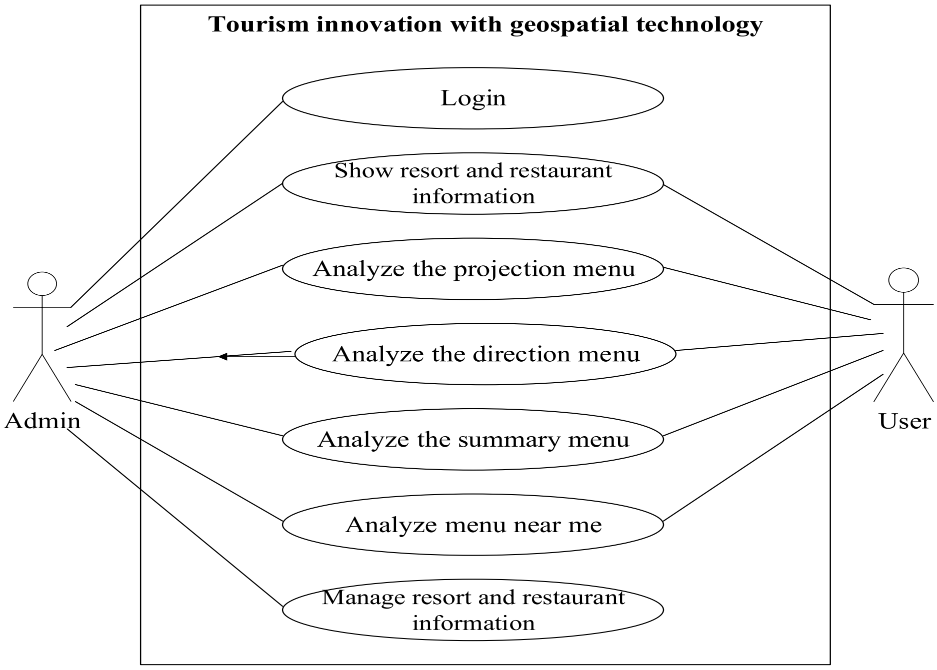


Figure 4 Shows a Use Case Diagram of an innovative prototype design (Source: Researcher, 2023)

From Figure 4, it can be explained that the innovation design divides the operator and the system into two parts as follows:

- Section 1 Admin: Administrators will interact with system activities, such as entering login information to manage innovation data, configuring menus for analyzing results, and personalizing display formats for easy access.
- Section 2 Users: Users can interact with internal activities without entering login credentials and have access to the resort and restaurant-specific information. Includes selecting the type of data analysis from each of the four menus.

5. Developing innovations to connect local tourism networks

Developing tourism innovations with ArcGIS Online supports spatial data analysis, displays online maps, and uses the Survey123 for ArcGIS application to collect resort and restaurant location coordinates. The information shown through the innovation consists of 1) place name, 2) location, 3) latitude and longitude, 4) type, 5) owner's name, 6) starting price, 7) contact method, 8) picture, 9) websites and 10) notes. The developed innovation can analyze data in four menus: 1) projection menu, 2) direction menu, 3) data summary menu and 4) near me menu.

Phase 3: Assessment of Satisfaction with Tourism Innovation

6. Evaluate innovation development

Assessment of satisfaction towards the development of tourism innovation uses an online questionnaire to collect data. There are applications of the Technology Acceptance Model (TAM), which describes information technology user behavior that is assessed by the user's level of perception of the system (Davis, 1989), and the Information System Success Model (IS Success Model), which is used to evaluate the success of information systems (DeLone & McLean, 1992), as a conceptual framework for developing the questionnaire.

The questionnaire was divided into three parts as follows: part 1, respondent information, part 2, satisfaction with the innovation, which consisted of 6 questions: 1) perceived usefulness of use, 2) perceived usefulness ease of use, 3) user attitude, 4) service quality, 5) information quality, and 6) system quality, and part 3, recommendations. The criteria for answering the questionnaire are Rating Scale 5 levels. The questionnaire was examined for the quality of the tool by evaluating the questionnaire's consistency with the study objectives (IOC) from three experts and testing the questionnaire's confidence with Cronbach's alpha coefficient of 0.92 (Cronbach, 1970).

The sample group for satisfaction assessment was Thai tourists who traveled in Pak Nam Pran sub-district. Cochran (1977) established the criteria for choosing a random sample of an undetermined sample size. Because the estimated number of tourists is 385 in the case of an unknown population, 410 is the number. Data from the samples were collected following the Principles of Human Research Ethics. The institutional review board of Rajamangala University of Technology Rattanakosin, Thailand (RMUTR-IRB, COA No. 003/2023) approved the research protocol.

Data collection commenced with selecting research participants who arrived to travel at "Tan Sam Ton", the primary check-in point for the Pak Nam Pran Subdistrict in March 2023. The research assistant will explain the purpose of the study and the data protection measures and provide the respondent's online contact information for the researcher and the research assistant in case the respondent has any questions. Including clarification that survey responses will not identify the respondent's identity to increase confidence in providing accurate information. The research assistant will send respondents an online questionnaire to complete if they volunteer to participate. Respondents are free to withdraw at any time from the questionnaire and study. The data were subsequently analyzed qualitatively using descriptive statistics. In the final step, all survey information will be deleted.

7. Report results and prepare documents

Explain the evaluation data following the tourism innovation satisfaction test to summarize the project's outcomes and prepare the concluding report.

Results

Results of the examine of the situation of the tourism industry in Prachuap Khiri Khan Province

From the Prachuap Khiri Khan Province Tourism Development Board meeting to drive the implementation of the Prachuap Khiri Khan Province Development Strategic Plan, the 3rd National Tourism Development Plan (2023-2027) and the 20-year national strategy on March 14, 2022. The province of Prachuap Khiri Khan's tourist statistics for the past three years has been reported (Manager Online, 2020), as shown in Table 1.

Table 1 Displays a report from tourist data for the past three years

Years	Total number of tourists (people)	Thai tourists (people)	Income from tourism of Thai people (million baht)	Foreign tourists (people)	Income from tourism of foreigners (million baht)
2019	7,168,424	5,924,708	28,601	1,243,443	13,790
2020	4,108,941	3,920,292	16,135	188,649	1,885
2021	2,677,116	2,673,519	10,494	3,597	36

Report information on tourists traveling in Prachuap Khiri Khan Province during 2019-2021 shows that the tourism economy of Prachuap Khiri Khan Province has significantly been affected by the COVID-19 virus epidemic. Therefore, to revitalize the tourism business to generate income again, the Prachuap Khiri Khan Governor has assigned every district to proceed in the following ways: 1) exploring the area's strengths and identity, 2) developing tourist attractions and 3) developing exciting products to create tourism programs according to the potential of the district group. The tourism program is divided into 3 zones: 1) Hua Hin – Pranburi, 2) Sam Roi Yot - Kui Buri - Prachuap Khiri Khan City and 3) Thap Sakae - Bang Saphan - Bang Saphan Noi. A tourism program focuses on staying at least 1-2 nights for tourists to have a longer time to spend in the area and to promote distribution in various districts and leading to income from tourism covering the whole province and giving importance to organizing activities that cater to different groups of tourists.

Based on a survey and interviews with entrepreneurs, resort businesses and restaurants in Pak Nam Pran Sub-district, it was found that in addition to the main problem of the decrease in tourists due to the COVID-19 epidemic situation. There are also problems in creating advantages and opportunities for competition between operators as follows:

1) Use the method of reducing prices to attract customers, but instead cut prices between operators. This event will directly affect small entrepreneurs with limited capital, causing some businesses to close because they cannot bear the cost of various expenses.

2) Using modern online media to assist with advertising is a form of incorporating information technology. However, entrepreneurs who lack expertise in information technology or are pioneers without a successor may be directly impacted by the lack of channels or public relations media that can reach more customers. Before deciding to use a service, modern tourists prefer to search online media for information and reviews from previous tourists, causing some business owners to miss out on increasing their income.

3) Using the method of combining public relations groups with government agencies, the Pak Nam Pran Subdistrict Administrative Organization will recommend resorts and restaurants that offer discounts to government agencies visiting the area in exceptional circumstances. If a customer desires to stay at a resort with multiple rooms but insufficient rooms available, the government agency will assist in recommending an alternative resort with sufficient rooms or an adjacent resort. It is possible to share rooms because most resorts in the area are neighboring and most resort operators are locals or relatives. This will increase exposure and entice more tourists to utilize the service.

Results of the development of integrated tourism innovation with geo-informatics technology

Integrated tourism innovation supports display via web and mobile applications, as shown in Figure 5.

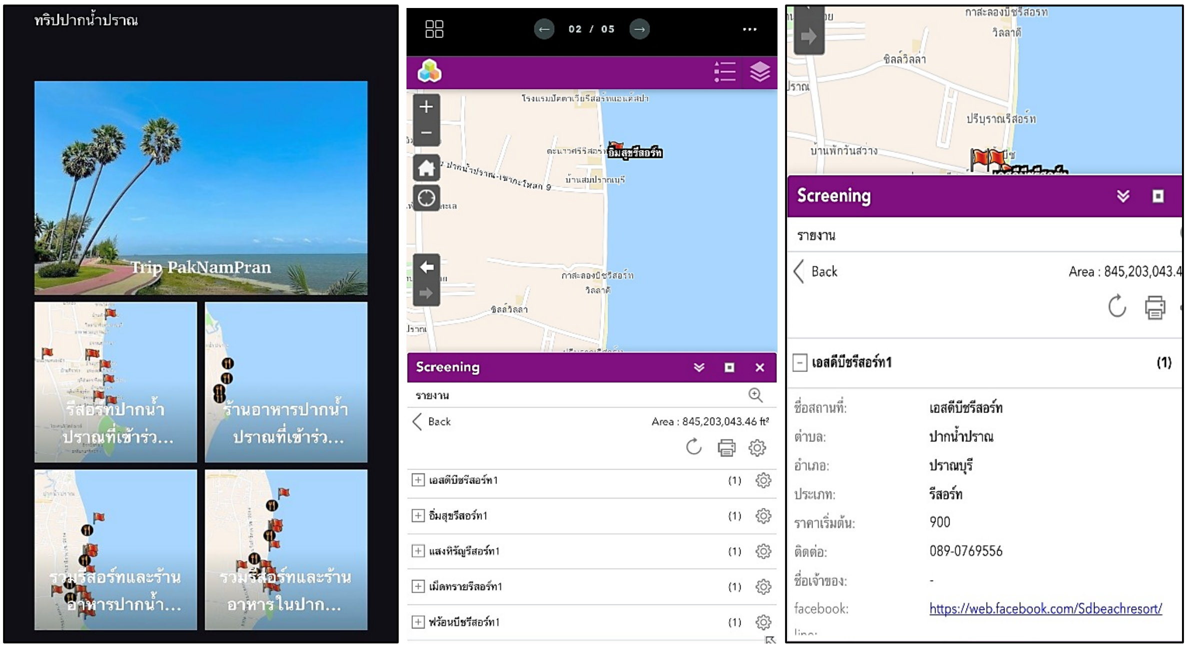


Figure 5 Display the display screen via Mobile Application
(Source: Researcher, 2023)

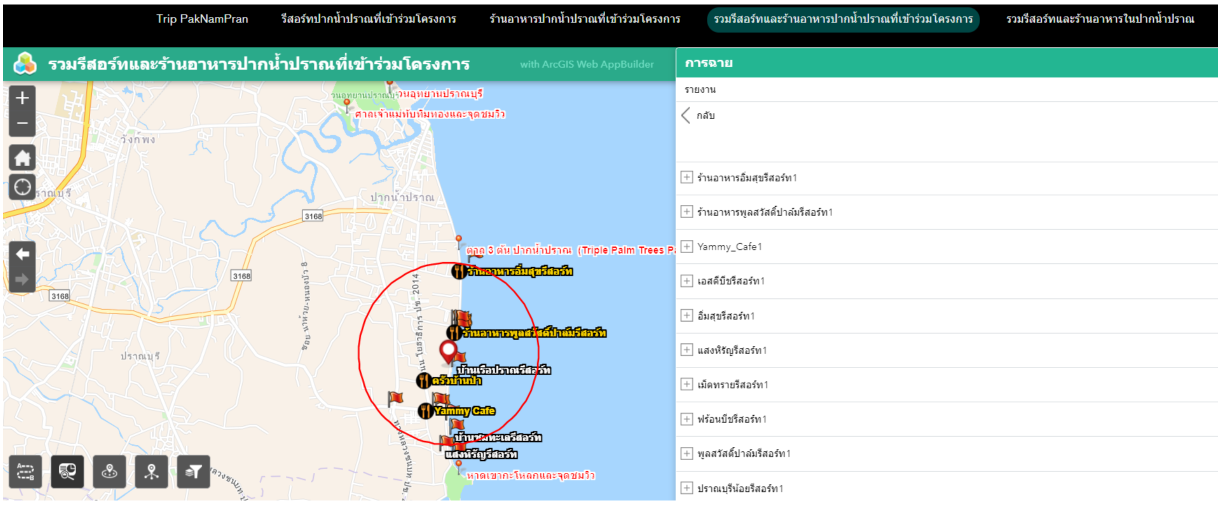


Figure 6 Show location search with projection tool
(Source: Researcher, 2023)

Figure 6 illustrates locating a location with the "Projection" tool. Within a specified radius, users can search for resorts and restaurants. Innovation will provide an inventory of new hotels and restaurants.

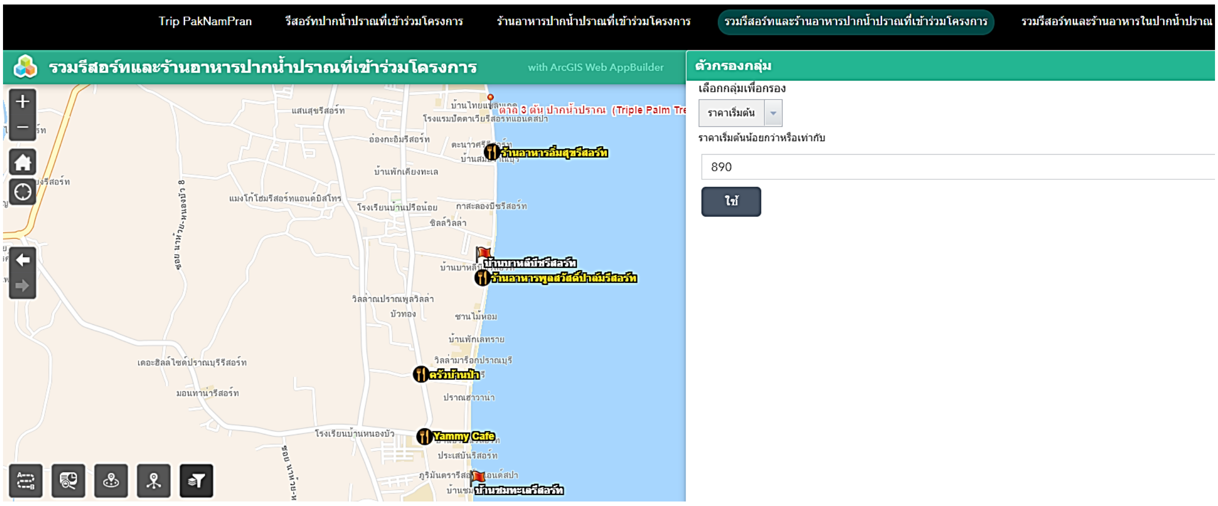


Figure 7 Displays location searches with the group filter tool
(Source: Researcher, 2023)

Figure 7 shows the search for places with the "Group Filter" widget. Users can search for resorts and restaurants to display results based on their preferences, such as searching for resorts with nightly room rates below 890 baht. The innovation will display a list of found hotels and restaurants. Users can press to view the information about the place.

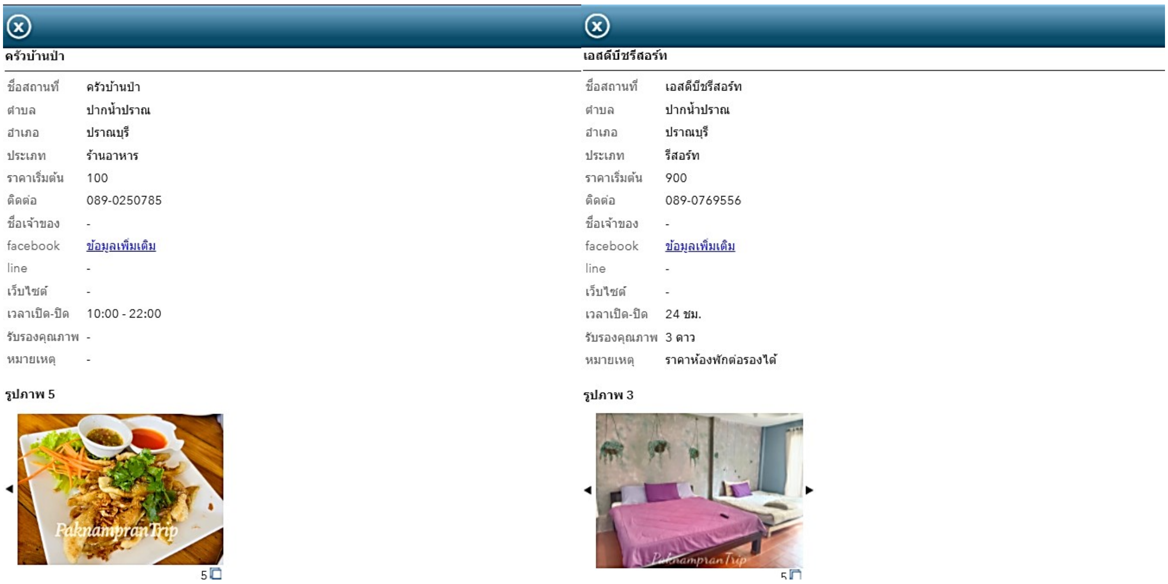


Figure 8 Shows a database of resorts
(Source: Researcher, 2023)

Figure 8 shows the database of each resort and restaurant that has been compiled. The innovation will display detailed information about the location, including name location, location, latitude, longitude, type, name of a business owner, starting price, contact channel, picture, website and remarks.

Satisfaction evaluation results for tourism innovation integrated with geospatial technology

Table 2 Displays satisfaction assessment results for innovations

Assessment Items	Number of samples (n = 410)	
	Average	**Meaning**
1. Perceived usefulness	4.49	Agree
2. Perception of ease of use	4.27	Agree
3. Attitude toward usage	4.02	Agree
4. Service quality	4.00	Agree
5. Information quality	4.16	Agree
6. Quality of the system	4.07	Agree
Total	**4.15**	**Agree**

Table 2 shows the satisfaction assessment results of 410 tourists traveling in Prachuap Khiri Khan Province. The following explains: With an average score of 4.49, travelers were happiest with the perceived usefulness. The highest-scoring criterion in this field is the accessibility of geospatial innovations, which makes obtaining information about tourism in Prachuap Khiri Khan Province easier. With an average score of 4.27, the perception of usability comes next. Accessibility received the highest rating in this category for evaluation criteria. Innovation can be utilized without memorizing specific instructions. The average quality of the data was 4.16. The measure with the highest rating in this category is the dependability of innovative insider information.

Discussions

The situation of the tourism industry in Prachuap Khiri Khan Province

Although Prachuap Khiri Khan Province is advantageous regarding the land area, tourism, and fishing industry potential, the province faces several challenges. In addition, Prachuap Khiri Khan is also regarded as the southern gateway connecting the central and south regions. There are numerous tourist attractions of interest. However, it was discovered that most tourists prefer to travel within the Hua Hin municipality, resulting in income inequality and distribution. In comparison, other sub-districts in Prachuap Khiri Khan Province are equally outstanding.

According to a survey of the tourism industry in Prachuap Khiri Khan Province, there is a problem with the lack of connection to the tourism database system within the province and tourists are still unfamiliar with several tourist attractions. When analyzing the causes, it was found that communities and businesses fail to recognize the significance of their participation in integrating tourism in the region, resulting in different occupations in various areas. This affects the development of entrepreneurial capabilities. Therefore, government agencies in the region have established strategies for tourism development, with the first approach being to develop, support, and promote tourism promotion activities, the second approach being to create and improve tourist attractions to meet quality standards, and the third approach being community development for conservation and tourism.

As the government prepared to open the country to foreign tourists on October 1, 2021, they can visit Thailand without restriction. The Ministry of Tourism and Sports, led by the Tourism Authority of Thailand (TAT), has prepared a plan to welcome foreigners. In the second phase plan leading to preparation, the district of Hua-Hin was designated as the pilot area for the province of Prachuap Khiri Khan. The "Hua-Hin Recharge Project" is a government, public health, and private sector collaboration in tourism and service businesses in the Hua-Hin municipal area, based on the "Phuket Sandbox Project" model. This project aims to effectively administer the vaccination to residents and ensure that employees in the hospitality and tourism sectors are fully vaccinated to welcome foreign tourists and build confidence among tourists (Anusonphat, 2020; Chaiprasert, 2021).

Sustainable development still presents challenges for integrated tourism. Poorly established regulatory bodies and planning can impede the efficacy of rural tourism and limit stakeholder participation, especially in developing nations where rural tourism capacity is lacking (Ariyani & Fauzi, 2023). Consequently, establishing a network of stakeholders in the region is a sustainable integrated tourism development policy that must be expedited. Starting with local governments must establish a clear strategy for tourism in the area, from tools to providing tailored solutions for each city, to overcome the stagnation of tourism in secondary cities and to facilitate technology or information management oversight. The subsequent step is to raise awareness and build the capacity of local communities to reduce barriers to the transition to sustainable tourism. Lastly, it is necessary to develop an integrated policy between local tourism operators and the private sector to develop a tourism zone based on the natural and cultural resources of the region, resulting in increased income distribution and economic sustainability.

Integrated tourism innovation with geo-informatics technology to connect the tourism network in Prachuap Khiri Khan Province

This study aims to develop a tourism innovation that can be displayed using a web application and geo-information technology to display spatial results from a central database. Future data linkages throughout the province of Prachuap Khiri Khan will rely on the data collected from the tourism and service sectors in the model area. The innovation's standout feature is a tool that analyzes location data, suggests routes to nearby locations and searches for location data based on user-specified criteria. Incorporating displays that can interact with users in web and mobile applications facilitates use and helps users make decisions because geospatial technology is outstanding in presenting spatial information for users to plan and design their travel (Jattamart & Kwangsawas, 2022). Previous researchers have used GIS to promote tourism through spatial analysis and presentation, such as designing and creating GIS web maps, mapping and planning natural tourism routes (Maaiah et al., 2021; Mango et al., 2022), analyzing and mapping the potential for sustainable ecotourism development (Omarzadeh et al., 2022).

The tourism industry is adopting geographical tools to create management and promotion opportunities for tourism resources. According to tourists, the utilisation of travel applications is growing. It is the combination of apps e-Tourism or apps m-Tourism with ICTs (Information and Communication Technologies) (Anthony & Abbas, 2021; Palos-Sanchez et al., 2021; Priyono et al., 2020). The strength of travel apps is that they enable users to utilize travel guides, GPS, searching for information, gaining access to travel services, and engaging in travel activities during the journey or at the destination (Saura, 2021). Previous research has demonstrated that the use and acceptance of travel applications are contingent on the application's design or user experience (Saura & Bennett, 2019). Therefore, innovative designers should pay greater attention to tourism innovation capacity. Incorporating innovative designs that highlight the distinctive geographical features of destinations to provide users with an enjoyable travel experience will contribute to the sustainability of innovation use.

Satisfaction with Geospatial Integrated Tourism Innovation

According to the satisfaction assessment results for tourism innovation, users were most satisfied with the creation in terms of perceived utility. Due to innovations, obtaining information about Prachuap Khiri Khan Province tourism is easier. The perception of usability follows. Users are pleased with the innovative use that requires no memorization of complicated steps. This is consistent with previous research suggesting that perceived usefulness and ease of use influence user acceptance of innovations and will play a more significant role if the user has traveled previously (Saura & Bennett, 2019; Taufik & Hanafiah, 2019; Tavitiyaman et al., 2022). These findings will be useful to designers of innovative travel apps, who should prioritise user-friendliness and perceived usefulness. These factors play a significant role in creating a memorable travel experience and lead to the willingness to reuse innovations, contributing to innovation sustainability (Kim et al., 2021).

In addition, users are pleased with the information's caliber. Due to the perception that the data presented in the innovation is trustworthy, there is a more positive attitude toward using new technologies or innovations. Consistent with the findings of (Palos-Sanchez et al., 2021), which demonstrate that the reliability of a travel application significantly impacts the performance expectations of its users. It shows that the primary purpose of user innovation is to search for travel information and use it to plan future trips or make decisions. Therefore, developing interesting innovations and presenting a multidimensional travel experience will increase positive attitudes toward innovation (Lin et al., 2020). This has a direct impact on the intent of sustainable use.

Conclusion and suggestions

This study focuses on developing geospatial innovations after the outbreak of COVID-19 for the recovery of the local tourism and service industries. The model area is Pak Nam Pran Sub-district, which borders Hua-Hin municipality. The study's strength is its collaboration with the tourism industry and the closest local government organizations to the community, including a thorough understanding of the area's context to determine guidelines for developing tourism according to the area's context. In addition to formulating plans to deal with unforeseen circumstances to prepare for the arrival of tourists, the consultant will assist with preparing the location for their arrival.

The future research strategy is as follows: Step One: Develop innovations with Virtual Reality (VR) technology to attract tourists or adopt travel live-streaming (TLS) for real-time interactions to reduce physical and spatial travel restrictions, as well as sharing travel experiences; Step 2: Enhance innovation to support English displays for foreign tourists. Finally, evaluate satisfaction with tourism innovations to improve innovations to meet user needs and develop measures to help tourists following the outbreak of COVID-19 that are suited to the region. In addition, in evaluating tourists' innovation usage behaviour, advanced statistics, such as structural equation modelling (SEM), should be used to analyse the results to understand better user behaviour and the relationship between relevant factors and tourists' innovation usage. This results in innovative improvements that cater to user needs and help create memorable travel experiences.

New knowledge and the effects on society and communities

The study's results led to the development of tourism promotion innovations and a central database that collects tourism and service sector data in the prototype area to facilitate the connection of tourism databases throughout the province. This benefits all parties involved in the tourism process chain from the upstream, i.e., small business owners have more opportunities to market their companies and increase their competitiveness. Travelers can access information from a central database more conveniently. In addition, the innovation includes data analytics tools that can interact with the user at any time. Government agencies in the region can use the central database to develop tourism programs linked to the region's potential. It is considered that the presentation of information and the community's identity will increase opportunities for the community, affecting the recovery of the tourism industry after the COVID-19 epidemic so that it can generate income once more and lead to income distribution in the area.

Acknowledgments

The authors are grateful for the support of Pak Nam Pran Subdistrict Administrative Organization Pranburi District for your courtesy in contacting and maintaining public relations with local entrepreneurs. Thank you to the resort and restaurant establishments for contributing facilities and information to the research project. The authors also appreciate and would like to thank the Rajamangala University of Technology Rattanakosin for supporting the research process of this article.

References

Anthony, J, B., & Abbas, P, S. (2021). Examining the digitalisation of virtual enterprises amidst the COVID-19 pandemic: a systematic and meta-analysis. *Enterprise Information Systems, 15*(5), 617-650. https://doi.org/10.1080/17517575.2020.1829075

Anusonphat, N. (2020). Economic Adjustment in Tourism under the Coronavirus Disease 2019 Crisis in Thailand. *Journal of Humanities and Social Sciences Phranakhon Si Ayutthaya Rajabhat University, 8*(1), 1-26. https://so03.tci-thaijo.org/index.php/husoarujournal/article/view/258758 (In Thai)

Ariyani, N., & Fauzi, A. (2023). Pathways toward the transformation of sustainable rural tourism management in central Java, Indonesia. *Sustainability,* 15(3), 2592. https://doi.org/10.3390/su15032592

Bartik, A. W., Bertrand, M., Cullen, Z., Glaeser, E. L., Luca, M., & Stanton, C. (2020). The impact of COVID-19 on small business outcomes and expectations. *Proceedings of the national academy of sciences, 117*(30), 17656-17666. https://doi.org/10.1073/pnas.2006991117

Chaiprasert, N., Nantapirat, S., & Phuripinisnant, T. (2021). Local Government Organization and the Survival of Thai Tourism in Crisis Situation COVID19 Case Study: Phuket Sandbox. *Journal of MCU Haripunchai Review, 5*(2), 71-83. https://so04.tci-thaijo.org/index.php/JMHR/article/view/253333 (In Thai)

Cochran, W. G. (1977). *Sampling techniques*. John Wiley & Sons.

Crick, J. M., & Crick, D. (2020). Coopetition and COVID-19: Collaborative business-to-business marketing strategies in a pandemic crisis. *Industrial Marketing Management, 88*, 206-213. https://doi.org/10.1016/j.indmarman.2020.05.016

Cristina-Andrada, B., Stăncioiu, A. F., Gabor, M. R., Alexe, F. A., Oltean, F. D., & Dinu, A. C. (2020). Considerations regarding the effects of COVID-19 on the tourism market. *Theoretical and Applied Economics, 3*(627), 271-284. http://store.ectap.ro/articole/1489.pdf

Cronbach, L. J. (1970). *Essentials of psychological testing, Harper and Row*. New York.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 319-340. https://www.jstor.org/stable/249008

DeLone, W. H., & McLean, E. R. (1992). Information systems success: The quest for the dependent variable. *Information systems research, 3*(1), 60-95. https://www.jstor.org/stable/23010781

Dube, K., Nhamo, G., & Chikodzi, D. (2021). COVID-19 cripples global restaurant and hospitality industry. *Current Issues in Tourism, 24*(11), 1487-1490. https://doi.org/10.1080/13683500.2020.1773416

Gohori, O., & van der Merwe, P. (2020). Towards a tourism and community-development framework: An African perspective. *Sustainability,* 12(13), 5305. https://doi.org/10.3390/su12135305

Haywood, K. M. (2020). A post COVID-19 future-tourism re-imagined and re-enabled. *Tourism Geographies, 22*(3), 599-609. https://doi.org/10.1080/14616688.2020.1762120

Huynh, D. V., Duong, L. H., Truong, T. T. K., & Nguyen, N. T. (2022). Destination responses to COVID-19 waves: Is “Green Zone” initiative a holy grail for tourism recovery?. *Sustainability, 14*(6), 3421. https://doi.org/10.3390/su14063421

Jattamart, A., & Kwangsawas, A. (2022). Promoting Local Wisdom with Innovation Geoinformatics for Community Information Service in Hua Hin District, Prachuap Khiri Khan Province. *Rajabhat Chiang Mai Research Journal, 23*(1), 54-75. https://so05.tci-thaijo.org/index.php/cmruresearch/article/view/248925 (In Thai)

Jattamart, A., Nusawat, P., & Kwangsawad, A. (2023). How can hesitation in hotel live-streaming payment be overcome?: Examine the role of entrepreneurial performance and viewers’ personality traits. *Journal of Open Innovation: Technology, Market, and Complexity, 9*(2), 100052. https://doi.org/10.1016/j.joitmc.2023.100052

Juergensen, J., Guimón, J., & Narula, R. (2020). European SMEs amidst the COVID-19 crisis: assessing impact and policy responses. *Journal of Industrial and Business Economics, 47*(3), 499-510. DOI: 10.1007/s40812-020-00169-4

Kim, H., Koo, C., & Chung, N. (2021). The role of mobility apps in memorable tourism experiences of Korean tourists: Stress-coping theory perspective. *Journal of Hospitality and Tourism Management,* 49, 548-557. https://doi.org/10.1016/j.jhtm.2021.11.003

Kourgiantakis, M., Apostolakis, A., & Dimou, I. (2021). COVID-19 and holiday intentions: The case of Crete, Greece. *Anatolia, 32*(1), 148-151. https://doi.org/10.1080/13032917.2020.1781221

Li, Z., Wang, D., Abbas, J., Hassan, S., & Mubeen, R. (2022). Tourists’ health risk threats amid COVID-19 era: role of technology innovation, Transformation, and recovery implications for sustainable tourism. *Frontiers in Psychology, 12*, 769175. https://doi.org/10.3389/fpsyg.2021.769175

Lin, S.-Y., Juan, P.-J., & Lin, S.-W. (2020). A tam framework to evaluate the effect of smartphone application on tourism information search behavior of foreign independent travelers. *Sustainability, 12*(22), 9366. https://doi.org/10.3390/su12229366

Maaiah, B., Al-Badarneh, M., & Al-Shorman, A. (2021). Mapping potential nature based tourism in Jordan using AHP, GIS and remote sensing. *Journal of Ecotourism*, *22*(2), 1-21. https://doi.org/10.1080/14724049.2021.1968879

Manager Online. (2020). Prachuap khiri khan devises strategies to revitalize provincial tourism. Retrieved from https://m.mgronline.com/local/detail/9650000025107 (In Thai)

Mango, J., Çolak, E., & Li, X. (2021). Web-based GIS for managing and promoting tourism in sub-Saharan Africa. *Current Issues in Tourism, 24*(2), 211-227. https://doi.org/10.1080/13683500.2019.1711028

Ntounis, N., Parker, C., Skinner, H., Steadman, C., & Warnaby, G. (2022). Tourism and Hospitality industry resilience during the Covid-19 pandemic: Evidence from England. *Current Issues in Tourism, 25*(1), 46-59. https://doi.org/10.1080/13683500.2021.1883556

Omarzadeh, D., Pourmoradian, S., Feizizadeh, B., Khallaghi, H., Sharifi, A., & Kamran, K. V. (2022). A GIS-based multiple ecotourism sustainability assessment of West Azerbaijan province, Iran. *Journal of Environmental Planning and Management, 65*(3), 490-513. https://doi.org/10.1080/09640568.2021.1887827

Orîndaru, A., Popescu, M.-F., Alexoaei, A. P., Căescu, Ș.-C., Florescu, M. S., & Orzan, A.-O. (2021). Tourism in a post-COVID-19 era: Sustainable strategies for industry's recovery. *Sustainability, 13*(12), 6781. DOI:10.3390/su13126781

Palos-Sanchez, P., Saura, J. R., & Correia, M. B. (2021). Do tourism applications' quality and user experience influence its acceptance by tourists? *Review of Managerial Science, 15*(5), 1205-1241. DOI: 10.1007/s11846-020-00396-y

Palos-Sanchez, P., Saura, J. R., Velicia-Martin, F., & Cepeda-Carrion, G. (2021). A business model adoption based on tourism innovation: Applying a gratification theory to mobile applications. *European Research on Management and Business Economics, 27*(2), 100149. https://doi.org/10.1016/j.iedeen.2021.100149

Parliamentary Budget Office. (2020). *Guidelines for promoting tourism in secondary cities to allocate tourism revenues*. Parliamentary Budget Office: The Secretariat of the House of Representative. Retrieved from https:/www.parliament.go.th/ewtadmin/ewt/parbudget/ ewt_dl_link.php?nid=989 (In Thai)

Priyono, A., Moin, A., & Putri, V. N. A. O. (2020). Identifying digital transformation paths in the business model of SMEs during the COVID-19 pandemic. *Journal of Open Innovation: Technology, Market, and Complexity, 6*(4), 104. https://doi.org/10.3390/joitmc6040104

Saura, J., & Bennett, D. (2019). A three-stage methodological process of data text mining: a UGC business intelligence analysis. *Symmetry, 11*(4), 519. https://doi.org/10.3390/sym11040519

Saura, J. R. (2021). Using data sciences in digital marketing: Framework, methods, and performance metrics. *Journal of Innovation & Knowledge, 6*(2), 92-102. https://doi.org/10.1016/j.jik.2020.08.001

Schlesinger, W., Cervera-Taulet, A., & Pérez-Cabañero, C. (2020). Exploring the links between destination attributes, quality of service experience and loyalty in emerging Mediterranean destinations. *Tourism Management Perspectives, 35*, 100699. https://doi.org/10.1016/j.tmp.2020.100699

Shafi, M., Liu, J., & Ren, W. (2020). Impact of COVID-19 pandemic on micro, small, and medium-sized Enterprises operating in Pakistan. *Research in Globalization, 2*, 100018. https://doi.org/10.1016/j.resglo.2020.100018

Sheresheva, M., Efremova, M., Valitova, L., Polukhina, A., & Laptev, G. (2021). Russian tourism enterprises' marketing innovations to meet the COVID-19 challenges. *Sustainability, 13*(7), 3756. https://doi.org/10.3390/su13073756

Shin, H., & Kang, J. (2020). Reducing perceived health risk to attract hotel customers in the COVID-19 pandemic era: Focused on technology innovation for social distancing and cleanliness. *International Journal of Hospitality Management, 91*, 102664. https://doi.org/10.1016/j.ijhm.2020.102664

Sung, Y.-A., Kim, K.-W., & Kwon, H.-J. (2020). Big data analysis of Korean travelers' behavior in the post-COVID-19 era. *Sustainability, 13*(1), 310. https://doi.org/10.3390/su13010310

Taufik, N., & Hanafiah, M. H. (2019). Airport passengers' adoption behaviour towards self-check-in Kiosk Services: the roles of perceived ease of use, perceived usefulness and need for human interaction. *Heliyon, 5*(12), e02960. https://doi.org/10.1016/j.heliyon.2019.e02960

Tavitiyaman, P., Zhang, X., & Tsang, W. Y. (2022). How tourists perceive the usefulness of technology adoption in hotels: Interaction effect of past experience and education level. *Journal of China Tourism Research, 18*(1), 64-87. https://doi.org/10.1080/19388160.2020.1801546

Tsionas, M. G. (2021). COVID-19 and gradual adjustment in the tourism, hospitality, and related industries. *Tourism Economics, 27*(8), 1828-1832. DOI:10.1177/1354816620933039

UNWTO. (2020). Impact Assessment of the COVID-19 Outbreak on International Tourism. Retrieved from https://www.unwto.org/impact-assessment-of-the-covid-19-outbreak-on-international-tourism

Zhou, S., Yan, Q., Yan, M., & Shen, C. (2020). Tourists' emotional changes and eWOM behavior on social media and integrated tourism websites. *International Journal of Tourism Research, 22*(3), 336-350. https://doi.org/10.1002/jtr.2339

Challenges of Young Female Social Entrepreneurs in Post-Covid 19: A Case Study of Mueang Pon, Mae Hong Son, Thailand

Jakkapong Sukphan*

Faculty of Business Administration, Maejo University, Thailand

Sutawan Satjasomboon

Mae hong son College, Chiang Mai Rajabhat University, Thailand

E-mail: jakkapong@mju.ac.th* and sutawan_sa@g.cmru.ac.th

*Corresponding author

(Received: 28 April 2023, Revised: 16 June 2023, Accepted: 18 June 2023)

https://doi.org/10.57260/rcmrj.2023.264701

Abstract

This research aimed to investigate the context of social entrepreneurship and examine the difficulties faced by young female social entrepreneurs in Mueang Pon, Mae Hong Son, Thailand, in the post-Covid 19 eras. Qualitative methodology was employed, using purposive sampling to select participants relevant to a specific group. In-depth semi-structured interviews were conducted with eight participants who had completed their bachelor's degree within the past five years with ages below 30 years old, representing various sectors such as hospitality, food and beverage, and handicrafts. To ensure the reliability and accuracy of the collected data, triangulation techniques were employed. Inputs from academics and government agencies are sought to validate the interview questions. Additionally, these questions were tested on other groups to confirm their appropriateness.

The findings reveal that young female social entrepreneurs in Mueang Pon primarily emerged from community-based tourism, often operating as family businesses or sole proprietorships. These entrepreneurs prioritize the common good and strive to drive recovery, growth, inclusivity, and resilience within their enterprises while also promoting sustainable community development. However, the Covid-19 pandemic has presented significant challenges for these entrepreneurs. They face difficulties accessing financial resources, networking opportunities, mentorship, and the capacity building necessary for effective business operations in the post-pandemic landscape. This research also highlights additional challenges that may be faced by women entrepreneurs, including persistent gender inequality and biases, disruptions to business operations, and the complexities of balancing multiple roles. Addressing these challenges should be a priority for young female social entrepreneurs in the future.

Keywords: Challenges, Young female, Social entrepreneurs, Post-Covid 19

Introduction

When examining the historical connection between entrepreneurship and its influence on social change, it becomes evident that societies have exhibited varying degrees of development. Among the factors contributing to this phenomenon, the emergence of female-owned businesses holds global significance. These enterprises not only serve as economic drivers but also play a crucial role in creating wealth, enhancing economic welfare, generating employment opportunities, and fostering societal transformation (Brush & Cooper, 2012; Jennings & Brush, 2013). Additionally, discussions on inventions and developmental processes, as predominantly explored in Baumol's work (1996), further highlight the complex nature of entrepreneurship. Consequently, Baumol's work focuses on investigating the impact of institutional factors on entrepreneurial development. Underlying this study is the assumption that environmental factors and their relative importance significantly shape the entrepreneurial landscape.

This qualitative study aims to investigate the pivotal role played by female entrepreneurs in a society changing. Employing an inductive approach, the research is grounded in the acceptance of Baumol's work (1996), which lends a somewhat deductive reasoning aspect to the study. Previous research has delved into various aspects of female entrepreneurship, including motivation, characteristics, and barriers to starting one's own business (Khan et al., 2019; Solesvik et al., 2019). However, it is crucial to recognize that characteristics alone do not solely determine the proliferation of entrepreneurship. Environmental factors, marketing strategies, innovation, and the presence of social entrepreneurs also wield significant influence in developing countries, particularly in the case of Thailand (Pansuwong et al., 2022; Politis et al., 2020; Srivetbodee, 2021).

The rate of female and young entrepreneurs has risen during the past decades. Hence, if the theory of entrepreneurial activity is dependent on environmental factors and institutions (Aljarodi et al., 2022; Baumol, 1996), then it should be further investigated what these are at a present state. Many factors might influence interest in starting a business. Some elements are general and related to the economy's overall situation or specific business conditions, motivation, challenges, and preconditions for business success (Bui et al., 2018; McGowan et al., 2012). Some factors are in the young generation, mainly explicitly related to this age group (Edelman et al., 2016).

Since the latter part of 2019, firms and economies across the globe have been confronted with a crisis from the Covid-19 pandemic and the accompanying government measures. Researchers have diligently examined the challenges faced by entrepreneurs as they grapple with resource mobilization in an environment riddled with lockdowns, hindering their ability to cater to customers and plan for the future (Kuckertz et al., 2020). Simultaneously, government agencies have encountered difficulties in providing relief to businesses that have experienced a decline in activities due to the unfolding crisis (Groenewegen et al., 2021). Drawing on the existing research on entrepreneurship and crisis management, Williams & Vorley (2015) offer valuable insights and research avenues that could shed light on the Covid-19 pandemic. Entrepreneurs may explore how businesses respond to crises, focusing on aspects of resilience and identifying potential barriers (Doern et al., 2019).

The global discourse on the participation of females in the workforce has highlighted a persistent gender gap in entrepreneurship, with males exhibiting a higher likelihood of venturing into new business ventures (GEM, 2022). Within this context, female entrepreneurs encounter specific challenges that may impede their progress, including individual constraints. Furthermore, in the realm of social and economic transformation, the emergence of the new economic model assumes a crucial role in driving societal development. As individuals raised in the era of the new economic model, young entrepreneurs possess a more intuitive and profound understanding of the evolution of the social market economy (Wang et al., 2021). Consequently, fostering the growth of young female social entrepreneurs becomes a promising strategy for promoting sustainable development in Thailand. Nevertheless, in order to effectively nurture and prepare aspiring entrepreneurs, it is essential for entrepreneurs and support organizations to have a comprehensive understanding of the potential challenges they may face in the near future.

Mueang Pon Village is a small village in Mae Hong Son, located south of Khun Yuam and nearby the famous tourist attraction, the so-called Thung Bua Tong Fields, and community-based tourism. The inhabitants mainly live from agriculture, such as rice, soybeans, and tobacco crops. There is a genuine interest in this village as its homestay program concludes with fabulous activities making them traditional. However, the Covid-19 pandemic has severely impacted the tourism industry in Mae Hong Son. Travel restrictions and lockdown measures have led to a significant decline in international and domestic tourist arrivals. Hotels, resorts, and other tourism-related businesses have faced financial losses, while many individuals have lost their jobs. The local economy has suffered due to reduced tourism revenue, creating hardships for the community. Recovery efforts have focused on promoting domestic tourism and implementing safety measures, but the road to recovery remains challenging amid ongoing travel restrictions and uncertainty surrounding the pandemic (Tourism Economic Review,2020). To mitigate the impact, the local government and tourism authorities have been implementing measures to support affected businesses and stimulate domestic tourism. They have focused on promoting domestic travel campaigns, improving health and safety measures, and providing financial aid to affected businesses. However, the road to recovery for the tourism industry in Mae Hong Son remains challenging, as international travel restrictions and the unpredictable nature of the pandemic continue to pose obstacles (National News Bureau of Thailand,2023).

Simultaneously, the recent crisis and economic challenges have led to job scarcity and layoffs among the newly graduated younger generation, prompting them to return to their hometowns and embark on entrepreneurial ventures (Ruyaporn et al., 2022). This study primarily focuses on female and young entrepreneurs who completed their bachelor's degree within the past five years during the Covid pandemic crisis and aged below 30 years old. Given that Mueang Pon is rooted in community-based tourism, the investigation on recovery and resilience of local communities impacted by the pandemic, with a specific emphasis on achieving sustainable development. Community-based tourism empowers local communities and facilitates socio-economic advancement, cultural preservation, and the empowerment of marginalized groups. Moreover, it provides alternative models that prioritize local involvement, cultural authenticity, and long-term sustainability. Through an examination of community-based tourism in the post-pandemic era, this research seeks to uncover valuable insights into how communities and tourism stakeholders can effectively prepare for and respond to future crises, thereby enhancing overall resilience and adaptive capacity within the tourism sector.

The primary objective of this study is to examine the contextual factors surrounding social entrepreneurs and explore the challenges faced by young female social entrepreneurs in the aftermath of the Covid-19 pandemic. The paper is structured as follows: following an introductory section, we present a comprehensive review of the literature, encompassing the role of social entrepreneurs, the contextual background of female and young entrepreneurs, and crisis management. Furthermore, we specifically highlight the landscape of social entrepreneurs and young female social entrepreneurs in Thailand. Subsequently, we provide a detailed account of the data and methodology employed in this study. The findings are subsequently presented and summarized in the results section. Finally, the concluding section offers a concise summary of our main findings and their implications.

Objectives

1. To study the social entrepreneurship of young female entrepreneurs in Mueang Pon, Mae Hong Son, Thailand

2. To analyze challenges encountered by young female social entrepreneurs after the COVID-19 outbreak in Mueang Pon, Mae Hong Son, Thailand

Literature review

Figure 1 depicts our proposed approach, guided by the theories of female and young entrepreneurs, crisis management, and social entrepreneurs. The rest of the section covers literature on these critical theories, which explore and presents the role of female and young entrepreneur, crisis management, and social entrepreneurs.

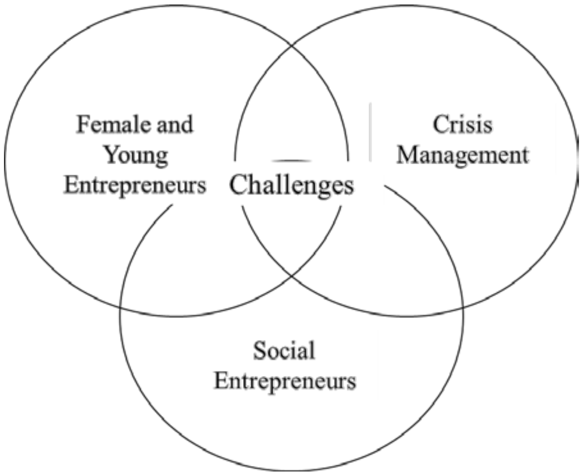


Figure 1 The Conceptual Model by the authors
(Source: Researcher, 2023)

Female and Young Entrepreneurs

According to Bruni et al. (2004), the business literature recognizes the distinct characteristics of females. However, Baycan et al. (2003) highlight a gender bias in entrepreneurship, with lower female participation. Initial research on female entrepreneurs primarily focuses on their motivations and economic performance (Santos et al., 2018; Yadav & Unni, 2016). On one hand, female entrepreneurs do not significantly differ from males in terms of personal characteristics, capabilities, and economic performance (Ahl, 2006; Watson, 2002). On the other hand, some studies have identified differences in personal traits, styles, investment sizes, and educational backgrounds (Carranza et al., 2018; Santos et al., 2018).

Entrepreneurship, particularly through female entrepreneurs, plays a vital role in the economic development of both developed and developing countries, especially during turbulent and challenging times. Their contributions to innovation, creation, and social empowerment can facilitate a faster recovery (Mustapha & Subramaniam, 2016). With the recent significant increase in self-employment rates and the new generation growing up in the new economic model, young entrepreneurs possess an intuitive understanding of the evolving social market economy and are more likely to succeed in this new paradigm (United Nations, 2013).

Various perspectives exist when examining young entrepreneurs, including young adults (Geldhof et al., 2014), student entrepreneurs (Politis et al., 2012), and adolescents (Schmitt-Rodermund & Vondracek, 2002). Previous research has focused on factors such as intention, resources, interests, self-efficacy, willingness, and experience that influence young entrepreneurship. Accordingly, this paper specifically targets young entrepreneurs who are fresh graduates and adolescents.

Social entrepreneurship

The concept of social entrepreneurship has been introduced in previous studies, with its origins tracing back to the mid-19th century (Bowen, 1953). However, it has gained significant popularity in the last decade and has emerged as a prominent area of research in various academic disciplines, business publications, books, and articles. Social entrepreneurship involves the operation of non-profit organizations that address complex social needs and have an embedded social purpose, particularly in the face of diminishing public funding (Austin et al., 2006; Reis & Clohesy, 2001). Various issues, such as poverty and human welfare, have motivated numerous firms to conduct business with a strong social drive, utilizing social entrepreneurship as a catalyst for social change, without expecting direct monetary benefits from their ventures (Barberá-Tomás et al., 2019; Gupta et al., 2020).

Likewise, the role of females in social entrepreneurship and their involvement in business creation have witnessed growth at different levels of government, both regionally and locally. Several tools and initiatives have been developed and implemented to promote female entrepreneurial activity (Urbano et al., 2014). Theoretical approaches have been proposed to study the processes of business creation by women and social entrepreneurship (Humbert, 2012; Huysentruyt, 2014; Jeong & Yoo, 2022). For instance, Van Ryzin et al. (2009) suggest that social entrepreneurs are more likely to be young, college-educated females of non-white ethnicity, residing in major cities, and possessing some business experience. The findings of their study underscore the higher likelihood of women engaging in social entrepreneurship.

Crisis Management.

Throughout history, crises and pandemics have often served as catalysts for innovation and progress (Meyer et al., 2020). The term "crisis" is commonly used but can lead to confusion and inaccuracies. It encompasses industrial and environmental crises that threaten human survival, organizations, industries, or countries (Shrivastava, 1993). Organizational crises resulting from such industrial and environmental crises are complex phenomena influenced by psychological, socio-political, and technological-structural factors. Effective crisis management becomes crucial for the survival of organizations, the maintenance of products or services, and the well-being of employees (Pauchant & Mitroff, 1992; Pearson & Clair, 1998). However, Pforr & Hosie (2008) argue that crises require case-by-case management, particularly in the context of tourism-related businesses.

Although the onset and resolution of a crisis are challenging to predict, businesses must be well-prepared to tackle future problems. The concept of crisis management can be divided into three phases: Pre-Crisis, Crisis, and Post-Crisis. The pre-crisis and crisis stages involve short-term responses aimed at mitigating the negative impacts, while the post-crisis phase consists of two sub-phases: the recovery phase, where normalcy is restored, and strategies are devised to recover from the damages, and the learning process phase, where after-action reviews facilitate knowledge and resource management in crisis situations (Laws & Prideaux, 2006).

Unlike other crises, the Covid-19 pandemic has introduced significant economic and societal uncertainty (World Health Organization, 2021). Such disruptions typically have substantial implications for entrepreneurship. Entrepreneurs are compelled to drive innovation and growth amid the challenges presented by the crisis, although they often encounter financial difficulties (Meyer et al., 2020). Consequently, personal characteristics (Navarro-García & Coca-Pérez, 2014), self-efficacy, and resilience (Bullough & Renko, 2013) play vital roles in motivating entrepreneurs during challenging times, enabling organizations and individuals to respond and recover more swiftly, adapt their business strategies, and bounce back (Doern et al., 2019). Additionally, we focus on the post-crisis phase (the learning process), which yields diverse performances in knowledge and resource management concerning crisis management (Ma & Zhang, 2022).

The key literature used in this study covering the main theoretical perspectives is presented in Table 1.

Table 1 Summary of Key Literature

Context	Reference
Female entrepreneurs	Ahl (2006); Carranza et al. (2018); Hughes et al. (2012); Santos et al. (2018); Watson (2002); Yadav & Unni (2016)
Young entrepreneurs	Geldhof et al. (2014); Mustapha & Subramaniam (2016); Politis et al. (2012); Schmitt-Rodermund & Vondracek (2002); Varadarajan et al. (2010)
Social entrepreneurship	Austin et al. (2006); Barberá-Tomás et al. (2019); Bowen (1953); Gupta et al. (2020); Humbert (2012); Huysentruyt (2014); Jeong &Yoo (2022); Reis & Clohesy (2001); Urbano et al. (2014); Van Ryzin et al. (2009)
Crisis management	Bullough & Renko (2013); Doern et al. (2019); Laws & Prideaux (2006); Ma & Zhang (2022); Meyer et al. (2020); Navarro-García & Coca-Pérez (2014); Pauchant & Mitroff (1992); Pearson & Clair (1998); Shrivastava (1993)

Methodology

Research Design

This research aims to investigate the context of social entrepreneurship and examine the difficulties faced by young female social entrepreneurs in Mueang Pon, Mae Hong Son, Thailand. The study adopts an experimental research design to gain insights into how these social entrepreneurs navigate and respond to the challenges of the Covid-19 outbreak. Due to the limited number of young female social entrepreneurs in the specific research area, a sample of eight informants was deemed appropriate, as suggested by Sutheewasinnon & Pasunon (2016). Qualitative research methods, specifically interviews, were employed to collect data from participants engaged in community-based tourism businesses such as hospitality, food and beverage, and handicrafts. The interviews were conducted between July and August 2022.

The interviews were conducted using in-depth semi-structured techniques, with each session taking an average of 30 minutes. Before the interviews commenced, participants were informed about the project and asked to sign a consent form. During the sessions, respondents shared their thoughts on various aspects of this research including motivation for starting a social business and how the Covid-19 pandemic impacted their companies. Researchers also followed up with some respondents over mobile phones to gather additional data such as personal characteristics, self-efficacy, and resilience levels.

The informants were asked to answer the following questions:

1. What motivated you to initiate your entrepreneurial venture?
2. In what ways has the Covid-19 outbreak influenced the operations of your enterprise?
3. How do you administer and strategize for your business amidst and subsequent to the pandemic crisis?

4. How do you incorporate troubleshooting techniques within your business framework?

5. To what extent will consumer patterns shift in response to post-pandemic circumstances, and how will you prepare accordingly?

The research objectives were briefly explained to them, highlighting their potential contributions. A formal meeting with entrepreneurs was held in June 2022 at the Mueang Pon subdistrict administrative organization's office to ensure data triangulation while participant observations were made. Two academics - one specializing in entrepreneur and social entrepreneurship studies - along with an officer from the community tourism-supporting Mueang Pon subdistrict administrative organization verified all questions related to the study. Moreover, several groups of participants from different areas also reviewed these questions for reliability and validity checks. Finally, stakeholder discussions during participant observation helped confirm the interview results' accuracy.

Table 2 Informants' characteristics

Participants	Type of Business	Ownership
P1	Hospitality	Family Business
P2	Hospitality	Family Business
P3	Hospitality	Family Business
P4	Food and Beverage	Family Business
P5	Food and Beverage	Sole Proprietorship
P6	Food and Beverage	Sole Proprietorship
P7	Handicraft	Family Business
P8	Handicraft	Family Business

Data Analysis

We used thematic analysis to understand an issue or idea (Attride-Stirling, 2001). We transcribed interview data and added practitioner perspectives for better understanding. Codes were assigned and classified into themes and meanings with researchers considering all the themes (Vaismoradi et al., 2016). The process was iterative until completion. Finally, using existing theories on young entrepreneurs, female entrepreneurs, and crisis management within the social entrepreneurship context helped identify challenges faced by participants during discussions of the analyzed data.

Results

The study findings are derived from a literature review, analysis of secondary documents, and conducting semi-structured interviews with eight female entrepreneurs who are young in age.

Objective 1 To study the social entrepreneurship of young female entrepreneurs in Mueang Pon, Mae Hong Son, Thailand.

In Thailand, the Covid-19 pandemic has led to a significant downturn in the economic and tourism industries. The government's emergency measures required financial activities, especially those related to hospitality and tourism, to cease completely. As a result of this pause in business operations, there has been an adverse impact on the economy with struggling businesses unable to generate income.

“…Due to the circumstances, my parents are unable to manage our homestays and engage in partnerships with various stakeholders within our community, such as suppliers, tourist attractions, and souvenir shops. Our family is seeking additional income opportunities, but unfortunately, we all find ourselves in a similar predicament. Consequently, I believe it is necessary for me to return and provide assistance to my parents… (P1)”

"...Our business is currently facing challenges due to the absence of customers. It remains uncertain when this crisis will abate, considering the restrictions on both domestic and international travel. In light of these circumstances, the only option available to me is to explore online avenues as a means to sustain our operations... (P7)".

"...The current situation has had a pronounced economic impact, resulting in the temporary closure of businesses. Unfortunately, as an outbound business, I am facing a shortage of employment prospects in these challenging circumstances...(P5)".

The quotes clearly demonstrate that Covid-19 has presented significant challenges for businesses. (P1), (P5), and (P7) have all emphasized the severity of the situation, with many companies forced to close indefinitely while still facing ongoing business costs. Such crises are not uncommon, and research shows that they can have a profound impact on both the economy and society at large (Meyer et al., 2020; Pauchant & Mitroff, 1992; Pearson & Clair, 1998). As a result of this crisis, there will likely be lasting changes in culture, community dynamics, and overall way of life.

In this scenario, the most probable survivors are knowledgeable female entrepreneurs who possess expertise in developing innovative business models and effectively engaging with clients to establish credibility (Mustapha & Subramaniam, 2016; Santos et al., 2018). The subsequent excerpts offer reliable evidence of the circumstance:

"... Due to social distancing restrictions, I must modify my business model to focus on online delivery, thereby creating new employment opportunities within our community … (P6)"

“…Due to the closure of our community, I have resorted to producing and selling products on a made-to-order or pre-order basis through social media. This approach presents a promising opportunity for us to maintain employment...(P8)”

Considering the paths customers take to reach businesses, their experiences, and their behavior is a complex process that involves societal change. According to (Barberá-Tomás et al., 2019; Gupta et al., 2020), this does not always result in direct financial benefits for social ventures. Young female entrepreneurs who are socially conscious show greater solidarity towards marginalized individuals and often engage in charitable activities, as noted by (Urbano et al., 2014; Varadarajan et al., 2009).

Table 3 The summary of the context of young entrepreneurs

The post-Covid-19 era presents unique challenges and opportunities for young female social entrepreneurs. Recognizing the importance of their role in driving economic growth and social change, therefore, we summarize the context of young female social entrepreneurs in Mueang Pon, Mae Hong Son, Thailand, as follows:

No.	Issue	Meaning
1	Recovery and Growth	Young female social entrepreneurs play a vital role in driving economic recovery and growth by initiating innovative and socially impactful businesses
2	Inclusive and Resilient	Young female entrepreneurs can build a more inclusive and resilient economy, fostering social cohesion and reducing inequalities
3	Sustainable Development	Young female entrepreneurs can address pressing social and environmental challenges, contributing to the sustainable development

Objective 2 To analyze challenges encountered by young female social entrepreneurs after the COVID-19 outbreak in Mueang Pon, Mae Hong Son, Thailand

Community-based tourism businesses have previously never been experiencing various epidemics and pandemics. However, as Pforr & Hosie (2008) noted, managing crises must be tailored to specific conditions. The sudden onset of the Covid-19 pandemic left businesses with limited time to prepare for the profound impacts of temporary closures and the suspension of activities worldwide. In response to this crisis, young female entrepreneurs in Mueang Pon have appealed to government agencies and nearby universities for support through initiatives such as tax deductions and the U2T program for BCG and Regional Development (Doern et al., 2019; Meyer et al., 2020). The following quotes exemplify the tactics employed by these businesses to sustain themselves amidst the crisis.

"... Despite the closure of all community-based tourism services, it is imperative for our business to continue operating. Consequently, I am compelled to adapt our business model, although obtaining financial support has proven challenging. Nevertheless, I remain determined to exhaust all efforts in securing the necessary financial assistance…" (P2)

"...Adaptation becomes essential in this situation, such as shifting towards food delivery services. However, we encounter obstacles in both establishing the necessary networks and acquiring sufficient skilled staff to support this new business model for survival..." (P3)

"...While we possess a competitive advantage in terms of skilled staff and expertise, we acknowledge a deficiency in our negotiation skills when transitioning to an online platform. Nevertheless, I am committed to continuously practicing and improving in this aspect…" (P4)

"...Although we take pride in offering authentic and high-quality products, we recognize a deficiency in our communication skills when operating online..." (P8)

The aforementioned statement further reinforces our second objective, which highlights the possession of key traits by young female social entrepreneurs. These include a visionary mindset, creativity, adaptability, and willingness to undertake risks, as Bullough & Renko (2013) and Navarro-García and Coca-Pérez (2014) suggested. Moreover, insights from practitioners regarding crisis management demonstrate that employing such tactics within businesses can effectively mitigate potential losses, ensure business continuity, and lay the foundation for post-crisis operations. That is the challenge for young female social entrepreneurs in Mueang Pon, Mae Hong Son, Thailand need to be concerned

Table 4 The summary of the difficulties faced by young female social entrepreneurs

The post-Covid-19 landscape poses distinctive challenges for young female social entrepreneurs. Acknowledging the significance of their contribution to the stages of business recovery, this study aims to outline the specific obstacles encountered. Therefore, we summarize the obstacles that become the challenges for young female social entrepreneurs in Mueang Pon, Mae Hong Son, Thailand as follows:

No.	Issue	Meaning
1	Access to Financial Resources	Limited access to funding and financial support poses significant constraints on the growth and sustainability of young female entrepreneurs
2	Networking and Mentorship	Building networks and accessing mentorship can be challenging for young female social entrepreneurs, hindering their access to valuable guidance and support
3	Capacity Building and Skills Development	Training and capacity-building opportunities tailored to the needs of young female social entrepreneurs are essential to enhance their business and managerial skills.

Discussions

The post-Covid-19 era presents distinctive challenges and opportunities for young female social entrepreneurs in Mueang Pon, Mae Hong Son, Thailand. Recognizing the pivotal role they play in driving economic growth and social transformation is essential for addressing their specific challenges and providing recommendations to empower them. The findings unequivocally highlight the profound impact of the Covid-19 pandemic on businesses, with widespread closures and ongoing operational costs affecting even small enterprises like family businesses and sole proprietorships. Scholars have emphasized the gravity of the situation, as evidenced by the significant influence these entrepreneurs have on the economy and society at large (Meyer et al., 2020; Pauchant & Mitroff, 1992; Pearson & Clair, 1998). Furthermore, the repercussions of the crisis are expected to bring about enduring changes in cultural norms, community dynamics, and overall way of life.

In the context of young female social entrepreneurs, they face the dual responsibility of supporting their families and establishing their own businesses, thereby contributing to their community's recovery and growth. However, as highlighted by Barberá-Tomás et al. (2019) and Gupta et al. (2020), this endeavor does not always result in direct financial gains. Additionally, socially conscious young female entrepreneurs display greater solidarity towards marginalized individuals and actively participate in charitable activities, as observed by Urbano et al. (2014) and Van Ryzin et al. (2009) in the realm of sustainable development. Survivors in this domain tend to possess comprehensive knowledge and expertise in developing innovative business models and effectively engaging with clients, thus establishing their credibility, as indicated by Mustapha and Subramaniam (2016) and Santos et al. (2018). It is important to recognize that understanding customers' paths, experiences, and behaviors in reaching businesses is a multifaceted process that entails societal change, emphasizing inclusivity and resilience.

Furthermore, young female entrepreneurs in Mueang Pon face significant obstacles when it comes to accessing financial resources. As suggested by Doern et al. (2019) and Meyer et al. (2020), these entrepreneurs often struggle to secure financial capital, mentorship, networks, and business development support essential for their ventures. Fortunately, the Thai government has implemented certain projects to provide assistance. Consequently, these entrepreneurs have sought support from government agencies and nearby universities, utilizing initiatives such as tax deductions and the U2T program for BCG and Regional Development. Key traits possessed by young female social entrepreneurs include a visionary mindset, creativity, adaptability, and willingness to undertake risks, as suggested by Bullough & Renko (2013) and Navarro-García and Coca-Pérez (2014). However, insights from practitioners in the field of women entrepreneurs and crisis management indicate persistent gender inequality and biases, disruptions to business operations, and the challenge of balancing multiple roles, as highlighted in the research of Yadav & Unni (2016). Thus, addressing these challenges remains a priority for young female social entrepreneurs in Mueang Pon, Mae Hong Son, Thailand, in the future.

Conclusion and suggestions

Recognizing the context of young female social entrepreneurs post-Covid-19 in Mueang Pon, Mae Hong Son, Thailand, is crucial for creating an enabling environment that supports their growth, success, and the overall development of society and the economy. By understanding their unique challenges and implementing the recommendations, stakeholders can foster an ecosystem that empowers these young women and unleashes their entrepreneurial potential. This study adopts a multidisciplinary approach, drawing from the theoretical perspectives of young entrepreneurs, female entrepreneurs, social entrepreneurs, and crisis management. In the context of the post-pandemic crisis, the concept of young female social entrepreneurs serves as a strategic tool for examining and addressing the specific challenges they face (Doern et al., 2019; Gupta et al., 2020). The research suggests several key recommendations for young female social entrepreneurs as follows: First, establishing specialized funds, grants, and financial programs that prioritize supporting these entrepreneurs, providing them with the necessary capital to start and scale their ventures. Second, developing comprehensive training programs that focus on enhancing entrepreneurial skills, business management, marketing strategies, and impact measurement for young female social entrepreneurs. Third, creating platforms for networking, mentorship, and peer-to-peer learning opportunities to connect young female social entrepreneurs with experienced mentors, industry experts, and like-minded peers. Fourth, advocating for policies that promote gender equality, eliminate gender biases, and create a favorable regulatory environment for young female social entrepreneurs. Finally, raising awareness about the achievements and contributions of young female social entrepreneurs through media campaigns, awards, and recognition programs to inspire others and challenge stereotypes. Implementing these recommendations will contribute to the growth and success of young female social entrepreneurs, fostering a supportive ecosystem that encourages their entrepreneurship and drives positive change in society.

New knowledge and the effects on society and communities

This paper offers valuable insights for entrepreneurs in navigating the crisis triggered by Covid-19. It highlights the significance of young female entrepreneurs as social entrepreneurs, drawing upon prior studies by Urbano et al. (2014) and Van Ryzin et al. (2009). Understanding the multifaceted impacts of the crisis, which can be categorized into distinct stages, as indicated by Laws and Prideaux (2006), is crucial for entrepreneurs. Our study reveals that entrepreneurial characteristics, such as self-efficacy and resilience, as emphasized by Bullough & Renko (2013), play a pivotal role in business recovery. Given the ongoing uncertainty surrounding the Covid-19 pandemic and the potential for future crises, entrepreneurs must remain attuned to external threats and possess the agility to adapt to evolving industry dynamics. Proactive measures should be taken to reorganize business operations and mitigate risks during the pre-crisis period, as suggested by Laws and Prideaux (2006). Furthermore, the context of young female social entrepreneurs in the special economic zones research area presents an opportunity for the government sector to formulate spatial policies and targeted initiatives in Mae Hong Son province, aimed at fostering the development and harnessing the potential of entrepreneurs in the region. Going forward, this would enable local government organizations to provide comprehensive support and assistance to entrepreneurs in close proximity, thus ensuring their sustained growth and well-being.

Acknowledgments

The authors wish to thank all the informants for their valuable data.

References

Ahl, H. (2006). Why Research on Women Entrepreneurs Needs New Directions. *Entrepreneurship Theory and Practice*, *30*(5), 595–621. https://doi.org/10.1111/j.1540-6520.2006.00138.x

Aljarodi, A., Thatchenkery, T., & Urbano, D. (2022). The influence of institutions on early-stage entrepreneurial activity: A comparison between men and women in Saudi Arabia. *Journal of Entrepreneurship in Emerging Economies, ahead-of-print* (ahead-of-print). DOI: 10.1108/jeee-02-2021-0076

Austin, J., Stevenson, H., & Wei-Skillern. (2006). Social and Commercial Entrepreneurship: Same, Different, or Both? *Entrepreneurship Theory and Practice*, *30*(1), 1–22. https://doi.org/10.1111/j.1540-6520.2006.00107.x

Barberá-Tomás, D., Castelló, I., de Bakker, F. G. A., & Zietsma, C. (2019). Energizing through Visuals: How Social Entrepreneurs Use Emotion-Symbolic Work for Social Change. *Academy of Management Journal*, *62*(6), 1789–1817. https://doi.org/10.5465/amj.2017.1488

Baumol, W. J. (1996). Entrepreneurship: Productive, unproductive, and destructive. *Journal of Business Venturing*, *11*(1), 3–22. https://doi.org/10.1016/0883-9026(94)00014-X

Baycan, T. B., Masurel, E., & Nijkamp, P. (2003). Diversity in entrepreneurship: Ethnic and female roles in urban economic life. *International Journal of Social Economics*, *30*(11), 1131–1161. https://doi.org/10.1108/03068290310497495

Bowen, H. R. (1953). *Social responsibility of the businessman*. Harper & Brothers.

Bruni, A., Gherardi, S., & Poggio, B. (2004). Entrepreneur-mentality, gender and the study of women entrepreneurs. *Journal of Organizational Change Management*, *17*(3), 256–268. https://doi.org/10.1108/09534810410538315

Bui, H. T. M., Kuan, A., & Chu, T. T. (2018). Female entrepreneurship in patriarchal society: Motivation and challenges. *Journal of Small Business & Entrepreneurship*, *30*(4), 325–343. https://doi.org/10.1080/08276331.2018.1435841

Bullough, A., & Renko, M. (2013). Entrepreneurial resilience during challenging times. *Business Horizons*, *56*(3), 343–350. https://doi.org/10.1016/j.bushor.2013.01.001

Carranza, E., Dhakal, C., & Love, I. (2018). *Female Entrepreneurs: How and Why Are They Different?*. The World Bank. Retrived from https://openknowledge.worldbank.org/handle/10986/31004 License: CC BY 3.0 IGO

Doern, R., Williams, N., & Vorley, T. (2019). Special issue on entrepreneurship and crises: Business as usual? An introduction and review of the literature. *Entrepreneurship & Regional Development*, *31*(5–6), 400–412. https://doi.org/10.1080/08985626.2018.1541590

Edelman, L. F., Manolova, T., Shirokova, G., & Tsukanova, T. (2016). The impact of family support on young entrepreneurs' start-up activities. *Journal of Business Venturing*, *31*(4), 428–448. https://doi.org/10.1016/j.jbusvent.2016.04.003

Geldhof, G. J., Weiner, M., Agans, J. P., Mueller, M. K., & Lerner, R. M. (2014). Understanding Entrepreneurial Intent in Late Adolescence: The Role of Intentional Self-Regulation and Innovation. *Journal of Youth and Adolescence*, *43*(1), 81–91. DOI:10.1007/s10964-013-9930-8

GEM. (2022). *Global entrepreneurship monitor 2021/2022 global report: Opportunity amid disruption*. The Global Entrepreneurship Research Association.

Groenewegen, J., Hardeman, S., & Stam, E. (2021). Does COVID-19 state aid reach the right firms? COVID-19 state aid, turnover expectations, uncertainty and management practices. *Journal of Business Venturing Insights*, *16*, e00262. DOI: 10.1016/j.jbvi.2021.e00262

Gupta, P., Chauhan, S., Paul, J., & Jaiswal, M. P. (2020). Social entrepreneurship research: A review and future research agenda. *Journal of Business Research*, *113*, 209–229. https://doi.org/10.1016/j.jbusres.2020.03.032

Hughes, K. D., Jennings, J. E., Brush, C., Carter, S., & Welter, F. (2012). Extending Women's Entrepreneurship Research in New Directions. *Entrepreneurship Theory and Practice*, *36*(3), 429–442. https://doi.org/10.1111/j.1540-6520.2012.00504

Humbert, A. L. (2012). *Women as social entrepreneurs* (No. 72). Third Sector Research Centre.

Huysentruyt, M. (2014). *Women's Social Entrepreneurship and Innovation* (OECD Local Economic and Employment Development (LEED) Working Papers No. 2014/01

Jeong, E., & Yoo, H. (2022). A systematic literature review of women in social entrepreneurship. *Service Business*, *16*(4), 935–970. DOI: 10.1007/s11628-022-00512-w

Kuckertz, A., Brändle, L., Gaudig, A., Hinderer, S., Morales Reyes, C. A., Prochotta, A., Steinbrink, K. M., & Berger, E. S. C. (2020). Startups in times of crisis – A rapid response to the COVID-19 pandemic. *Journal of Business Venturing Insights*, *13*, e00169. https://doi.org/10.1016/j.jbvi.2020.e00169

Laws, E., & Prideaux, B. (2006). Crisis Management: A Suggested Typology. *Journal of Travel & Tourism Marketing*, *19*(2–3), 1–8. https://doi.org/10.1300/J073v19n02_01

Ma, B., & Zhang, J. (2022). Tie strength, organizational resilience and enterprise crisis management: An empirical study in pandemic time. *International Journal of Disaster Risk Reduction*, *81*, 103240. https://doi.org/10.1016/j.ijdrr.2022.103240

McGowan, P., Redeker, C. L., Cooper, S. Y., & Greenan, K. (2012). Female entrepreneurship and the management of business and domestic roles: Motivations, expectations and realities. *Entrepreneurship & Regional Development*, *24*(1–2), 53–72. https://doi.org/10.1080/08985626.2012.637351

Meyer, J., McDowell, C., Lansing, J., Brower, C., Smith, L., Tully, M., & Herring, M. (2020). Changes in Physical Activity and Sedentary Behavior in Response to COVID-19 and Their Associations with Mental Health in 3052 US Adults. *International Journal of Environmental Research and Public Health*, *17*(18), 6468. https://doi.org/10.3390/ijerph17186469

Mustapha, M., & Subramaniam, P. A. (2016). Challenges and Success Factors of Female Entrepreneurs: Evidence from a Developing Country. *International Review of Management and Marketing*, *6*(4), 224–231. https://www.econjournals.com/index.php/irmm/article/view/2492

National News Bureau of Thailand. (2023). Tourism Authority of Thailand, Mae Hong Son Office prepare to promote tourism After the COVID-19 situation which is related to the BCG Model policy. Retrived from https://thainews.prd.go.th/th/news/detail/TCATG230109184002450 (In Thai)

Navarro-García, A., & Coca-Pérez, J. L. (2014). Antecedents and Consequences of Entrepreneurial Orientation of Spanish Exporting SMEs in Time of Crisis. *Springer Books*, 21–29.

Pansuwong, W., Photchanachan, S., & Thechatakerng, P. (2022). Social innovation: Relationships with social and human capitals, entrepreneurial competencies and growth of social enterprises in a developing country context. *Social Enterprise Journal*, *19*(1), 51–79. https://doi.org/10.1108/SEJ-02-2022-0014

Pauchant, T., & Mitroff, I. (1992). *Transforming the Crisis-Prone Organization: Preventing Individual, Organizational, and Environmental Tragedies*. Jossey-Bass.

Pearson, C. M., & Clair, J. A. (1998). Reframing Crisis Management. *The Academy of Management Review*, *23*(1), 59–76. https://doi.org/10.5465/amr.1998.192960

Pforr, C., & Hosie, P. J. (2008). Crisis Management in Tourism. *Journal of Travel & Tourism Marketing*, *23*(2–4), 249–264. https://doi.org/10.1300/J073v23n02_19

Photchanachan, S., Uppapong, K., Atchavanan, C., Mangkang, K., & Kanwivat, S. (2020). The Characteristics of Social Entrepreneurs in Thailand. *Journal of Humanities and Social Sciences, Rajapruk University*, *6*(3), 31-43. https://so03.tci-thaijo.org/index.php/rpu/article/view/248917 (In Thai)

Politis, D., Winborg, J., & Dahlstrand, Å. L. (2012). Exploring the resource logic of student entrepreneurs. *International Small Business Journal*, *30*(6), 659–683. DOI:10.1177/0266242610383445

Reis, T. K., & Clohesy, S. J. (2001). Unleashing new resources and entrepreneurship for the common good: A philanthropic renaissance. *New Directions for Philanthropic Fundraising*, *2001*(32), 109–144. https://doi.org/10.1002/pf.3206

Ruyaporn, T., Sarapong, T., & Poonsuk, V. (2022). Legal Problems for Labour Protection During Coronavirus Disease 2019 Pandemic. *Journal of Graduate Studies Valaya Alongkron Rajabhat University*, *16*(3), 105–122. https://so02.tci-thaijo.org/index.php/JournalGradVRU/article/view/248916 (In Thai)

Santos, G., Marques, C. S., & Ferreira, J. J. (2018). A look back over the past 40 years of female entrepreneurship: Mapping knowledge networks. *Scientometrics*, *115*(2), 953–987. DOI: 10.1007/s11192-018-2705-y

Schmitt-Rodermund, E., & Vondracek, F. W. (2002). Occupational dreams, choices and aspirations: Adolescents' entrepreneurial prospects and orientations. *Journal of Adolescence*, *25*(1), 65–78. https://doi.org/10.1006/jado.2001.0449

Shrivastava, P. (1993). Crisis theory/practice: Towards a sustainable future. *Industrial & Environmental Crisis Quarterly*, *7*(1), 23–42. https://www.jstor.org/stable/26162560

Solesvik, M., Iakovleva, T., & Trifilova, A. (2019). Motivation of female entrepreneurs: A cross-national study. *Journal of Small Business and Enterprise Development*, *26*(5), 684–705. https://doi.org/10.1108/JSBED-10-2018-0306

Srivetbodee, S. (2021). Marketing and Process Innovation: Case Studies of Thailand's Green Social Entrepreneurs. *CONNEXION Journal of Humanities and Social Sciences*, *10*(2), 112-125. https://so05.tci-thaijo.org/index.php/MFUconnexion/article/view/254797

Sutheewasinnon, P. & Pasunon,P. (2016). Sampling Strategies for Qualitative Research. *Parichart Journal*, 29(2), 31–48. https://so05.tci-thaijo.org/index.php/parichartjournal/article/view/69461 (In Thai)

Tourism Economic Review. (2020). Covid 19 an effect on the tourism industry in Thailand. Retrived from https://www.mots.go.th/download/TourismEconomicReport/4-1TourismEconomicVol4.pdf

United Nation. (2013). *UN officials highlight key role of entrepreneurs in addressing development issues | UN News*. UN News. Retrived from https://news.un.org/en/story/2013/06/443302

Urbano, D., Ferri Jiménez, E., & Noguera i Noguera, M. (2014). Female social entrepreneurship and socio-cultural context: An international analysis. *Revista de Estudios Empresariales*, *2*(2), 22–26. https://revistaselectronicas.ujaen.es/index.php/REE/article/view/2084

Van Ryzin, G. G., Grossman, S., DiPadova-Stocks, L., & Bergrud, E. (2009). Portrait of the Social Entrepreneur: Statistical Evidence from a US Panel. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations*, *20*(2), 129–140. DOI:10.1007/s11266-009-9081-4

Varadarajan, D. S., Majumdar, S., & Gallant, M. (2010). Relevance of education for potential entrepreneurs: An international investigation. *Journal of Small Business and Enterprise Development*, *17*(4), 626–640. https://doi.org/10.1108/14626001011088769

Wang, Z., Tang, R., & Cheng, X. (2021). The Impact of Young Entrepreneurs' Network Entrepreneurship Education and Management System Innovation on Students' Entrepreneurial Psychology. *Frontiers in Psychology*, *12*, 1-9. DOI:10.3389/fpsyg.2021.731317

Watson, J. (2002). Comparing the Performance of Male-and Female-Controlled Businesses: Relating Outputs to Inputs. *Entrepreneurship Theory and Practice*, *26*(3), 91–100. https://doi.org/10.1177/104225870202600306

Williams, N., & Vorley, T. (2015). Institutional asymmetry: How formal and informal institutions affect entrepreneurship in Bulgaria. *International Small Business Journal*, *33*(8), 840–861. DOI:10.1177/0266242614534280

World Health Organization. (2021). *WHO Results Report 2020-2021*. Retrived from https://www.who.int/about/accountability/results/who-results-report-2020-2021

Yadav, V., & Unni, J. (2016). Women entrepreneurship: Research review and future directions. *Journal of Global Entrepreneurship Research*, *6*(12), 1–18. DOI:10.1186/s40497-016-0055-x

Development of Business Management System Leveraging on Social Capital: A Case of Hub Mae Win Community Enterprise, Mae Wang Sub-District, Chiang Mai Province

Waewwan La-ongsri, Rowena Alcoba and Waranya La-ongsri *

International College, Chiang Mai Rajabhat University, Thailand

Manop Chum-Un

Faculty of Management Sciences, Chiang Mai Rajabhat University, Thailand

E-mail: waewwan_lao@g.cmru.ac.th, rowena.alcoba@gmail.com, waranya_lao@g.cmru.ac.th* and manop.teya@gmail.com

*Corresponding author

(Received: 3 February 2023, Revised: 16 June 2023, Accepted: 18 June 2023)

https://doi.org/10.57260/rcmrj.2023.263464

Abstract

This study examined the community business pattern based on the social capital of Hub Mae Win Community Enterprise, leading to the development of a suitable business management system for the community. Participatory Action Research (PAR) was conducted using the mixed method of quantitative and qualitative research. Preliminary findings indicated that the community enterprise did not have an organizational structure and that each member worked independently, using time-consuming and costly production processes resulting in low-quality products. Despite the homogeneity of the group, the community leaders and members failed to leverage on the social capital to work together effectively to achieve common goals for the organization. Working with the organization, the researchers recommended the development of a management system that is anchored on relationship building and trust. The system is divided into four parts – 1) management: organizational structure establishment, 2) production: job assignment based on knowledge and skills, 3) marketing: online and offline distribution channels, and 4) accounting and finance: income-expenditure account creation, and compensation allocation. The respondents showed higher level of satisfaction after they had utilized the developed management system particularly on the aspects of community unity, love, solidarity, and harmony, and community business transparency.

Keywords: Community enterprise, Community business management, Social capital, Business management system

Introduction

Located in the Chiang Mai province of Thailand, Mae Win Sub-district consists of 19 villages of diverse ethnic tribes including Karen, Hmong and Thai. Majority of the population works in agriculture, producing rice, corn, soybeans, lettuce, Chinese cabbage, Japanese onions, and flowers, which are sold to the Royal Project Foundation. Others are engaged in tourism business, with various interesting tourist attractions and attractive activities for both Thai and foreign tourists, such as rafting, elephant riding, hiking, beautiful flower gardens and waterfalls. Each community has its own unique way of life, traditions and cultures, which are still preserved and passed on to the succeeding generations like Songkran Festival, Yi Peng month, and the local language. Despite the social and cultural diversity, the people of Mae Win live together in harmony.

To alleviate poverty and improve the welfare of the people in the sub-district, a community enterprise called Hub Mae Win Community Enterprise was established in 2020. The intention was to make it a hub for locally-made products and expand the market. Products include woven fabrics, embroidered fabrics, and handicrafts that represent the beautiful identity of the local tribes. Additionally, the enterprise would serve as an information center for local people and tourists. It seeks to promote and foster a sense of hometown pride among residents leading to the appreciation of natural resources and awareness of the community's environment. It also aims to advance the local people's well-being, carry on traditions, culture, way of life and local identity.

In the beginning, the community business seemed to be growing, with more people joining as they recognized the economic potentials, and also with the support of relevant government agencies. However, the business has not made any progress after that because the members were lacking direction and basic knowledge in management. They had unclear organizational structure, weak coordination, and the operational setup had not been fully developed.

This research project focused on the development of a management system which would be suitable for the community enterprise, with proper organizational structure and an appropriate management system, such as personnel, resources, marketing, and finance. This would enable the community to run its business efficiently, enhance the well-being of the people in the community and serve as a model for developing management systems for other similar community enterprises.

The researchers aimed to leverage on the social capital of trust, unity, and shared cultures and traditions among the people of Mae Win as important resource in helping them develop the community business. Studies show that social capital can create a business management system that aligns with the needs and aspirations of the community enterprise, and could ultimately lead to sustainable growth and success. One example is the Klong Arang Community which is recognized and admired as a model of sufficiency economy, happy, and excellent village in the whole province of Sakeaw. Studies found that Klong Arang community members have volunteering-mind and are enthusiastic in developing their community, and participate in the community management. They trust each other, and believe in and cooperate with their leaders in the community management. Boontham. (2019)

Literature review:

Community capital

According to Community Organizations Development Institute. (2019), Community capital means anything that exists within the community both occurred naturally, and created by human. For example, natural resources, environment, people, culture, traditions, including money, which is valuable to people lives.

Community capital consist of

1. Monetary Capital – received from various fund, saving, and budget.
2. Non-monetary Capital

2.1 Human Capital – know-hows, skills, of people in the community

2.2 Social Capital – trust, faith, mutual acceptance, and culture, passing down for the next generation.

2.3 Physical Capital – facilities made for convenience, fundamental factors that support the livelihood of the people in the community, like electricity, water, communication, transportation.

2.4 Natural Capital – natural resources and environment such as natural water source, forest, mountain, sea, island, animals, mineral, and plants.

Following Intria. (2017), Social Capital is part of community capital, which means things in people's daily lives, for example, a relationship between people in a community, being part of a group, trust, having the same culture, being cooperated to achieve common goals, resulting in living happily together. The community strongly affects stability within the community.

Business Production Planning

A business undertakes these three tasks in order to produce goods and services. These activities are essential for both the survival of an organization and its ability to produce.

1. Marketing, which creates demand for a good or service, or at the very least, accepts orders for it (nothing occurs until a sale is made).
2. Production and operations involve creating, producing, and delivering the final product.
3. Accounting and finance, which keep tabs on the organization's performance, handle bill-paying and cash collection, Heizer et al. (2017)

Organizational Structure

Employees are grouped according to organizational structure so they concentrate their efforts for the best possible results. It has three essential components, level of hierarchy, departments, and coordination/communication system among departments. The hierarchy refers to a number of subordinates directly reporting to each supervisor. According to an organization’s departments, people may be arranged in several logical groups, such as a function of work, a product line, a work project. The coordination and communication system are essential to support the hierarchy, Pinto (2015)

There are a few common structures used in most businesses.

1. Functional organizations – creating departments out of employees who are doing comparable tasks.
2. Project organizations – assembling individuals into project teams for short-term tasks.
3. Matrix organizations – establishing a dual hierarchy where projects and roles are equally important.

In accordance with Robbin (2016), in organizational design, there are 6 essential components. Begin with a work specialization, breaking down work activities into individual job responsibilities. Then, a departmentalization is a job organized into departments, like functional, product, customer, geographic, or process. The ability to complete tasks within an organization is impacted by authority, responsibility, and power. Authority is a right to issue commands and demand that compliance. When authority has been transferred, responsibility refers to the commitment to follow through. Power, which is distinct from authority, is the ability to have an impact on decisions. Span of Control is the amount of employees a manager can effectively and efficiently supervise. When it comes to decision-making, centralization and decentralization refer to whether the majority of choices are taken at higher organizational levels or delegated to subordinate managers. Formalization refers to how standardized an organization's tasks are and how heavily policies and procedures are used to direct employee conduct.

Marketing strategies for small business

Marketing is important for both large and small businesses. Marketing strategy is a part of a business plan, which will drive the business to succeed. Therefore, small business should pay attention to the marketing planning, which includes the following elements: marketing objective, sales forecasting, target market, and marketing mix, Ongsakul et al. (2007)

1. Marketing Objective – make the marketing plan clearer. The marketing objectives must be specific and measurable.

2. Sales Forecasting – a pre-sales forecast. It is used in a production planning, promotion making, so it is possible to estimate the profit of the business.

3. Target Market – a segmentation of the market as a whole, and identify the target market of the business. It will enable the business to develop marketing strategies to suit the target customers. There will be no unnecessary marketing waste to non-target customers.

4. Marketing Mix – the set of actions, or tactics, that a company uses to promote its brand or product in the market. It includes product, price, place, and promotion.

Objectives

1. To identify the current existing management practices in the community enterprise.
2. To determine how social capital can be enhanced and used to mobilize the members to work together in running an efficient and competitive business.
3. To develop a suitable business model for a strong and sustainable community enterprise.

The study is based on a theory of change that:

If enterprise members are knowledgeable of business management and have taken part in developing the business management system, and leverage on the social capital as a resource to mobilize members to work together, then they will be able to run an efficient and competitive business.

Methodology

1. Research Design and Instrument

The study employed mixed method, combining qualitative and quantitative research. Adapting the techniques of participatory action research (PAR), the study attempts to understand the situation or problem in the community enterprise and develop action-oriented interventions with the involvement of all stakeholders. As defined by the International Development Research Centre-Canada, action research is "research on the conditions and effects of various forms of social action and research leading to social action".

Participatory Action Research (PAR) was conducted using tools and procedures as follows:

Step 1. Diagnose the problem. Explore the local environment, understand the existing operational setup of the community enterprise and the gaps. Identify the strengths and weaknesses of members in running the business. Collect data using focus group discussions (FGD) with people who are involved in the community business, including the president, vice president, village headman and members, comprising a total of 41 informants. Questions asked in the context of the community were focused on the following issues:

1.1 Existing operational setup and management system

1.2 Challenges, problems and requirements encountered in the operation

1.3 Strengths and weaknesses of members in running the business

Step 2. Build knowledge. The researchers arranged a series of workshop training to provide knowledge on business management focusing on the following topics:

a. Overview of community businesses,
b. Operations Management: inventory management, production processes, and quality control
c. Marketing Strategies: product positioning, pricing, promotion, and customer relationship management
d. Financial Management.

Prior to the training, the researchers conducted a training needs assessment to evaluate the members' existing knowledge about community business management and what is required to develop/build knowledge.

Step 3. Design and develop a business management system. After building knowledge through training and workshops, the researchers used the brainstorming method to help the members design and develop a suitable business management system. A series of meetings were organized to allow members to discuss, debate and agree.

Step 4. Test-run. Study the consequences of the actions/interventions through system trial. The designed system was put on a test-run by the group for three months. They ran the enterprise using the newly-established management system. In the beginning of the test-run, the researchers guided the members if they encountered any problems or concerns and continuously mentored them until they were ready to implement it by themselves.

Step 5. Evaluation. Learning from the actions and taking corrective actions. Following the three-month system trial, the researchers conducted a focus group discussion to evaluate the results of implementing the new business and any problems that may have been encountered. In addition, members were asked to answer a survey questionnaire to collect data on their perceptions and attitude toward using the new management system. The researchers continuously monitor the performance and feedback from the community to make necessary adjustments.

In the process, the researchers leveraged on the community social capital by identifying the key stakeholders within the community enterprise, understanding their roles, influence, and relationships. The researchers actively engaged the community members and stakeholders to build trust and establish relationships. They were involved in decision-making process to seek their input, ideas, and feedback on the design and development of the business management system. The opportunities for interaction and knowledge-sharing among the members and officers during the series of training, focus group discussions and brainstorming aimed to help develop their sense of belonging and forge harmony in the group. This participatory approach not only strengthened relationships but also ensured that the system aligns with the community's goals and values.

2. Population and Sample

The population used in the study are the three groups comprising the weaving community enterprise in the area of Mae Win Sub-district in Mae Wang District, Chiang Mai Province. The sample group was selected using purposive sampling, the criteria for choosing being the accessibility of the people in the group and the recommendations of the district leaders and related government agencies. The group also expressed willingness to improve the enterprise and cooperate with the study. Hub Mae Win Community Enterprise was selected as the sample group. There were 41 members from two villages, Moo 5 and Moo 6. Their products were from a mix of ethnicities, such as Hmong and Karen. The group had a strong desire to develop its community enterprise group, but insufficient knowledge in business management.

Results

1. Results from the preliminary study of the community business management practices

1.1 Management

The study showed that the community enterprise did not have a clear organizational structure. Although there was a president, no other roles were assigned causing the members to not know their responsibilities under the group operations. The president performed many duties alone resulting in a rather heavy workload. Hence, not all tasks were completed due to tremendous workload and lack of cooperation from the members within the group.

1.2 Production

The main products of the community enterprise were woven products such as shirts, dresses, scarves, and bags, among others. There was lack of coordination among the members on what products to produce. They generated goods on their own at every stage starting from raw material procurement to products creation. The researchers identified problems in product quality, production time, and cost of production. Although members were able to carry out their own production at every step, each member had different capabilities. For example, some people were good in product design, but not good in cloth dyeing. Therefore, working on unskilled parts was time consuming, and also affected quality. However, hiring workers to do the unskilled parts would result in higher production costs. Moreover, the cost of a whole process material preparation was high due to the diversity of materials and equipment used.

1.3 Marketing

Results showed that there was absence of marketing strategy to promote and sell the products. The group members were doing every production process solely by themselves causing poor product quality that did not meet customer requirements both in terms of form and quantity. As a result, the products could not be sold. Furthermore, product pricing was determined by each member according to his own wishes, not based on the actual cost or following a pricing strategy. Another problem was the lack of distribution channels, with members selling their products at their homes with no other way to reach customers.

1.4 Accounting and Finance

The group did not record business transactions, such as income and expenses. Since the members worked separately, there was no compensation shared. Members who were unable to produce or sell products would have no income. The unequal distribution of jobs and income had a negative impact on group engagement and motivation, resulting in inefficient business operations.

2. Results from the development of the community business management system

2.1 Administration and Organization

Organizational structure

A flat organizational structure was determined to be suitable for a small, newly founded organization. This structure helps eliminate complications in the management and coordination processes. The organization chart is shown in Figure 1.

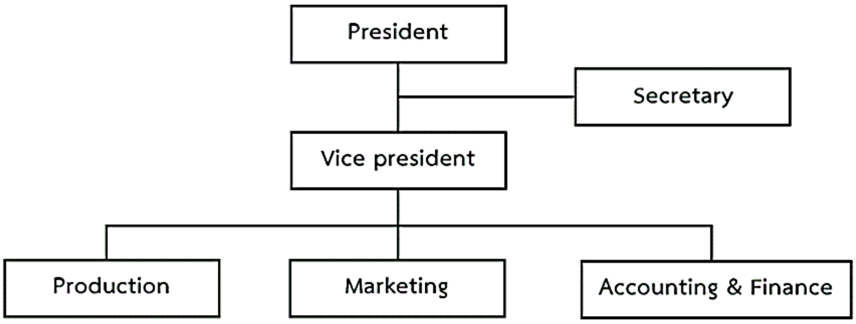


Figure 1 Organizational chart of Hub Mae Win Community Enterprise
(Source: Researcher, 2022)

Roles and Responsibilities

The assignment of duties and responsibilities were based on abilities, knowledge, skills and experience. Under the direction of the president and the vice president, members were allowed to offer their opinions and participate in the job selection. By embracing community-based decision-making, the system is expected to be more aligned with local needs and aspirations.

The duties were divided into main departments: Production, Marketing, Accounting and Finance. Job titles were created: President, Vice President and Secretary. Roles and responsibilities of each department were under the supervision of the Department Directors.

Member participation

A monthly meeting was scheduled for every last Wednesday of the month to discuss work performance and address any problems. The president would lead the meeting, and all members would participate by sharing their ideas for business improvement. This provides opportunities for diverse voices to be heard and actively involves individuals from various backgrounds, ages, and perspectives. The meetings would become opportunities to create harmony among members of the group. By valuing and leveraging on the harmonious relationship of members, the implementation of the new system becomes more robust and sustainable.

2.2 Production

Production management

A standard production model was developed to allow all members to work in the community enterprise. Roles and responsibilities were assigned based on the skills and experiences of members. There were 7 steps in the production process: (1) Material procurement (2) Product design (3) Cotton dyeing (4) Cotton weaving (5) Cloth tailoring (6) Embroidery (7) Quality inspection. Individuals were assigned responsibility for each step in the production process. This mechanism ensures equal representation and involvement of all community members. By valuing and including everyone's input, the system has become more comprehensive and inclusive.

Production planning

Coordination mechanisms were established between Marketing Department and Production Department in order to streamline the processes and avoid wastage.

The marketing department must verify the quantity of inventory. If any items were nearly out of stock or expected to be ordered by customers, the president would be informed to send a job request to the production department. The Production Department would receive the assignment from the president and then proceed to allocate the tasks to various steps along the production process. After the production were completed, the products would be quality-checked before sending to the marketing department.

Materials procurement

Effective collaboration among members made the planning for material procurement more efficient. This enabled bulk purchasing, leading to economies of scale. The process began by assessing the available materials in each department. Then, a material purchase requisition was created, which required approval from the president. This requisition was also coordinated with the accounting and finance departments to allocate the budget accordingly.

2.3 Marketing

The group designed an appropriate marketing strategy for the community enterprise, using the marketing mix (4Ps) concept as follows:

Product

The primary products consisted of woven fabrics that incorporated a blend of patterns reflecting the distinctive tribal identities of the Hmong, Karen, and Thai communities. These patterns were infused with the traditional wisdom passed down through generations. Value-added features were incorporated into the products, including the inclusion of logo tags on each item for branding and improved recognition. These tags featured a brief narrative about the product along with its pricing information.

Price

The pricing strategy was determined by adding a desired profit margin, typically ranging from 10% to 25%, to the production cost. Additionally, members took into account the price of local competitors and aimed to position their prices slightly lower. Members generally regarded this pricing approach as a competitive and reasonable markup compared to other businesses in the area.

Place

Distribution channels were categorized into two segments: offline and online.

In the offline channel, the group set up a store to sell their products at Mae Win Guesthouse Resort. The president was responsible for overseeing sales and coordinating with other departments. Furthermore, the group took part in numerous local and international exhibitions as alternative distribution channels, aiming to enhance the product's visibility and reach a wider customer base.

For the online channel, a workshop session was organized for the marketing department to familiarize them with the utilization of various online platforms, including Facebook, Shopee, and Lazada, for the promotion and sale of the products.

Promotion

The group placed a strong emphasis on communication through online channels to raise customer awareness, utilizing platforms like Facebook fanpage and Facebook Live. They also organized additional activities, including farming events and community tours, to further promote awareness of the enterprise.

2.4 Accounting and Finance

The accounting and financial management system was divided into three parts:

Income and Expense Accounting: A detailed income and expenditure account was established, encompassing the calculation of the group's production costs. This aspect of financial management fell under the supervision of the group president.

Compensation Allocation: Compensation was disbursed based on the type and quantity of work performed by each member. Profit-sharing was distributed to members proportionally, reflecting their level of involvement, and was paid out semi-annually.

Group Performance Reporting: The group implemented a quarterly reporting system to evaluate overall performance. This allowed members to monitor progress, address challenges, and collaborate on solutions. Transparency, open communication, and information sharing were integral to fostering trust within the community.

3. Perceptions of members on the development of the community business management system

Table 1 Opinions on the group's community business management system, before - after development Comparison

No	Item	$\bar{x} \pm sd$		Interpretation
		Before	After	
1	You feel being a part of, and actively participate in the group.	2.63+0.49	4.36+0.49	Better
2	The efficiency of the group's management system.	2.73+0.45	4.56+0.50	Better
3	You are aware of the group's actual business performance.	2.46+0.50	4.41+0.50	Better
4	The community businesses can generate income and improve the well-being of community members.	2.73+0.55	4.46+0.50	Better
5	The community has unity, love, solidarity, and harmony.	2.65+0.48	4.51+0.51	Better
6	You are pleased with the income received.	2.56+0.50	4.43+0.50	Better
7	You are satisfied with the business transparency.	2.48+0.55	4.50+0.51	Better
8	Overall satisfaction with the community business management system.	2.68+0.57	4.39+0.49	Better

Table 1 provides a comparative analysis of the opinions of 41 members from the Hub Mae Win Community Enterprise Group regarding the new business management system. The majority of respondents were women under the age of 50, with a high school education and a daily income of less than 300 baht.

The results reveal that respondents expressed a higher level of satisfaction across all aspects following the development and implementation of the new system. Their highest level of satisfaction was observed in terms of the efficiency of the new management system (item 2 = 4.56). This was closely followed by item 5, which pertains to unity, love, solidarity, and harmony (item 5 = 4.51), and item 7, which concerns community business transparency (item 7 = 4.50).

Discussions

1. Preliminary study involved exploring the local environment, gaining insights into the current operational structure of the community enterprise, identifying areas that needed improvement, and assessing the strengths and weaknesses of its members.

The Hub Mae Win Community Enterprise lacked a well-defined organizational structure, leading to member confusion about their roles and responsibilities. Previous research has indicated that the absence of a clear organizational structure can result in role ambiguity and redundant work (Mukda, 2014).

Many members had limited knowledge of proper business management systems, primarily due to their educational background, with most having completed only high school. Given their lack of business experience, they needed training to acquire a deeper understanding of business management principles and their practical application within the community enterprise setting.

The members predominantly operated as individuals, and a sense of collaboration and unity within the group was conspicuously lacking. Certain members carried disproportionately heavy workloads, while others were less actively involved, resulting in diminished trust and a lack of a sense of belonging among the group.

The absence of coordination within the group had an adverse impact on product quality, production timelines, and production costs. The products were solely sold within the community due to the absence of marketing channels and promotional activities. Additionally, there was no income-expense accounting system in place, which is crucial for effective financial management. Furthermore, there was no profit-sharing scheme, which contributed to low motivation and engagement among the members.

2. Intervention activities were implemented to enhance knowledge in business management and bolster the social capital within the community.

The researchers organized various intervention activities, including training sessions, workshops, and meetings, to impart knowledge on business management and foster a sense of harmony, trust, and unity among the members. By actively involving all members in brainstorming and discussions, the group collaboratively developed a comprehensive business management system that encompassed various aspects including management, production, marketing, accounting, and finance. As stated by Penmas et al. (2021), human resource management, marketing, production, and accounting & finance management are fundamental components of community business management. Moreover, active membership participation is crucial for the success of any community business, as emphasized by Wongkalasin et al. (2020).

Given that the community enterprise is small and newly established, a flat organizational structure was deemed the most appropriate choice. This structure simplifies management and coordination, promoting active member participation, Palasak (2019). Regarding production, the group established a production plan and assigned roles and responsibilities based on members' skills and aptitudes. This aligns with Suaydee et al.'s (2021) assertion that proper job allocation and adherence to production standards are key factors for success in production.

The development of marketing strategies involved establishing the selling price and devising marketing channels. The selling price was determined by adding the cost and the desired profit. Both offline and online distribution channels were identified for marketing and distribution purposes. Online platforms like Facebook and Line were utilized for distributing goods, along with participation in sales exhibitions. Yanpiboon and Grisanaputi (2020) highlight the significance of establishing multiple distribution channels for products.

The group received training on financial management and the creation of income - expense account. The group was mandated to submit quarterly performance reports to assess progress and identify and resolve any issues. Moreover, financial management was divided into two components: compensation and dividends from profits. This aligns with Mukda's (2014) study, which highlighted the need for accurate accounting information among OTOP producers to effectively manage their budgets and remain competitive in the market.

Conclusion and suggestions

The initial assessment indicated that the community enterprise lacked an effective management system. It had an unclear organizational structure with undefined roles and responsibilities. As a result, the substantial workload became solely the responsibility of the chairman, leading to an excess of unfinished tasks. Additionally, there was no production management system in place, and a lack of coordination among members was evident. Products were individually produced, resulting in low quality and high costs. Additionally, there was no marketing plan, and members were selling their goods at home without any other distribution channels. The product price was set without considering the costs. There was no accounting and financial system in place. Members worked separately, which meant they did not share the profits. Additionally, some members who lacked the ability to create the product did not have a source of income. The group members lacked motivation and engagement, making it difficult to run an efficient community business.

With the development of the community business management system, a suitable organizational structure was established. Clear roles and responsibilities were appropriately assigned based on the member knowledge, abilities and responsibilities. Meetings were scheduled to facilitate discussions and the sharing of ideas about the business, fostering participation and building good relationships among the members. The production process was designed with clear steps, and work responsibilities were assigned based on the expertise and skills of the workers. In addition, the quantity to produce and the choice of materials to use were planned in advance to save time, reduce costs, and meet customer requirements. The marketing mix (4Ps) concept was used as a tool for developing the marketing strategy. The product quality was improved and appropriate prices were set. Product quality was improved, and pricing strategies were adjusted accordingly to better align with market demands. A combination of offline and online distribution channels was employed to reach a broader customer base. An income-expense account was established to ensure transparent monitoring and control of business finances. Wages were determined in accordance with the type of work and workload performed. Profits were distributed proportionally based on the level of engagement. Business performance was monitored regularly through quarterly reporting.

The development of business management system received positive feedback from the members. Quantitative data demonstrated a higher level of member satisfaction after implementing the new system, particularly in areas such as the management system's efficiency, community harmony, and system transparency.

Recommendations

Drawing from these findings, the researchers offer the following recommendations.

1. Enhance members' understanding of product value addition and improve online marketing strategies on other social platforms to expand the customer base and boost sales.

2. Establish policies to ensure the ongoing implementation and adherence to the new business management system.

New knowledge and the effects on society and communities

The research generated a new suitable business management system for the community enterprise. It transformed the unsystematic community business to a well-organized one. With efficiency and transparency, members were more willing to engage in the business activities. As a result, the community business has developed sustainably, leading to harmony and well-being of society. Additionally, the system might serve as a template for other communities and community businesses.

Acknowledgments

This research would not have been possibly completed without the participation and assistance of so many people whose names may not all be enumerated. We sincerely appreciate and gratefully acknowledge their valuable contributions. However, the researchers would like to express their deep appreciation particularly to the following: Thailand Science Research and Innovation (TSRI), for the financial support; Chiang Mai Rajabhat University for providing the opportunity to engage in this project; Mae Win Sub-district Administrative Organization for providing convenient coordination with the local area. And last but not the least, to Hub Mae Win Community Enterprise, for participating in the project and providing valuable information.

References

Boontham, S. (2019). Social Capital and Strengthening of Klong Arang Community, Sakeaw Province, Thailand. *PSAKU International Journal of Interdisciplinary Research, 8*(1/2), 112-119. https://so05.tci-thaijo.org/index.php/PSAKUIJIR/article/view/242913 (In Thai)

Chuthamas, P. (2021). Factors affecting Strength of Na Sa Ung Community According to Sustainable Development Goals. *Academic journal of North Bangkok University, 10*(1), 110-119. https://so01.tci-thaijo.org/index.php/NBU/article/view/247654 (In Thai)

Heizer, J., Render, B., & Munson, C., (2017). *Operations Management Sustainability and Supply Chain Management*. (12nd ed.). United States of America: Pearson Education, Inc.

Intria, M. (2017). Social Capital. *Narkbhutparitat Journal*, *9*(2), 14-25. https://so04.tci-thaijo.org/index.php/nakboot/article/view/104774 (In Thai)

Mukda, W. (2014). Guidelines Management of Product Manufacturing Group on One Tambon One Product in Tak Province. *SDU Research Journal*, *10*(1), 187-205. https://so03.tci-thaijo.org/index.php/sduhs/article/view/29240 (In Thai)

Ongsakul, V., & Kanitpong, T., (2007). *Small Business Management*. Bangkok: I Group Press Company Limited.

Palasak, J. (2019). Guidelines for Managing Community Product Group of one Tambon ne Product : Case Study, Huay Yang Village, MuangLuang Sub-District, HuaiThapThan District, Sisaket Province. *Rajabhat Maha Sarakham University Journal, 13*(3), 107-114. https://journal.rmu.ac.th/journal/view_article/e40274f2f6a9662f995813c3da9c00a7202001040342071578127327142812874 (In Thai)

Penmas, P., Sripraseart, P., Somnuk, N., Kuenui, P., & Thongpun, B. (2021). Community Business Management on Self-Sufficiency Economy in Nakhon Si Thammarat Province. *Journal of Roi Kaensarn Academi*, *6*(12), 36-48. https://so02.tci-thaijo.org/index.php/JRKSA/article/view/250355 (In Thai)

Pinto, K. J. (2015). *Project Management.* United States of America: Pearson Education, Inc.

Robbins, P. S., Coulter, K. M., & DeCenzo, A. D. (2016). *Fundamentals of Management*. London: Pearson Education.

Suaydee, N., & Inprom, C. (2021). The Study of Critical Success Factors in Community Business Management : a Case Study of Ban Na Onk Community Enterprise of Product Processing in Sathing Mo Subdistrict, Singhanakhon District, Songkhla Province. *The Proceedings the 20th National Community Social Development (CSD)*, (pp. 360-368). 31 July 2021, CISCO WEBEX MEETINGS (online).

Wongkalasin, S., Wongthong, L., & Krivart,. K. (2020). Management of Community Business Model in Nakornratchasima Province. *NRRU Community Research Journal, 14*(2), 255-265. (In Thai) https://so04.tci-thaijo.org/index.php/NRRU/article/view/241389/165295

Yanpiboon, A., & Grisanaputi, W. (2020). The Management Practices in Managing Community Enterprise Group in Nong Bua Lam Phu Province, *KKU International Journal of Humanities and Social Sciences, 10*(1), 84-106. (In Thai) https://so04.tci-thaijo.org/index.php/KKUIJ/article/view/218076

Rajabhat Chiang Mai Research Journal : RCMRJ
Vol. 24 No.3 September–December 2023 : TCI 1, ACI

Development of School Management Model to Promote Thinking Process Skills of Watjamarom School under the Roi Et Primary Educational Service Area Office 2

Preeyanan Hernthaisong
Ban Dongkhrangyai School, Thailand
E-mail: uaypreeya@gmail.com
(Received: 8 March 2022, Revised: 14 June 2023, Accepted: 18 June 2023)
https://doi.org/10.57260/rcmrj.2023.264065

Abstract

This research aims to; 1) to study the components of the school management model to promote thinking process skills of Watjamarom School under the Roi Et Primary Educational Service Area Office 2, 2) to study the current condition, the desirable condition, and the need for developing a school management model to promote thinking process skills of Watjamarom School, 3) to develop a school management model to promote thinking process skills of Watjamarom School, and 4) to study the results of using the school management model to promote thinking process skills of Watjamarom School, employing the four-phase research, Phase 1: Analysis of the components of the resultant system by seven experts, Phase 2: research present situations, ideal conditions, and development needs model for managing schools to encourage thinking process skills, data was collected using a questionnaire. 5-level estimation scale, the sample group used as administrators, teachers, and educational personnel, basic education institute committee chairman, parents, and community leaders, totaling 138 people, data analysis by means, standard deviation, Phase 3: creation of a school management model to encourage thinking process skills. This phase involves researching schools with management systems that encourage thinking process skills and best practices, and Phase 4: by implementing the established model in schools.

The findings of the study may be summed up as follows:

1. There are 6 components of the school management model to promote thinking process skills of Watjamarom School: 1) policies to promote thinking process skills, 2) executive leadership, 3) curriculum to promote thinking process skills, 4) teacher personality and teaching and learning management to promote thinking process skills, 5) student characteristics that promote thinking process skills, and 6) an environment that fosters thinking process skills, where peer-reviewed results were found to be the most appropriate.

2. Watjamarom School,conducted a study on the school management model to promote thinking process skills, and the findings revealed that the overall desirable condition is at a high level.

3. Watjamarom School management approach to thinking process skills together with; 1) management and policy implementation to promote thinking process skills into practice, 2) curriculum development that promotes thinking process skills, 3) learning management to promote thinking process skills, 4) the provision of an environment and a learning center that promotes thinking process skills, and 5) the aspect of developing student characteristics that promote thinking process skills. The model was evaluated by specialists, and the findings showed that it was appropriate overall at the highest level.

4. The results of applying the model revealed that; 1) overall, the management component and the implementation of policies to advance the application of thinking process skills were at the highest level, 2) the element of curriculum development that best fosters thinking process skills was present generally, 3) the evaluation outcomes for learning management to support thinking process skills were at the highest level overall, 4) the assessment's findings on creating a space and a learning environment that encourages the use of all thinking process skills were at the highest level, and 5) students' development of traits that support thinking process skills were at good and very good levels, which represented 88.31% of the total.

Keywords: Development, School management model, Promote thinking process skills

Introduction

The Office of the Basic Education Commission has encouraged and supported the emphasis on enhancing the quality of education to bring thinking process skills into the classroom by integrating with 8 groups of learning subjects and emphasizing that the outcomes of concrete learning management can be measured and evaluated in a way that accurately reflects the results of assessments. As a result, it is the responsibility of the instructor to help students reach their full potential as thinkers so that they might acquire useful thinking abilities. Teachers must adjust in all areas since standard 4 defines assessment of educational quality for learners as placing an emphasis on students' capacity for critical, synthesizing, creative, introspective, and imaginative thought. In the past, teachers were the ones who imparted knowledge to pupils by explaining it in order for them to retain it and grasp it, but in today's digital era, when knowledge is awash in technological advancement, instructors are unable to impart all of it. As a result, instructors in the modern day must help students develop their critical thinking skills in order to provide them with the tools they need to move on in life, critical thinking skills are crucial since they are essential to human survival (Guilford, 1967). Because only when people take creative initiative, consider why things happen, know how to think about preventing or thinking about addressing issues in daily life, and have ideas for developing and improving diverse situations in society for the better, can society continue to advance (Dewey, 1973). A person's life and society will be conducted with high regard if they have good, appropriate, and suitable thought processes, to become a person who thinks logically and correctly, train yourself in various approaches and techniques, and learn how to help society as a whole, one should be aware of the numerous approaches and methods in this area. (Wongaree, 2015)

The thought process is a type of thinking that combines higher level thinking abilities with more fundamental thinking abilities, it has been conceptualized in a variety of ways to take on new meanings, and it is one of the many processes that are vital to existence. Such as decision-making process, creative thinking process, critical thinking process, reflective thinking process, scientific process, problem-solving process, research process, etc., each process has a goal, which is reached through a series of phases. (Wongaree, 2015) This is in line with Moonkham (2011), who stated that thinking is a process that calls for thinking abilities and characteristics in order to develop suitable and diverse thinking processes, such as analytical thinking,comparative thinking, critical thinking, problem solving, synthetic thinking, applied thinking, creative thinking, conceptual thinking, future thinking, integrative thinking, strategic thinking, critical thinking, and a host of others. Similarly, Khaemani (2001) stated that the thinking process is the act of thinking in order to arrive at the desired idea, such as the critical thinking process, the creative thinking process, and the problem-solving process, as well as the reflective process, reflective process, and scientific thinking process, to put it briefly, a thought process is a way of thinking that draws on lower-level thinking abilities, higher-level thinking abilities, and complex thinking traits to produce an appropriate and varied thought process made up of the five thinking talents, they are 1) creative thinking process, 2) problem solving thinking process, 3) decision-making process, 4) critical thinking process, and 5) synthetic thinking process.

The following are recommendations for fostering cognitive abilities: 1) Using thinking-promoting approaches can help learners develop systematic thinking skills and the ability to arrange information so that it properly delivers the intended meaning, while most teachers strive to educate students to think, they do not actively encourage pupils to do so, 2) Appropriate environment setup; the setting plays a key role in the development of thinking, this includes the atmosphere in the classroom, the preparation of student work boards and question boards, the absence of outside noise, the use of bright, learning-friendly lighting, the placement of an experience corner where students can study independently, the use of research resources to encourage self-learning, as well as the development of an environment that supports teachers in their teaching and learning, 3) Teachers who are actively involved in teaching and learning activities can create learning activities that emphasize thinking skills based on curriculum analysis; the basic education core curriculum is distinctly specified in learning standards and indicators. As a result, the instructor must assess the curriculum, generate ideas for designing learning activities that fulfill the curriculum, and allow students to gain information through a range of experiences on their own, 4) As teachers do on a regular and daily basis, thought-promoting activities and thinking-process skills training can be used in annual activities, homeroom activities, flagpole activities, exhibitions, project work, and to train students all the time, activities can be simple or complex depending on the purpose of the activity, the learners' proficiency level, and the time period, 5) Promote the use of thinking skills exercises, teachers can develop thinking skills exercises via thinking exercises alone or in conjunction with knowledge building, teachers can design a procedure that enables students to reflect on their thoughts in a series of phases, 6) Establish a culture of thinking throughout the school, with teachers serving as good examples for students to adopt. For instance, if teachers want to change students' behavior promptly, they must begin teaching on time. Likewise, if teachers want to develop students' capacity for critical thought, they themselves must be capable of doing so, and 7) Find or buy media, tools, and things that foster thinking to capture the attention of the students. (Ministry of Education, 2008)

As was said above, it is clear that the planning of educational activities targeted at fostering thinking abilities is crucial since it will serve as a crucial foundation for students' further development in other areas. As a result, the development of cognitive abilities is something that has to be prioritized and cannot be disregarded since it will affect how each student behaves. However, given that fact, it is important to note that planning activities to foster cognitive abilities is seldom given much attention, with the majority of them being disregarded to the point where they have a detrimental impact on student development. Therefore, understanding and organizing the environment, atmosphere, and learning resources to facilitate the learning of the students will help encourage students to have higher thinking skills, where all parties must participate in management and work together to truly make it happen. This is especially true if administrators, teachers, and stakeholders recognize the importance of fostering cognitive skills.

The Watjamarom School should employ the school management model to promote thinking process skills as part of the Roi Et Primary Educational Service Area Office 2 for managing education, improving students' quality of life, Service Area Office 2 responsibilities and resolving social issues. The operation must be systematic and enable personnel from all parties to cooperate. This will increase the effectiveness of learners and lead to education management achieving the set goals. Participation from all parties is required to develop learners' quality by applying to suit their own context. As a school administrator, the researcher recognized the significance and requirement of management to foster thinking process skills since it was seen to be the most important activity that needed to be done to maximize student learning. As a result, there is interest in creating a management model for schools that encourages thinking process skills in order to further improve the standard of school instruction.

Research Objectives

1. To study the components of the school management model to promote thinking process skills of Watjamarom School under the Roi Et Primary Educational Service Area Office 2.
2. To study the current condition, the desirable condition, and the need for developing a school management model to promote thinking process skills of Watjamarom School.
3. To develop a school management model to promote thinking process skills of Watjamarom School.
4. To study the results of using the school management model to promote thinking process skills of Watjamarom School.

Methodology

The researcher conducted in the nature of research and development, using qualitative and quantitative data collection, the implementation process is divided into 4 phases, it may be characterized as a research process, as follows and is presented in table 1 as follows;

Table 1 Outlines the procedures for creating a management model for the Watjamarom School under the Roi Et Primary Educational Service Area Office 2.

Research Process	Activities Performed	Results
Phase 1: Researching the Watjamarom School management style within the purview of the Roi Et Primary Educational Service Area Office 2.	1. Study documents, concepts, theories and related research. 2. Combine the primary elements and auxiliary elements of the school management model to enhance thinking process skills. 3. By 7 experts, determine if the model's primary elements and auxiliary elements are appropriate. 4. analysis of documents, concepts, theories, and pertinent research to study the elements of the school management model to develop thinking process skills	1. The theoretical foundation of the school administration approach to encourage thinking process skills. 2. The central element and supporting elements of the school management strategy to foster thinking process skills.

Table 1 Outlines the procedures for creating a management model for the Watjamarom School under the Roi Et Primary Educational Service Area Office 2. (Continue)

Research Process	Activities Performed	Results
Phase 2: Researching present situations, ideal conditions, and pressing requirements in order to create a management strategy for the Watjamarom School, which falls under the purview of the Roi Et Primary Educational Service Area Office 2.	1. Use the primary components and supporting elements discovered in Phase 1 as a foundation for generating a questionnaire on the current and ideal circumstances in order to design a school management model that will encourage the development of thinking process skills. 2. Administrators, educators, basic education committee chairs, parents, and community leaders a total of 138 people were included in the sample from which data were gathered. 3. Analysis of the demands required to create a school management model to increase thinking process skills using an average analysis of standard deviation of ideal circumstances and present conditions. 4. Data was collected using a questionnaire. 5-level estimation scale, the sample group used as administrators, teachers, and educational personnel, basic education institute committee chairman, parents, and community leaders, totaling 138 people, data analysis by means standard deviation.	1. Conditions that now exist and would be ideal for the creation of a school management model at Watjamarom School, which is part of the Roi Et Primary Educational Service Area Office 2.
Phase 3: Creation of an the Roi Et Primary Educational Service Area Office 2 school management model to advance the thinking process skills of Watjamarom School.	1. Study trips to schools using a management model for schools to encourage excellent practices and effective thinking process skills. 2. Creating guides and models based on school administration concepts to advance thinking process skills. 3. Nine experts examine and assess if the model and the manual are appropriate given the model. 4. Improve pattern/pattern implementation guide.	1. The school management strategy that encourages thinking process skills passed the audit. 2. The guidebook promotes thinking process skills by using a school management paradigm.
Phase 4: Research on how Watjamarom School, which is part of the Roi Et Primary Educational Service Area Office 2, uses a school management strategy to foster thinking process skills.	1. Use the model in actual circumstances. 2. Assess how well individuals engaged are using the model. 3. Outline the outcomes of creating a management paradigm for schools that encourages thinking process skills. 4. Data was collected using a questionnaire 5-level estimation scale and rubric score for evaluate students' thinking process skills. 5. Data analysis by means standard deviation and Percentage.	1. Outcomes of executive evaluation and policy implementation to encourage application of thinking process skills. 2. Evaluations of programs that foster thinking process skills. 3. Learning resources and the environment condition assessment result. 4. Findings from teacher learning management behavior evaluations. 5. The findings from the evaluation of students' thinking process skills. 6. Advice on how to use the model going forward and ideas for more study.

Scope of Research

The following are the terms the researcher used to describe the research's scope;

1. Scope of content

By examining ideas and theories regarding the study topics from well-known and widely-accepted academics, the researcher has determined the content scope, this analysis has been combined to provide the following research conceptual framework: effects of the combination of school management model's components on the development of thinking process skills, it comprises of 1) thought-process promotion policies, 2) top-level management, 3) programs that increase thinking process skills, 4) using a teacher's personality and teaching style to encourage thinking process skills, 5) characteristics of students that foster the ability to thinking process skills, and 6) a setting that encourages thinking process skills.

2. Scope of population and sample/informant

The following four steps are presented by the researcher in line with the study question and objectives:

2.1 Phase 1: The purpose of this phase is to educate students on how to assess the primary components and auxiliary components of the school management model to enhance thinking process skills. The informant group, which consisted of seven experts, looked studied whether the school management model's elements were adequate for fostering thinking process skills.

2.2 Phase 2: Researching the present situation, ideal situation, and required requirements in order to create a management model for schools that would foster thinking process skills.

2.2.1 A total of 188 individuals live there, including 16 administrators, instructors, and members of the educational staff, 1 head of the Board of Basic Education, 168 parents of Kindergarten through Mathayom 3, and 3 community leaders.

2.2.2 The sample group consisted of 16 administrators, teachers and educational personnel, chairman of the Board of Basic Education is 1 person, and three community leaders, acquired by selective selection and parents of 118 students, was obtained using Krejcie and Morgan's table (Krejcie and Morgan, 1970; Boonchom Srisaard, 2004), total 138 people.

2.3 Phase 3: Creation of the Roi Et Primary Educational Service Area Office 2 school management model to advance the thinking process skills of Watjamarom School.

2.3.1 School administrators, instructors, and students were the group of informants in the school visit using a school management model to develop effective thinking process skills and excellent practices (Best Practice).

2.3.2 Nine experts served as the group of informants for the examination and assessment of the model and manual's adequacy for promoting thinking process skills in schools in accordance with the school management model.

2.4 Phase 4: Research on how Watjamarom School, which is part of Roi Et Primary Educational Service Area Office 2, uses a school management strategy to foster thinking process skills. The following informant group was chosen by the researcher among persons associated with the school where the model was used: 1) the person acting as the supervision committee, supervising and monitoring the use of the number format 9 people consisting of; 1 executive, 1 teacher and educational personnel, 1 basic education board, 3 parents, and 3 representatives from community leaders, 2) the idea was being put into practice by 15 instructors at the school, and 118 students.

1. Components of the school management model to promote thinking process skills of Watjamarom School in the Roi Et Primary Educational Service Area Office 2. There are 6 components: 1) policies to promote thinking process skills, 2) executive leadership, 3) curriculum to promote thinking process skills, 4) teacher personality and teaching and learning management to promote thinking process skills, 5) student characteristics that promote thinking process skills, and 6) an environment that fosters thinking process skills, where peer-reviewed results were found to be the most appropriate.

2. Watjamarom School,conducted a study on the school management model to promote thinking process skills, and the findings revealed that the overall desirable condition is at a high level.

3. Watjamarom School management approach to thinking process skills together with; 1) management and policy implementation to promote thinking process skills into practice, 2) curriculum development that promotes thinking process skills, 3) learning management to promote thinking process skills, 4) the provision of an environment and a learning center that promotes thinking process skills, and 5) the aspect of developing student characteristics that promote thinking process skills. The model was evaluated by specialists, and the findings showed that it was appropriate overall at the highest level in terms of feasibility, appropriateness, usefulness, and accuracy requirements, it was found to be at the highest level in all items, and the results of manual evaluation performed according to the model It was found that it was appropriate at the highest level.

4. The results of applying the model revealed that; 1) overall, the management component and the application of policies to advance the application of thinking process skills were at the highest level, 2) the element of curriculum development that best fosters thinking process skills was present generally, 3) the evaluation outcomes for learning management to support thinking process skills were at the highest level overall, 4) the assessment's findings on creating a space and a learning environment that encourages the use of all thinking process skills were at the highest level, and 5) students' development of traits that support thinking process skills were at good and very good levels, which represented 88.31% of the total.

Results

1. The six components of the school management strategy that Watjamarom School, which is a part of Roi Et Primary Educational Service Area Office 2, is using to foster thinking process skills are as follows; 1) policies to promote thinking process skills, 2) executive leadership, 3) curriculum to promote thinking process skills, 4) teacher personality and teaching and learning management to promote thinking process skills, 5) student characteristics that promote thinking process skills, and 6) an environment that fosters thinking process skills, where peer-reviewed results were found to be the most appropriate.

2. The Watjamarom School, studied current conditions, desirable conditions, and the need to develop a school management model to promote thinking process skills. The results showed that the current condition overall was at a moderate level, and the desirable condition overall was at a high level.

3. Watjamarom School management approach to thinking process skills together with; 1) management and policy implementation to promote thinking process skills into practice, 2) curriculum development that promotes thinking process skills, 3) learning management to promote thinking process skills, 4) the provision of an environment and a learning center that promotes thinking process skills, and 5) the aspect of developing student characteristics that promote thinking process skills. The model was evaluated by specialists, and the findings showed that it was appropriate overall at the highest level in terms of feasibility, appropriateness, usefulness, and accuracy requirements, it was found to be at the highest level in all items, and the results of manual evaluation performed according to the model It was found that it was appropriate at the highest level.

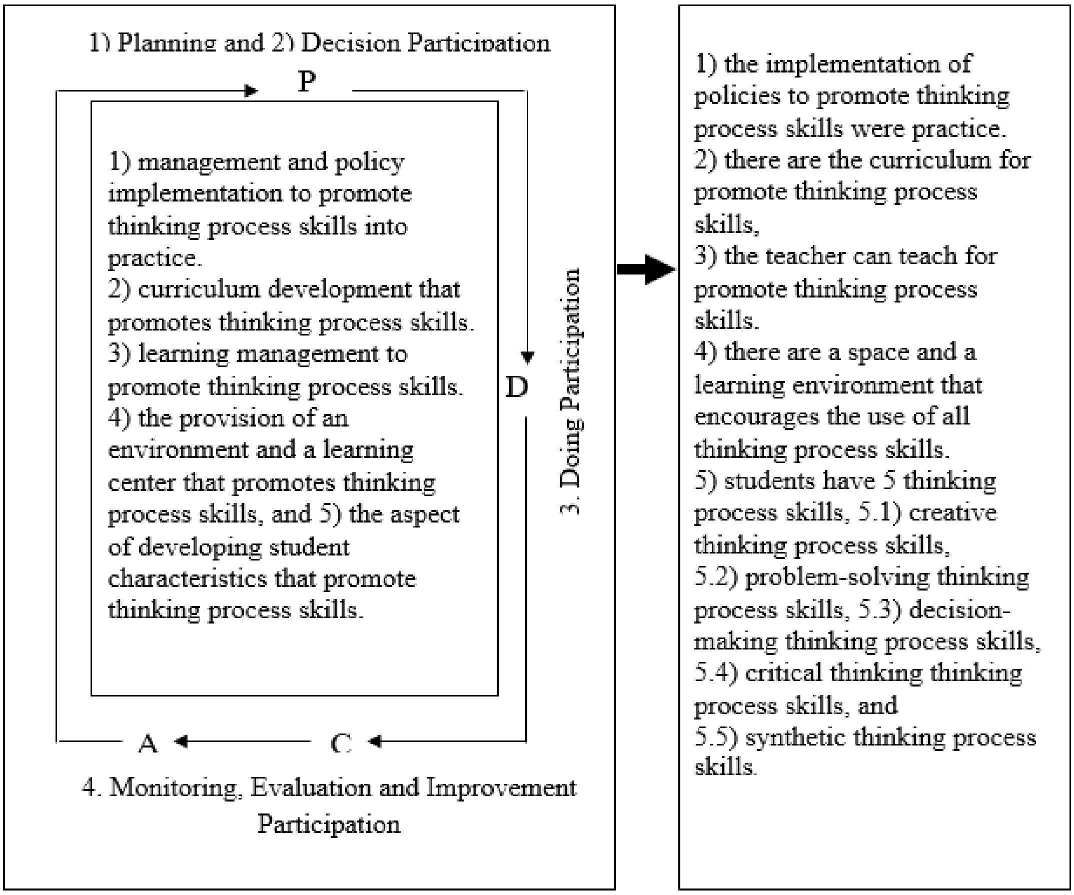


Figure 1 Model to Promote Thinking Process Skills of Watjamarom School under the Roi Et Primary Educational Service Area Office

4. The results of applying the model revealed that; 1) overall, the management component and the implementation of policies to advance the application of thinking process skills were at the highest level, 2) the element of curriculum development that best fosters thinking process skills was present generally, 3) the evaluation outcomes for learning management to support thinking process skills were at the highest level overall, 4) the assessment's findings on creating a space and a learning environment that encourages the use of all thinking process skills were at the highest level, and 5) students' development of traits that support thinking process skills were at good and very good levels, which represented 88.31% of the total.

Discussions

The researcher has the following topics to discuss based on the research findings;

1. The six components of the school management model that Watjamarom School, which is a part of Roi Et Primary Educational Service Area Office 2, is using to foster thinking process skills are as follows; 1) policies to promote thinking process skills, 2) executive leadership, 3)curriculum to promote thinking process skills, 4) teacher personality and teaching and learning management to promote thinking process skills, 5) student characteristics that promote thinking process skills, and 6) an environment that fosters thinking process skills, where peer-reviewed results were found to be the most appropriate.Since the researcher had

carried out the study and studied pertinent research papers to obtain components of a school management model to promote thinking process skills that are appropriate for the context of Watjamarom School, the results of the examination by qualified experts revealed that it was the most appropriate for all components, and in line with all 5 thinking process skills, namely creative thinking process skills, problem-solving thinking process skills, decision-making thinking process skills, critical thinking process skills, and synthetic thinking process skills.

2. The Watjamarom School, which is a part of Roi Et Primary Educational Service Area Office 2, studied current conditions, desirable conditions, and the need to develop a school management model to promote thinking process skills, discovered that the overall ideal condition was at a high level, the policy to enhance thinking process skills was at a low level, and the overall existing state was at a moderate level. The student qualities that encourage thinking process skills were also the most important factor, followed by the environment, learning The Watjamarom School, studied current conditions, desirable conditions, and the need to develop a school management model to promote thinking process skills. The results showed that the current condition overall was at a moderate level, and the desirable condition overall was at a high level. This is consistent with the results of the study of Thanyarat Uttho (2016) which found that the school administration conditions to promote students' critical thinking found that the educational institute administration conditions to promote critical thinking of elementary school students were generally at a high level, and when considering each aspect, all 6 aspects were at a high level, ranked in descending order of average scores, namely 1) educational institution curriculum preparation, 2) atmosphere and environment arrangement, 3) supervision. Supervision, monitoring and evaluation, 4) vision policy setting, 5) thinking development, and 6) resource support and personnel development respectively.

3. Watjamarom School management approach to thinking process skills together with; 1) management and policy implementation to promote thinking process skills into practice, 2) curriculum development that promotes thinking process skills, 3) learning management to promote thinking process skills, 4) the provision of an environment and a learning center that promotes thinking process skills, and 5) the aspect of developing student characteristics that promote thinking process skills. According to the evaluation findings of the model's appropriateness, usefulness, utility, and validity criteria, the overall evaluation by experts revealed that the model was appropriate at the highest level. All elements were determined to be at the highest level, and the manual evaluation's findings in accordance with the model were also discovered to be at the highest level. According to Rodyhu (2018) findings which indicated that the development model for thinking schools included 8 components, in particular component 1: educational policy, is a method of education management that encourages the growth of thinking process skills in managers and practitioners at all levels, by applying policies to create schools of comparable quality, students are not required to take exams to study at different levels, component 2: executive leadership is a quality of administrators that exhibits the capacity to influence instructors and all other parties to collaborate, possess knowledge, competence, and leadership in order to achieve objectives, component 3: teacher leadership is the capacity to fulfill the duty of a teacher, assist students' growth in accordance with their potential, and serve as an excellent role model for academic leadership, component 4: a thinking-promoting teaching style It is a quality in a teacher that fosters the growth of pupils' critical thinking abilities, as well as their self-confidence, love and compassion for all of their students, component 5: parenting It is a technique for educating and shaping children of parents in order to produce valuable contributors to society, to instill in them self-control and a sense of responsibility for both their own well-being and that of the larger community, and to maximize natural growth, component 6: pupils' cognitive capacities in accordance with their age, discipline, desire in learning, and joyfully adapted social behavior are characteristics of students that enhance thinking, component 7: curriculum that promotes thinking is the creation

of a curriculum that encourages student thinking in accordance with the learning development of students in accordance with their ages, responds to individual differences, does not focus on content, requires less time to learn, and organizes learning to motivate students to practice a variety of thought process skills, and component 8: an atmosphere that is conducive to learning and safe, with media and technological tools that are learning resources that facilitate the learning process as well as encourage the development of thinking skills that will be useful in successfully navigating the 21st century, is what is meant by an environment that is conducive to learning, which all 8 components can explain the development to a thinking school at 64.70 percent.

4. The results of applying the model revealed that; 1) overall, the management component and the implementation of policies to advance the application of thinking process skills were at the highest level, 2) the element of curriculum development that best fosters thinking process skills was present generally, 3) the evaluation outcomes for learning management to support thinking process skills were at the highest level overall, 4) the assessment's findings on creating a space and a learning environment that encourages the use of all thinking process skills were at the highest level, and 5) students' development of traits that support thinking process skills were at good and very good levels, which represented 88.31% of the total.This is in line with the results of Prachan (2017) study which proposed guidelines for implementing an administrative model to develop innovative thinking skills of teachers in basic education institutions for successful implementation, consisting of;

1) Create a clear vision and innovative plan that will serve as the policy of educational institutions for the advancement of teachers' capacity for innovative thought.

2) Establishing an administrative structure for a horizontal educational institution with open communication between all parties in order to foster an environment that will encourage the growth of innovative thinking abilities and the establishment of networks for innovation.

3) In order to foster the creative problem-solving abilities of teachers in institutions of basic education, school administrators research and comprehend management theories and compare them to existing practices.

4) The educational institution action plan should include a project to help instructors at educational institutions strengthen their innovative thinking abilities.

5) The management model research results were given to the teacher meeting by the school administrators in order to help instructors in basic education schools improve their capacity for creative thought.

6) In addition to fostering knowledge, understanding, materials, equipment, and educational technology in order to further develop innovative thinking skills, school administrators and staff members speed up the implementation of the policy, they also educate each school staff member to foster understanding and positive attitudes.

7) The management encourages the capacity of individuals for innovative efficiency through a range of approaches, emphasizing team learning, raising teacher morale by offering positive reinforcement, and holding an invention competition for instructors to enjoy.

8) According to the preparedness and appropriateness of educational institutions, educational institution administrators encourage and assist educational staff to assume the roles and obligations that are consistent with their policy-based tasks.

9) Establish agreements, positions, powers, and duties so that everyone can work together to gather the information they need. Arrange study tours so that everyone can learn about other schools' management styles.

The creation of a management model for schools to encourage the use of the thought process Students at Watjamarom School, which is a part of Roi Et Primary Educational Service Area Office 2, will be assisted in developing their thinking process skills as part of an educational strategy to support the growth of thinking process skills to create a high-quality school. There are many ways for students to study, supporting their interests and aptitudes, promoting equality, fostering autonomous growth, and equipping them with the knowledge and skills they need to thrive in the society of the twenty-first century.

Conclusion and suggestions

There are recommendations for using the results of this research and recommendations for further research;

1. Suggestions for applying the research results

1.1 School administrators and those involved should study the school management model to foster thinking process skills of Watjamarom School, which is a part of Roi Et Primary Educational Service Area Office 2, for thorough understanding, before implementing the system in their educational institutions, by emphasizing understanding the components as the drivers of work, if school administrators understand until they can be applied in the school will suffer.

1.2 Administrators should constantly promote knowledge of the value of school management models among teachers, students, and everyone else involved. This will help to foster thinking process skills that can be applied to study trips to schools that have best practices.

1.3 In order to grow instructors, students, and everyone else involved in the school, the model must be operated in accordance with the handbook for all processes. As a result, the school management strategy to encourage cognitive skills is appropriate for the environment of the school.

1.4 The Primary Educational Service Area Office should encourage its schools to adopt a school management model to promote thinking process skills of Watjamarom School, which is a part of Roi Et Primary Educational Service Area Office 2 have been adapted according to their own context.

2. Suggestions for further research

2.1 A study and research should be done on people development models for setting up educational activities to encourage students' ability to think critically.

2.2 A research study should be conducted to compare the outcomes of utilizing the school administration model to foster cognitive skills with those of other administrative philosophies in order to use the findings to make the school administration model more effective.

New knowledge and the effects on society and communities

The findings of this research indicate that everyone involved in education administrators, teachers, students, parents, and the community is considered to be contributing to the advancement of the issue. This research also suggests a framework for planning learning activities to foster thinking process skills. Particularly, both inside and outside of the school, the setting is acceptable. The development of thinking is influenced by both internal and external environments. This is true in the classroom, where students can display their work on question boards and portfolio boards, where the environment must be free from outside noise, where the lighting is appropriate for learning, and where a study corner is available for independent study time. Additionally, community resources from outside the school are crucial to fostering self-education, these resources include developing a learning environment for instructors in both teaching and learning, such as through planning community-based activities that stretch students' intellectual limits.

References

Dewey, J. (1973). *How to Think.* New York: D.C. Health and Company.

Guilford, J. P. (1967). *The Nature of Human Intelligence.* New York: McGraw-Hill Book Company.

Khaemani, T. (2001). *The Science of Thinking.* The Master Group Management Co., Ltd. (In Thai)

Ministry of Education. (2008). *Basic Education Core Curriculum 2008.* Bangkok: Ministry of Education. (In Thai)

Moonkham, S. (2011). *Organization of learning activities that emphasize thinking.* Bangkok: EK Books. (In Thai)

Morgan, C. T. (1978). *Thinking and Problem Solving: A Brief Introduction to Psychology.* (2nd ed.). New Delhi: Tata McGraw-Hill. Co.

Prachan, O. (2017). *An administrative model for developing teachers' innovative thinking skills in basic education institutions.* Phitsanulok: Naresuan University. (In Thai)

Rodyhu, W. (2018). *Development of A Thinking School Model*. Bangkok: Srinakharinwirot University. (In Thai)

Srisaard, B. (2004). *Preliminary research.* 8th edition. Bangkok: Suwiriyasan. (In Thai)

Uttho, T. (2016). *School administration model to promote critical thinking of elementary school students.* Bangkok: North Bangkok University. (In Thai)

Wongaree, S. (2015). *Teaching documents, thinking and decision-making courses.* Udon Thani: School of General Education, Udon Thani Rajabhat University. (In Thai)

Rajabhat Chiang Mai Research Journal : RCMRJ
Vol. 24 No.3 September–December 2023 : TCI 1, ACI

Fairy Tales and Promotion of Early Childhood Development

Pitchayapa Treewong
Faculty of Education, Phetchabun Rajabhat University, Thailand
E-mail: pitchayapa.tre.@pcru.ac.th
(Received: 11 March 2023, Revised: 11 June 2023, Accepted: 18 June 2023)
https://doi.org/10.57260/rcmrj.2023.264131

Abstract

The purpose of this academic article is to present the selection of storybooks for early childhood children, which must consider the ability to promote the development and imagination of early childhood children, and must consider children of each age who are able to receive knowledge and interests are different, because fairy tales are considered an important helper for parents and teachers in raising early childhood children, because in addition to providing fun, fables also provide knowledge and ideas that include morals and ethics. It is crucial to consider a child's age, interest, perception, and skill when determining whether or not a fairy tale is acceptable for young children. As a result, there is a genuine advantage to children's learning in that they will start to identify tales from seen sights and heard sounds as they gradually come to understand the meaning of the words until they can connect the two. In addition to learning the facts and tales that make the literature interesting to read, memorize them. As a result, selecting tales to help young children develop their skills will also strengthen their relationships with their parents and teachers, who have been telling tales to children since they were still in the womb. Additionally, selecting tales that are age-appropriate will be able to effectively support the development of the kids in all areas.

Keywords: Early childhood, Fairy tales, Child development promotion

Introduction

Parents can begin telling tales to their children when they are still in the womb. Storytelling has been shown to improve children's cognitive development and learning. As talking to a fetus may aid in the development of the brain and neurological system that govern hearing, parents may employ tone, emotions, and sentiments to elicit a response from their children when they are listening to stories. This is a healthy development since the fetus can detect it and may react with wriggles and body movements, from the time the kid is born until he or she is an adult, they will start to be curious and want to learn more, as well as encouraging them to become interested in the world around them and the literature they have in front of them. In order to engage and improve children's skills in other areas as well, it is important to select age-appropriate children's stories and storytelling techniques. When you think of a story, a lot of people probably picture one that has been passed down, with a princess, prince, fairy, or witch as the protagonist, with moral and ethical lessons woven in, and with a happy ending that the author wrote so that the audience would listen to it happily and joyfully, used as a lullaby before going to bed, but did you know that stories are more significant for young children than that? Regularly sharing stories with young children can be simple and inexpensive, but it has many benefits, including fostering children's imagination, creativity, and ability to focus for longer periods of time. It also helps to promote language development, especially listening to accumulate words, which will support children's fluent communication. (Playwet, 2011)

In any case, Tobbundit (2005) it has been stated that fairy tales are effective, for promoting learning in children, that early childhood no child dislikes listening to fairy tales, fairy tales create imagination, dreams, thoughts, understanding and perception for children. Thus, storytelling is a necessary activity for early childhood children as it promotes natural learning. The purpose of telling stories to young children is not just to amuse and entertain them; rather, the stories' content must be engaging and educational so that the young listeners will gain knowledge from them. Likewise, the characters in fairy tales must help children develop their imaginations and include both positive role models that the young listeners should emulate and negative role models that the young listeners should avoid. In order to make the narrative more entertaining, the storyteller may utilize techniques such as picture storytelling, hand puppets, finger puppets, dolls, or other equipment, as well as a proper location to pique the interest of young listeners. The content of the story must therefore have a length that is appropriate for the age and interest of the child, just as it will help encourage the child to have characteristics in various aspects that are consistent with the desirable standard of early childhood education curriculum.

From the above information is consistent with the research of Innurak (2010) saying; a fable is a narrative or legend that has been passed down from one generation to the next, created from the author's or storyteller's imagination from the past to the present, with the intention of educating or illustrating to youngsters the proper way to live. Fairy tales are both oral and written stories that have been passed down orally from one generation to the next, making them part of the rich cultural history of humans. They are also stories that have been documented in writing because they are significant and useful. The tales taught by the teacher may use the method of storytelling or use of various devices in storytelling for fun, morality and easy understanding of the content of the tale that needs to be conveyed. However, in telling the story the selection of stories or the use of teaching language should take into account the age of the audience.

The purpose of a fable is to insert ideas, morals, or ethics into a story that has been told for a long time. It may also be based on reality or come from the author's imagination. The goal is for the listeners to enjoy the story while also being able to use it as a model for how to behave properly in public. However, the benefit of tales for teaching is that they aid in the development of mental pictures in young learners, who succeed in learning to read and write both at home and in early childhood settings where they are exposed to stories and books from other cultures. Early infancy is a time when fancies may be produced in great numbers, but due to cognitive limits and a lack of experiences. Because of this, kids at this age are suitable for enhancing or enhancing their experience as well as creativity via storytelling to help them adjust and prepare for everyday events.

Results

Benefits of storytelling for early childhood

Advantages of storytelling for early childhood

Children may like listening to tales when they are told to them, and parents and instructors may use a variety of storytelling techniques to keep kids interested. As a result, there are several advantages to storytelling for young children. (Piromrak, 1997)

1) Choose a location and a routine for reading tales to early childhood children in order to acquaint them and spur their interest in reading or listening to stories, this includes choosing a time for reading at least one story each day as a routine.

2) As a way to reduce distractions and encourage youngsters to focus on the narrative, turn off the television, video games, and phones and provide a calm space for storytelling.

3) The youngster should either sit comfortably, on the parent's lap, or in a position that allows them to clearly see the storybook.

4) To get more kids to read the novel, the tone and mood should be handled effectively.

5) In order to develop imagination, focus, analytical thinking, and pleasure, children should be involved in the narrative by asking questions during the story, underlining terms that they want the kid to remember, or having children point to visuals.

6) When children are old enough to make their own selections, they should pick out books they enjoy and share them with others since doing so may teach them how to make decisions and may also pique their interest in the narrative.

Characteristics of good Storybooks for early childhood children

However, the story's content must be of a length that is suitable for the age and level of interest of young children. This will encourage young children to develop traits in a variety of areas that are in line with the ideal standard of educational curriculum, some examples of such attributes are as follows; (Boonyanit, 2008)

1) Promoting physical development, helping children have a growing body, developing large and small muscles to be strong, just during the story telling, there is an opportunity for children to participate in the content of the story, allowing children to move different parts of the body, for example, allowing children to play roles as characters in the story, jumping along the content of the story.

2) The content of most stories contains moral subtexts that help promote morals and ethics, and it also helps children concentrate longer from focusing on listening to stories to help cause thinking, imagination, and courage. These benefits include promoting mental-emotional development, assisting children to have good mental health, being happy while children listen to stories, and being happy while children listen to stories.

3) In order to foster social development, children will have the chance to interact with adults and other children while listening to stories, the stories' themes will also be applied to daily life, encouraging children to value nature and protect the environment for peaceful coexistence. As a result, kids will gain a better understanding of both themselves and others.

4) Encourages intellectual growth, aids in the development of children's imagination and creativity, aids in the development of language, communication, listening, and speaking skills in an age-appropriate manner, and also aids in the development of children's observant, reflective, inquisitive, and opinion-expressing traits, and capable of resolving issues requiring logical thought, conceptual thought, and mathematical principles as the foundation for subsequent study.

Given that not all children will enjoy the stories that are available, the storyteller or reader for the kids must pick one. While making this decision, they should take the following factors into account; the narrative should be chosen to suit the child's various ages, and the time spent telling it should be appropriate to the duration of the child's attention and focus, this will depend on how well the story meets the child's requirements. The information must be educational, original, encourage morals and ethics, have a compelling plot that will pique kids' interest, be good literature in terms of both plot and character traits, utilize inventive language, and timelessness is never a story. It also carefully examines human emotions, offering inventive solutions for kids to deal with challenges. It also warns against making light of other people's suffering and from using words or treating them in a reproachful or derogatory way. (Hoffman, 1970)

Techniques for storytelling to enhance early childhood development

Children's imagination at each level

Early infancy is a time when creativity is at its peak, adults often share a variety of tales with young children, whether they are about something thrilling, amusing, tragic, or scary, or about the world around them. (Crow & Crow, 1962) So, it is important for teachers and others to be aware of how children think in order to be able to tell or write tales that speak to their needs and imaginations, which the child's imagination can be divided as follows;

1) An independent imagination is one that is not entirely supported by the child's experience, children in the early years of life will rely on their own thoughts to guide their actions and shape their emotions.

2) Spatial imagination is a child's imagination that can relate what he sees or hears, with things that have been seen and heard before, can be divided into 3 steps;

Stage 1: that is when the early childhood hears something or the early childhood sees something and thinks of what has been seen before, or imagines what the early childhood has seen before.

Stage 2: in addition to the early childhood associating what they see or hear with something else, the early child also imagines the emotion or liveliness of that object.

Stage 3: imagination of the surreal, magical, wonderful, with this stage of imagination that every child dreams of having.

As a result, the storyteller must prepare the tale to be told before beginning the narrative as follows, after selecting the subject of the tale to fit the audience and being pleased with the plot, to ensure a seamless transition as the tale moves forward, the narrator must read the story they choose several times in order to become comfortable with, comprehend, and be well-versed in it. (Filela, 1975) Also, it must address the narrative process, which the narrator must take into account while presenting the beginning, continuing the narrative until the middle, and concluding the story in a way that is clear and engaging given the narrator's particular traits. The storyteller must also prepare and experiment with the materials used in the story in order to develop competence and arrange the utilization in first-come, first-served order. The storyteller must be prepared for all activities, such as storytelling, and they must be appropriate for the audience. For example, they should sing or speak repeatedly and easily, they should also invite the audience to take part in the performance or engage in activities with them. Also, the narrator must take into account the audience's needs while determining the best place for them to narrate because they need to be able to see and hear the information. (Wayson, 1984) In addition, it is crucial for the storyteller to read the narrative aloud often and to memorize the plot, the characters, and the actions. If the narrator is worried about becoming stuck when telling, the narrator must take notes to avoid forgetting.

Storytelling methods for primary teachers

Storytelling used by early childhood teachers can be divided into two methods:

1. Oral storytelling: because the child listening to the story will only be paying attention to the storyteller, the storyteller must always be prepared, here are some preparation tips for oral storytelling; (Sheviakov & Fritz, 1995)

1.1 Prepare the content of the tale, consisting of reading the tale to be told and understanding the tale first, then catch the point of the story that what stories to tell to the children who listen, and break down the steps of the story well. The way a story is told often differs from how it is read, especially when it comes to adding or removing people to make the story more or less acceptable. The ability to adapt the narrative to the children's interests is crucial because if the storyteller notices that the kids are having a good time, they may add more material.

1.2 The narrator must have a pleasant tone, though it need not be beautiful, and most importantly, the pacing must emphasize the sound to make the story seem interesting. The tone should not be too smooth, and the narrator's use of a soft, heavy voice or a fast, slow speech rate can also convey the story's mood.

1.3 When telling a story in front of a lot of kids, the storyteller's personality needs to be engaging for them, they need to be not too still or too swayed, and they need to move and gesture in ways that are appropriate for the story's subject matter, they also need to stand in a way that is relaxed and kid-friendly.

1.4 Wearing clothing that allows for mobility is required.

1.5 It's important for the environment where the narrative is being heard to not be too busy and for both the listener and the storyteller to be able to focus.

2. Telling stories using textbooks Use of this accompanying book refers to the use of illustrated books, those who will use picture books must prepare as follows; (Sheviakov & Fritz, 1995)

2.1 Memorize the tale so that you can retell it when the narrator opens the picture book.

2.2 Study the meaning of the colors used in illustrations because children's books often use colors to convey the mood of the story as well.

2.3 It's important to pay attention to the images on the front and back covers of books because sometimes the beginning and the conclusion of a tale appear on the front and rear covers, respectively.

2.4 If the audience is seated in a semicircle, the entire artwork has to be lifted so that everyone can view it, the book should be handled such that the audience can completely see the illustration.

Hence, it can be said that the value of narrative for young children and the value of storytelling materials for young children are as follows; helps to improve comprehension for kids, as an example of presenting a tale “Little Red Shirt” that instructors may supply and select from a variety of media, such as 3D mirror-paper stories, puppeteers, images on magnetic grid plates, etc., by the use of interactive or lifelike media, teachers may help students learn concepts better by causing them to move or see things more realistically. (Sanhachawee, 2000) Children will find it fascinating to see the characters in the story move in a way that compliments their roles throughout the entire narrative, as in the media story “Little Red Shirt”, which serves as an example to draw their attention. Encourage kids to appreciate these types of media by allowing them to follow the narrative with pleasant emotional engagement, this will encourage kids to adjust to new conditions and get ready for everyday life.

Methods for sourcing and selecting media for telling stories and stories for early childhood children.

Children are interested in the purpose and content of the subject to be taught, so early childhood teachers should think about what methods are available to make it easier to provide materials to tell stories and stories, and the selection of media needs to take into account its size, appearance, and color. Based on the principles of economical, profitable, and efficient, early childhood teachers and practice teacher as well as parents should learn about telling stories and stories to children as follows; (Prapatthong, 1979)

1. An examination of the media available in educational settings to see whether any are appropriate and satisfy the learning objectives and content to be taught. If so, labor, time, and resources would be saved, or current materials might be produced and used as media.

2. If there is no media, as per number 1, inquiry may ask the students in the class, for instance, “We want red roses, yellow tulips, and blue flowers to use in class. Who has flowers at home”, “Which instructors may obtain the flowers they want”, etc. If it seems that these things are not available at the child's home, the guardian may help provide them or may inquire about fellow teachers in the school, even janitorial staff, who may help to provide them. However, for the early childhood, the teacher should not be so sure and should ask the guardian who picks up the child to be sure.

3. As borrowing certain essential media is difficult and expensive, it is important to look into other sources of borrowing, such as slide projectors and story slides, or narrative films, cartoons, or by borrowing slide projectors or movie projectors from close institutions next to each other. As for slides or movie films or plaques to record images for television broadcasting instead of movie films, they may be borrowed from news agencies, etc.

4. Early childhood educators should adhere to the saving principle, the advantages of learning about storytelling, and the efficacy of storytelling, certain forms of media that you wish to utilize must be developed by yourself in order to fulfill the aims and material that will be used to educate.

5. Purchasing some types of media is required, should explore the distribution sources and ascertain the price in order to purchase media that meets the objectives, if it's a cheap purchase, it's up to the discretion of the teacher whether it's worth buying or not, such as scraps of colored paper, scraps of cardboard, scraps of paper, scraps of fabric, etc., which may be purchased from a printing factory or a garment factory. If teachers only need a small amount of them, they are frequently sold in bulk and at a discount, if only a small amount is required, they may be given away for free by a printer or factory if the early childhood teacher has good interpersonal skills and wants to use the leftovers for the kids' education. The buying and acquisition of pricey narrative materials is therefore possible for educational institutions with sufficient funding. Because children want instructors to tell tales and stories by viewing new media more, this does not imply that storytelling and storytelling for early childhood children will use this sort of storytelling media as a substitute for teachers. As for pricey media, it will only be utilized periodically. (Pruksawan, 1991)

In order to help children, adapt and prepare for everyday situations, teachers and practice teacher as well as parents should raise awareness of the storytelling materials for young children in the material section, as well as the tools and techniques they use to convey knowledge, understanding, emotions, feelings, experiences, attitudes, and values appropriate for children. Children already like listening to tales, so storytelling media may help draw and hold more children's attention, storytelling media can be developed in a variety of ways and in a variety of ways. The materials for telling stories to young children also include the tools, techniques, and strategies that instructors should encourage kids to utilize while telling tales to their peers for them to see and hear. Teachers and practice teacher as well as parents can encourage and coach kids to conduct role-plays replicating stories in fairy tales they have previously seen and heard because kids already have a very high level of imagination and creativity. On occasion, kids may even help each other utilize the media to tell new stories on their own. (Srisuwan, 2003)

Rajabhat Chiang Mai Research Journal : RCMRJ
Vol. 24 No.3 September–December 2023 : TCI 1, ACI

Conclusion and suggestions

"Storytelling" is essentially one of the key activities that instructors employ to encourage the growth of children of all ages, from infants to kids in primary school. Stories can be one of the most effective tools for forming good habits in children, as illustrated by the images and texts that tell various tales. If the teacher selects the story at the right time, at the right time, and with the right story, stories can be more than just attention-getters for the kids. Why stories have so much influence on children, and why scholars encourage children to learn to love reading from an early age, this is the answer to this question.

1. Tales help promote age-related development: for early childhood children, stories are regarded as stimulating visual skills, listening, and increasing vocabulary, and some fairy tales can also help enhance the development of tactile skin as well, and when growing up stories in fairy tales are also good stimulants for language development, whether reading simple words from a book, learning about rhymes, synonyms, differences, and understanding the sequence of events, etc. (Yoonpun, 2006)

2. Stories help build concentration: with the interest of stories, in addition stories that are often lined up to have a follow -up, allowing children to concentrate easily from reading, and is a concentration that comes from their own interior needs, that is, wanting to know what will happen, further up on each page there is something interesting hidden, or what kind of tone will the parents and teachers use when they see that picture, picture, etc.

3. Stories help build imagination: one of the charms of the story is that can be changed endlessly, for example, a picture story for children will never get bored even if it is the same book that is read over and over again, because every time a child reads, they may have different imaginations towards those things, and it may be because they have seen the real thing, or it may be because the tone of the reader has changed, or perhaps it's because older kids have a different reading environment, which allows them to invent new versions of old tales in their imaginative minds, sometimes they even draw parallels between those tales and their own lives. (Winkomin, 1999)

4. A story is a medium to create warmth: anybody with experience can relate to this emotion as children's giggles and grins often accompany the opening of a storybook, and parents also find themselves able to unwind while they read the tale, the most unique aspect of fairy tales is that they may be used as a vehicle to quickly foster happy memories in families, teachers and parents frequently hear cute stories when listening to and telling them, and they also frequently observe the child's endearing conduct. (Intanin, 2011)

Storytellers must learn the art of storytelling, which includes using tone and gestures, in order to keep youngsters engaged. During storytelling, the storyteller must always prepare in preparation before delivering a tale to the kids to ensure that the storytelling always serves the desired aim. (Winkomin, 2017) Having activities following storytelling is another crucial factor that storytellers must take into account, by allowing kids to engage and absorb the ideas or concepts in the narrative, storytelling will be effective in the context of its intended goal. Utilizing the correct storytelling skills is a crucial art that will assist make the narrative entertaining and grab kids' attention so they will be more amazed, in addition to utilizing a good story that is appropriate for the audience's age. Teachers and parents should thus research the concepts before planning storytelling activities for kids. and storytelling methods that are easy to learn and apply in order to provide youngsters with the best possible experience.

From the author's ideas presented above, it can be inferred that the tale is one that has been handed down through the generations or has a new author, with the intention of satisfying the primary psychological needs, to stimulate enjoyment and creativity in the imagination, and may even include morals or helpful rules for children to follow in their daily lives. Because of this, tales are incredibly significant and beneficial to kids. They not only assist parents get their kids to understand and value the behavior they wish to inculcate in them, but stories also serve as effective teaching tools. Children who regularly hear engaging stories will pick up words from listening to and imitating speech, which affects their language development without the child being aware of it. By regularly sharing stories with children, parents can encourage and support their children's healthy development in accordance with their age. Both the promotion of excellent relationships for the participants of both parties to have a sense of intimacy, as well as in terms of the physical, emotional, social, intellectual, and linguistic, bond each other more tightly.

As a result, it can be said that storytelling is a crucial component of promoting early childhood development. It is also a helpful activity, a time for the family to spend together, and it helps the kids form positive memories. Children who listen to fairy tales on a regular basis will have language learning skills, listening skills, and summarize, and strengthen the ability to solve problems on the spot, concentrate on listening, which are very important skills in learning. This is because stories in fairy tales are like fictional situations, helping children to practice thinking, is another form of exercise that is fun and easy to understand. A good story is one whose primary goal is to educate in a happy and joyful environment, so that children do not feel taught and children feel loved by their parents and teachers. Children will enjoy listening to stories because fairy tales offer imaginative stories that satiate the needs of love and attention. (Ausubel, 1968).

New knowledge and the effects on society and communities

The practice of “telling stories” is seen to be a novel body of knowledge that positively affects local communities and society, for example by allowing young children to learn and grow by using local folktales. Which folktales are considered a type of tale that can be passed down from generation to generation, which may not be recorded as evidence because in ancient times there was no other form of entertainment, in many cultural societies, storytelling is used to listen to each other, and which frequently it is a story from the imagination showing the beliefs of the villagers. Folk stories are frequently produced based on the author's imagination and are subsequently documented or published, thus it's difficult to determine where they came from. (Srisuwan, 2003) Folktales are significant in many facets of human life and society, including the transmission of knowledge, the development of personality, and the influence on thoughts, attitudes, and actions. Because folklore is a collection of attitudes, beliefs, likes, fears, entertainments, conventions, and other ideas, folktales aid in human understanding of the human condition in general. Folktales are the heritage of a nation as a national culture that chronicles the life of each nation and each language that has been remembered and practiced. In any case, folktales allow humans to know local conditions of life based on the principle that folklore is the basis of life for a particular nation or group. Most significantly, folk stories inspire pride in one's own community and let people understand how similar their circumstances are to those of others, making an unbroken group. (Paripurana, 1999)

References

Ausubel, D. P. (1968). *Education Psychology a Cognitive View*. New York: Holt, Rinehart.
Boonyanit, J. (2008). *How to help children love reading.* Bangkok: Children's Club. (In Thai)
Crow, L. D., & Crow, A. (1962). *Child Development and Adjustment.* New York: Macmillan.
Filela, J. (1975). *Methods of Teaching way of Training non – Learners into Learners.* Adult Education, 40, 201-203.
Hoffman, M. L. (1970). *Moral Development in Carmichael's Manual of Child Psychology.* New York: John Wiley and Sons.
Innurak, S. (2010). *Ability to use small muscles of early childhood Mind Home Day Care Nursery.* Master of Education thesis. Srinakharinwirot University Prasarnmit. (In Thai)
Intanin, P. (2011). *Storytelling Techniques.* Bangkok: Children's Club. (In Thai)
Paripurana, S. (1999). *Tales, their importance and benefits.* Ratchaburi: Chom Bueng Rajabhat Institute. (In Thai)
Piromrak, K. (1997). *Storytellers create readers.* Bangkok: Children's Club. (In Thai)
Playwet, K. (2011). *Books for children.* Bangkok: Department of Librarianship Chulalongkorn University. (In Thai)
Prapatthong, S. (1979). *The influence of children's storytelling and parenting education on Achievement behavior of Thai children.* Master of Education Thesis Kasetsart University. (In Thai)
Pruksawan, B. (1991). *A New Dimension in Teaching Reading.* Bangkok: Thai Wattana Panich. (In Thai)
Sanhachawee, A. (2000). *Teach reading and writing together with stories for early childhood children.* Bangkok: Department of Academic Affairs.
Sheviakov, G. V., & Fritz, R. (1995). *Discipline for Today's Children and Youth.* Washington DC: Association for Supervision and Curriculum Development. (In Thai)
Srisuwan, C. (2003). *Folklore-Language Wisdom.* Bangkok: Yellow Printing. (In Thai)
Tobbundit, K. (2005). *Storytelling for early childhood.* Bangkok: Educational Supervisors Unit. (In Thai)
Wayson, W. W. & T. J. (1984). Climates for Excellence: School that Forter Self-discipline. *Phi delta Kappan*, *65*(6), 419-421. https://www.jstor.org/stable/20387061
Winkomin, P. (1999). *Drama and puppet stories for children.* Pathum Thani: Phetchaburi Rajabhat Institute. (In Thai)
Winkomin, P. (2017). *Theater and puppet stories for children.* Pathum Thani: Phetchaburi Rajabhat Institute. [(In Thai)
Yoonpun, K. (2006). *Storytelling.* Bangkok: Department of Librarianship Faculty of Humanities Srinakharinwirot University Prasarnmit. (In Thai)

Fostering Multicultural Competence in Primary School Students and Teachers through Participatory Media Production

Natcha Promsri, Nannaphat Saenghong and Nongyao Nawarat
Faculty of Education, Chiang Mai University, Thailand
Prasit Leepreecha
Faculty of Social Sciences, Chiang Mai University, Thailand
E-mail: natcha.prmim@gmail.com,nannaphat.s@cmu.ac.th
nongyao.n@cmu.ac.th and prasit.lee@cmu.ac.th
(Received: 7 January 2023, Revised: 21 June 2023, Accepted: 4 July 2023)
https://doi.org/10.57260/rcmrj.2023.263084

Abstract

This study examined the impact of participatory media production on developing multicultural competence in students and teachers at a diverse primary school. Participants included 32 fifth-grade students and three teachers actively engaged in activities targeting multicultural competence enhancement. The study employed a theoretical framework of participatory communication. Results indicated significant improvements in students' multicultural competence albeit with variations in individual growth levels. On average, students demonstrated intermediate-level growth, with attitudes exhibiting the highest progress, followed by knowledge and skills. Teachers also experienced growth in multicultural competency, with knowledge showing the most significant improvement, followed by attitudes and skills. Notably, there were variations in the level of development among the teachers. Overall, the study underscores the efficacy of participatory media production in fostering multicultural competency while acknowledging that the impact may vary among individuals, as evidenced by diverse growth levels observed among students and teachers.

Keywords: Multicultural education, Multicultural competency, Participatory media production, Communication

Introduction

Multicultural competence refers to the knowledge, skills, and attitudes required to effectively interact with individuals from diverse cultural backgrounds (Spanierman et al., 2011; Sue & Sue, 2013). It enables individuals to navigate and engage in meaningful cross-cultural interactions, understand and challenge their biases and assumptions, and effectively communicate and collaborate across cultural boundaries (Sue & Sue, 2013). Multicultural competence is considered an essential quality for teachers (Gay & Howard, 2000; Hamilton, 2016; Lehman, 2017). It empowers teachers to actively and effectively engage with students from diverse cultural backgrounds, leading to the creation of creating inclusive and responsive learning environments (Gay & Howard, 2000; Manning & Baruth, 2004). In a study by Hamilton (2017), the psychometric properties of the multicultural teaching competency scale (MTCS) were examined among in-service teachers, revealing its positive influence on teaching self-efficacy and teacher-student relationships. Furthermore, multicultural competence enhanced well-being, reduced stress, and increased teacher job satisfaction (Hamilton, 2017). Equipped with multicultural competence, teachers can appreciate cultural differences, adapt instructional practices, and promote educational equity (Gay & Howard, 2000; Manning & Baruth, 2004). With multicultural competence, teachers can appreciate and respect cultural differences, adapt their instructional practices to meet students' diverse needs and work towards promoting equity in education (Gay & Howard, 2000; Manning & Baruth, 2004).

Various approaches have been identified in research for developing multicultural competence among teachers. School-based workshops have proven successful (Yongyuan et al., 2010; Arphattananon, 2021; Sinchadechochai, 2017). Other approaches for promoting multicultural competence encompass participation in a professional development training workshop centered on multicultural education (Lehman, 2017; Spanierman et al., 2011), collaboration with culturally diverse families and communities (Manning & Baruth, 2004), engagement in reflective practice (Gay & Howard, 2000), and involvement in multicultural service-learning initiatives (MSL) (Smith et al., 2011), and use of using video clips (Pennock & Schwartz, 2012). Gay and Howard (2000) emphasize the significant role of teacher education programs in fostering multicultural competence. They advocate for integrating multicultural competencies throughout the entire teacher education program, encompassing coursework, practicum experiences, exit requirements, certification processes, and employment opportunities.

Multiple studies, including those by Derman-Sparks & Edwards (2020), Ladlia (2012), Nawarat (2018), and Manning and Baruth (2004), have emphasized the importance of cultural competence and multicultural competence for children. According to Derman-Sparks & Edwards (2020), children can perceive and develop attitudes toward diversity early on. Therefore, fostering children's comprehension, skills, and attitudes concerning cultural differences is vital. In response to the growing diversity many cities and schools worldwide are experiencing, there is increasing recognition of the need to address multicultural competence in educational settings. Research also suggests various strategies to enhance multicultural competency in children. These strategies include engaging in implementing community-based activities (Derman-Sparks & Edwards, 2020; Nawarat, 2018), utilizing literature and storytelling (Ladlia, 2012) employing arts-based learning and teaching (Hulsbosch, 2010; Manning & Baruth, 2004; Yongyuan et al., 2010) strategies aim to provide students with immersive experiences that promote understanding, appreciation, and respect for diverse cultures and perspectives. Educators can create inclusive learning environments that celebrate diversity and contribute to developing multicultural competence by actively engaging students in these activities.

However, the current body of literature reveals a research gap in exploring multicultural competency development among teachers and students through participatory media production, specifically in video clip creation. Participatory media production involves groups or communities collaborating to produce various media types, including audio, video, images, and text. It empowers individuals by allowing them to create their own media, express their thoughts and ideas, and contribute to positive and meaningful transformations (Pennock & Schwartz, 2012 & Sarria-Sanze et al., 2023). Pennock & Schwartz (2012) conducted a study demonstrating video clips' effectiveness in enhancing multicultural knowledge and pedagogical skills in pre-service teacher education. Similarly, Sarria-Sanze et al. (2023) investigated the use of participatory video (PV) with 14 refugees in the Netherlands. Through the Digital Place-makers program, the researchers taught editing and storytelling, which boosted the refugees' confidence and shed light on social injustices. The study emphasizes challenging vulnerability labels in refugee research and promoting knowledge co-production to empower participants and foster ownership of their work.

This study aims to investigate the effectiveness of utilizing participatory media production, specifically digital video-making, to promote multicultural competence among students and teachers in a culturally diverse primary school setting. By addressing a research gap, the study seeks to contribute to our understanding of how participatory media production can effectively enhance multicultural competence in educational environments.

Research objective

To examine the impact of participatory media production on promoting multicultural competence among students and teachers in a diverse primary classroom setting.

Theoretical framework

Participatory communication is a central theoretical framework in this research study. It encompasses diverse definitions provided by scholars in the field. Participatory communication is the processes or designs essential for groups facing common problem issues and engaging in reciprocal learning and understanding through dialogue (Ascroft, 1987; Bordenave, 1994; Nair & White, 1993; Narula, 1994). It also entails facilitating long-term changes and empowering communities to make collective decisions (Melkote & Leslie, 2001). Participatory communication emphasizes the active involvement of stakeholders in the communication process to promote development and problem-solving activities (Kitruenromsuk, 2005). It aims to train groups of people or social members to exchange information, analyze social problems, find solutions, and make decisions based on comprehensive information (Kitruenromsuk, 2005).

Satapitanon (2006) outlines the principles of participatory communication that contribute to public conscientization and transformative learning within groups and communities. These principles consist of four components. The first component emphasizes acknowledging the diverse backgrounds of participants, which shape their thoughts, perspectives, attitudes, communication skills, pride in their involvement, and commitment. The second component underscores the importance of ensuring equal participation, wherein all participants actively engage in various stages of the process, including analysis, issue identification, cause identification, impact assessment, exchanging perspectives and opinions, and participating in decision-making. The third component highlights the rights and responsibilities of participants, encompassing respect for one's own and others' thoughts, active and thoughtful listening, and recognition of the fundamental rights and responsibilities of social members. The fourth component focuses on participants' rights and freedom to access media and information on a level playing field across three dimensions: physical, economic, and cultural-social. Ensuring accessibility to media and communication channels within these dimensions facilitates a shared understanding of community issues, empowerment, and equality among individuals (Kaewthep, 2006; Satapitanon, 2006). By incorporating these principles, the study aims to foster active and inclusive engagement, promote meaningful change, and enhance multicultural competence.

Methodology

This study employed participatory action research (PAR) as its methodology, aiming to foster collaborative efforts and drive meaningful change throughout the research process (Kemmis & Taggart, 1988). The study occurred in a public primary school characterized by cultural diversity in ethnicity, migration, language, gender, socioeconomic status, and disability. Although the student population represented a range of backgrounds, the school did not have adequate multicultural teaching and learning activities in place, despite the teachers recognizing the diversity within the school. The school selection was based on Banks' (2010) framework of "The School as a Social System," which recognizes the school as a complex social entity and considers factors such as school policies, curriculum, teachers, and stakeholder involvement.

Participant

This study involved three fifth-grade teachers and 32 fifth-grade students as participants. The informants were selected using purposive sampling, meaning that the participants were intentionally chosen based on specific criteria that aligned with the research objectives (Phothisita, 2019).

Research activity

The study emphasized the integration of participatory media production as a crucial component of the research process. It was specifically designed to align with the four key principles of participatory communication, namely acknowledging diverse backgrounds, ensuring equal participation, respecting participants' thoughts and rights, and emphasizing access to media and information, as established by Satapitanon (2006). Recognizing the importance of these principles as a foundation, the study sought to provide participants with equal opportunities to contribute, respect their perspectives and rights, and promote access to media and information.

The research activities were conducted in two cycles, following the participatory action research framework. In the first cycle, after the initial planning and implementation phase, teachers and students actively participated in training sessions focused on multicultural education and global citizenship. These sessions likely involved interactive discussions, collaborative activities, and multimedia resources to engage participants in exploring and understanding diverse cultures and perspectives. As part of the first cycle, the teachers and the researcher developed and implemented three learning units. These include Unit 1 focused on equality and social justice, Unit 2 explored identity and diversity, and Unit 3 examined globalization and interdependence. Each address important themes related to multicultural education.

During the second cycle, the focus shifted towards enhancing teaching and learning activities through participatory media production. Collaborating with a media specialist, the researcher (first author) provided training to both students and teachers on creating storybooks and producing video clips. This training encompassed practical guidance on various technical aspects of media production, storytelling techniques, and the effective utilization of multimedia tools. With the guidance of the three participating teachers, students formed groups and actively engaged in creating video clips on diversity and related topics. This participatory approach to media production provided students with a platform to explore their creativity, express their perspectives, and collaborate with their peers to produce impactful visual representations of multicultural concepts and personal experiences. Students were encouraged to brainstorm ideas, plan their video content, and allocate tasks among themselves within their respective groups. The student collaboration resulted in the creation of nine video media that address various multicultural themes. These include stories about the ethnic group, transnationalism, community issues, and the impact of COVID-19 on bullying. These videos serve as valuable resources for multicultural learning and promote understanding among students. The research concluded with an exhibition during the school's academic showcases, where the student-produced video clips were displayed and appreciated by teachers, the school principal, students, parents, and school committee members. This exhibition celebrated the students' accomplishments and allowed the wider school community to acknowledge and value their efforts in participatory media production.

Data collection

The study used two multicultural competence scales, one for students and one for teachers, administered at the beginning and end of the research activities. The multicultural competency scale was developed using Lister's (1999) cultural competence and Campinha-Bacote's (2000) cultural competence framework. The student scale measured knowledge, attitudes, and skills related to cultural diversity, including understanding classmates' ethnicity, language, religion, costumes, and traditions, positive interactions, adaptability, effective communication, collaboration, and accepting diverse opinions. The teacher scale assessed knowledge of student cultures and multicultural pedagogy, positive attitudes towards diverse students, and skills in designing activities that foster tolerance and acceptance of cultural differences. The study also utilized direct observations by the first author, who actively participated and observed students during all activities, particularly during the collaborative video clip creation process. This approach provided a deeper understanding of students' behaviors, interactions, and engagement levels. The combination of the multicultural competence scale and direct observations offered a comprehensive assessment of students' multicultural competence development, capturing nuanced details and insights that may have been missed using the multicultural competence scale alone.

Data analysis

The study utilized quantitative data analysis with the SPSS program to examine the changes in multicultural competency among students and teachers before and after the research activities. The analysis involved calculating percentages, means, and standard deviations to assess variations in multicultural competency scores. A formula developed by Kanjanawasee (2009) was applied to determine the relative growth level in multicultural competency. The scores were then interpreted using predetermined criteria consisting of four levels: "significant" for scores ranging from 76 to 100, "high" for scores from 51 to 75, "moderate" for scores from 26 to 50, and "initial" for scores from 0 to 25. Additionally, the observation data were analyzed, focusing on these aspects: role and responsibility, communication, interaction, participation and collaboration, and attention to learning diverse cultural backgrounds and experiences.

Results

This research aimed to enhance the multicultural competence of primary school students and teachers through the utilization of participatory media production—digital video-making. By analyzing multicultural competency scales and observations, the study revealed positive advancements in multicultural competence for teachers and students in knowledge, skills, and attitudes. Detailed information about these developments is provided below.

Changes in students' multicultural competence

The study aimed to assess how participatory-based video clip production impacted the multicultural competence of students and teachers. The findings showed positive improvements across all three aspects: knowledge, skills, and multicultural attitudes, indicating an overall enhancement in multicultural competence. Participants were categorized into four groups based on their relative growth scores: significant, high, moderate, and initial. Further details regarding each group's transformation are outlined below.

According to the data in Table 1, one student who identified as Shan ethnicity out of the thirty-two students exhibited a significant change in multicultural competence across the dimensions of knowledge, skills, and attitudes. This represents approximately 3.13% of the total student population. This student's growth in skills showed the highest relative growth level of 100, followed by attitudes at 82 and knowledge at 42.

Table 1 Relative growth score of multicultural competency at a very high level

Student	Ethnicity and Nationality	Multicultural Competence		
		Knowledge	Attitude	Skill
B018	Shan, Thai	42	82	100

The interview and observation data indicated a student showcased multicultural competency in various areas. In terms of knowledge, the student understood their friends' languages and cultures and could identify differences in ethnicity across more than five ethnic groups. Regarding attitudes, the student exhibited openness to different opinions and encouraged their peers during collaborative tasks. Additionally, the student actively participated in media production, assuming roles such as directors and actors while demonstrating multicultural skills by listening attentively to diverse opinions.

Table 2 Relative growth score of multicultural competency at a significant level

Student	Ethnicity and Nationality	Multicultural Competence		
		Knowledge	Attitude	Skill
B01	Shan, unknown	100	33	30
B08	Thai, Thai	74	69	0
B09	Lisu, unknown	71	38	40
B019	Thai, Thai	100	43	0

The analysis of the relative growth scores in Table 2 reveals the significant changes observed in students' multicultural competence who demonstrated a high level of improvement. These students comprise 12.50% of the total student population. All four students in Table 2 demonstrated remarkable improvements in knowledge, indicating a comprehensive understanding of multicultural competence. Student B01 achieved the highest growth score of 100, followed by Student B08, with notable growth at 74. Student B09 and Student B019 also significantly increased, scoring 71 and 100, respectively. These findings highlight the successful enhancement of knowledge regarding cultural diversity among these students. However, it is worth noting that two students showed no change in skills. These students took on leadership roles in video production and showed increased confidence and tolerance. They actively participated, enjoyed learning, and embraced teaching through media production.

Table 3 displays the relative growth scores of multicultural competence for students who exhibited an intermediate level of change. Out of the total of thirty-two students, eleven students (34.37%) were classified in this group. Among the students in Table 3, most experienced changes in two aspects of multicultural competence. Specifically, they demonstrated growth in knowledge and attitudes, attitudes and skills, or knowledge and skills. Some students did not show any change in knowledge. Two students made no change in attitudes, and four students did not exhibit skills growth. These variations highlight the diverse development patterns in different aspects of multicultural competence among the students. However, they displayed comparable growth in multicultural competence across the attitude, knowledge, and skill dimensions.

Table 3 Relative growth score of multicultural competency at a moderate level

Students	Ethnicities and Nationalities	Multicultural Competence		
		Knowledge	Attitude	Skill
B07	Lisu, Thai	0	38	36
B010	Hmong, Thai	56	40	0
B011	Thai, Thai	0	57	50
B013	Shan, Myanmar	43	50	0
B014	Shan, Myanmar	59	33	10
B016	Hmong, Thai	17	43	50
B021	Thai, Thai	44	69	0
B023	Thai, Thai	36	50	0
B024	Shan, Myanmar	29	0	43
B026	Thai, Thai	44	0	36
B027	Thai, Thai	29	60	22

The observation data highlights the positive behaviors displayed by this group of students concerning multicultural competency. They demonstrated the ability to learn and understand the basic languages spoken by friends from diverse ethnic backgrounds. Furthermore, they exhibited open-mindedness by their peers to collaborate effectively. These behaviors showcase their willingness to embrace diversity and cultivate an inclusive environment within the group.

Table 4 Relative growth score of multicultural competency at an initial level

Students	Ethnicity and Nationality	Multicultural Competence		
		Knowledge	Attitude	Skill
B02	Shan, Unknown	25	33	25
B03	Shan, Unknown	0	0	22
B04	Lisu, Thai	0	33	0
B05	Shan, Thai	29	14	0
B06	Thai, Thai	25	75	0
B012	Myanmar, Unknown	22	0	0
B015	Shan, Burmese	71	17	22
B017	Shan, Thai	22	0	44
B020	Thai, Thai	20.	33	0
B022	Lisu, Thai	30	22	14
B025	Thai, Thai	0	20.	0
B028	Thai, Thai	0	14	22
B029	Thai, Thai	0	36	0
B030	Thai, Thai	40	0	0
B031	Myanmar, Unknown	0	36	0
B032	Thai, Thai	0	50	0

According to Table 4, Group 4 consists of sixteen students out of thirty-two (50%) who demonstrated an initial level of change in multicultural competence. Most of these students showed improvement in only one aspect, while a few exhibited growth in two elements, and very few displayed progress in all three parts. Most students demonstrated the highest growth in multicultural competence in the attitude dimension, followed by knowledge and skill. From observations, it is evident that these students actively participated in weekly learning and teaching activities, indicating their commitment and responsibility. However, they primarily took on supportive roles in the video production process and had fewer primary responsibilities than the other three groups. Nevertheless, similar to the other groups, most students in Group 4 were interested in learning new languages or stories from their counterparts, highlighting their openness to diverse cultural experiences.

Changes in teachers' multicultural competence

According to Table 5, the teachers displayed varying change levels in multicultural competency. Among them, teacher A3 exhibited the highest level of growth, particularly in the knowledge and attitude aspects. Teachers A1 and A2 showed initial and moderate gains in all three aspects, mainly in knowledge.

Table 5 Relative growth score of multicultural competency of teachers

Teacher	Ethnicity and Nationalities	Multicultural Competency		
		Knowledge	Attitude	Skill
A01	Thai, Thai	22	29	29
A02	Thai, Thai	29	0	0
A03	Thai, Thai	100	100	71

The teachers demonstrated the highest level of improvement in their knowledge of cultural diversity, followed by a positive shift in their attitudes towards diversity and improved skills to manage and promote multicultural education effectively. In addition, the observations revealed that following their participation in the research processes, the teachers became more attentive to classroom differences. They actively created opportunities to express diverse languages and cultures, such as allowing students to dress in ethnic costumes and incorporating students' ethnic languages into the production of video clips.

Discussions

This study examined the impact of participatory media production, specifically video production, within a participatory action research framework on the multicultural competence of primary school students and teachers. The findings, based on data collected through multicultural competence scales and observations, revealed a positive influence of this approach on enhancing multicultural competence among students and teachers. The study's findings demonstrate that the application of participatory communication principles in video production led to an increase in students' multicultural competence. The principles, including acknowledging diversity, ensuring equal participation, promoting inclusivity, respecting students' thoughts, and emphasizing media access, were key factors in fostering shared understanding, empowerment, and equality among participants. The use of video production and media channels was instrumental in achieving these positive outcomes.

However, the research also revealed variations in students' multicultural competence development, resulting in the identification of four distinct groups. This observation aligns with previous studies that have recognized the existence of diverse outcomes when using different approaches to foster multicultural learning among children (Ladlia, 2012; Hulsbosch, 2010; Hirunrux, 2017; Nawarat , 2018; Yongyuan et al., 2010). A considerable number of students were categorized into the initial and intermediate growth groups, suggesting that the approach and its activities may not uniformly promote multicultural competence among all students. Several factors could contribute to this variation, such as limited involvement in leadership roles, fewer assigned responsibilities, or reduced interest in learning from peers representing diverse backgrounds. These findings emphasize the need for further exploration and tailored interventions to address the specific needs of students within different growth groups. Strategies such as facilitating leadership roles, assigning increased responsibilities, and nurturing interest in learning from diverse peers can contribute to promoting multicultural competence among students.

The study's findings demonstrate differences in the degree of change in multicultural competence among the three teachers, with one experiencing a significant change and two showing moderate changes. These results are consistent with previous research conducted by Pennock & Schwartz (2012), Nawarat (2018), and Yongyuan et al. (2010), which also observed similar patterns of improvement in teachers' competence through their involvement in multicultural education interventions. The findings indicate that the teachers significantly improved their knowledge of cultural diversity, followed by a positive shift in their attitudes towards diversity and improved their skills. These findings align with the research conducted by Yongyuan et al. (2010), which focused specifically on kindergarten to 3rd-grade teachers engaged in developing and implementing a multicultural education model in a diverse school. The study's results demonstrated improved average scores regarding knowledge and practices related to multicultural education literacy among these teachers. However, it is essential to note that the study by Yongyuan et al. (2010) did not find significant variations in the teachers' appreciation of multicultural education literacy, respect for cultural diversity, and recognition of a multicultural environment. These aspects primarily pertain to attitudes. The variations in the level of change among the teachers can be attributed to their roles, active participation in research processes, and direct interaction with students. Teacher A3, who actively engaged in research and demonstrated a genuine interest in multicultural education, showed a higher level of change in their multicultural competence. This underscores the significance of active engagement and sincere interest in fostering multicultural competence among teachers.

The study underscores the effectiveness of participatory action research in engaging students and teachers as active participants in the research process and promoting their multicultural competence. The study adopts a participatory approach, wherein students play a central role in the research activities. Four key principles guide the implementation of this approach. Firstly, creating safe spaces allows students to freely express their opinions, fostering an inclusive environment that values diverse thoughts and perspectives. This encourages open and respectful discussions, leading to multicultural learning. Secondly, the approach emphasizes the importance of taking action and active participation throughout the research process. Students are involved in various stages, including topic identification, decision-making, and designing video content. This active involvement enables the development of knowledge and skills related to multicultural competence. Additionally, the study recognizes the significance of delegating roles and responsibilities among participants and effectively managing time. This ensures that work processes are well-organized and productive, particularly in media production. By implementing participatory action research, the study aims to enhance students' understanding and appreciation of cultural differences, fostering their multicultural competence.

Conclusion and suggestions

This study provides evidence that participatory media production positively influences multicultural competency development in students and teachers. By actively engaging in creating video clips centered on diversity topics, students could enhance their knowledge, attitudes, and skills related to cultural diversity. Teachers also experience growth in their multicultural competency, improving their knowledge and attitudes toward diversity. The findings underscore the effectiveness of participatory media production as a valuable tool for fostering multicultural competency in educational settings. However, the study also acknowledged that the impact may vary among individuals, highlighting the importance of recognizing and catering to each learner's unique needs and interests. Future research should investigate the factors influencing the varying levels of multicultural competency development among students engaged in participatory media production. Additionally, exploring the long-term sustainability and transferability of multicultural competency gained through this approach is crucial. These investigations can provide valuable insights for developing targeted interventions and instructional strategies to enhance student multicultural competency.

New knowledge and the effects on society and communities

Participatory Teaching Materials to Promote Multicultural Learning for Primary School Classroom.

Acknowledgments

This research activity is funded by National Research Council of Thailand (NRCT).

References

Arphattananon, T. (2021). *Multicultural schools: Thailand's education policy for multicultural society*. Bangkok; Chulalongkorn university press. (In Thai)

Banks, J. A. (2010). Multicultural education: characteristics and goals. In J. A. Banks & C. A. M. Banks, (Eds.). *Multicultural Education: Issues and Perspectives* (7th ed.). John Wiley & Sons, Inc.

Campinha-Bacote, J. (2002). The process of cultural competence in the delivery of healthcare services: A model of care. *Journal of transcultural nursing: official journal of the Transcultural Nursing Society*, *13*(3), 181–201. https://doi.org/10.1177/10459602013003003

Derman-Sparks, L., & Edwards, J. O. (2020). Anti-bias education for young children and ourselves (2nd ed.). National Association for the Education of Young Children.

Gay, G., & Howard, T. C. (2000). Multicultural teacher education for the 21st century. *The Teacher Educator*, *36*(1), 1-16, DOI: 10.1080/08878730009555246

Hulsbosch, H. (2010). Multicultural education through arts-based learning and teaching. *Multicultural Education Review*, *2*(2), 85-101, DOI: 10.1080/2005-615X.2010.11102876

Kaewthep, K. *Communication for Social Change in Seminar Report on the Development of Community Media Plans in Four Regions*, Page 2- 7. 27-28 October 2001 at Sala Thai Room, Ambassador Hote Bangkok, 2001. (In Thai)

Kanjanawasee, S. (2009). *Classical test theory*. (6th ed.). .Bankok; Faculty of Education, Chulalongkorn University. (In Thai)

Ladlia, K. (2012), Literature-based teaching model for enhancing danguage Development in preschool students. *Journal of Yala Rajabhat University*, 1(1), p 11-20. (In Thai)

Lehman, C. L. (2017). Multicultural competence: A literature review supporting focused training for pre-service teachers teaching diverse students. *Journal of Education and Practice, 8*(10), 109-116. https://files.eric.ed.gov/fulltext/EJ1139702.pdf

Lister, P. (1999). A taxonomy for developing cultural competence. *Nurse Education Today, 19*, 313-318.

Manning, L. M., & Baruth, L. G. (2004). *Multicultural education of children and adolescents.* Allyn and Bacon.

Nawarat, N. (2018). *Multicultural EducationCritical Perspectives and Praxis in Schooling*. Wanida karnpim limited partnership. (In Thai)

Pennock, P., & Schwartz, R. (2012). Using video clips to implement multicultural aspects of science and nature of science into a biological content course for Pre-Service Teachers: An Action Research Project. *i.e.: inquiry in education, 3* (2), 1-32. https://files.eric.ed.gov/fulltext/EJ1171919.pdf

Phothisita, C. (2019). *Science and art of qualitative research*. (8th ed.). Chulalongkorn University Press. (In Thai)

Sarria-Sanz, C., Alencar, A., & Verhoeven, E. (2023). *Using participatory video for co-production and collaborative research with refugees: critical reflections from the Digital Place-makers program*. Learning, Media and Technology, DOI: 10.1080/17439884.2023.2166528

Satapitanon, P. (2006). *Participatory Communication and Community Development: from Concept to Research Practice in Thai Society*. Bangkok: The Thailand Research Fund. (In Thai)

Smith, A., Johnson, C., Powell, G., & Oliver, J. (2011). The relationship between multicultural service-learning and self-reported multicultural competencies in undergraduate students: A qualitative participatory action study. *SCHOLE: A Journal of Leisure Studies and Recreation Education. 26*, 1-13. DOI:10.1080/1937156X.2011.11949676

Spanierman, L. B., Oh, E., Heppner, P. P., Neville, H. A., Mobley, M., Wright, C. V., Dillon, F. R., & Navarro, R. (2011). The multicultural teaching competency scale: Development and initial validation. *Urban Education, 46*(3), 440-464. https://doi.org/10.1177/0042085910377442

Sue, D. W., & Sue, D. (2013). *Counseling the culturally diverse: Theory and Practice* (6th ed.). Wiley.

Yongyuan, B. (2010). *Development of a model for multicultural education in primary school*. Retrieved from: http://dric.nrct.go.th

Rajabhat Chiang Mai Research Journal : RCMRJ
Vol. 24 No.3 September–December 2023 : TCI 1, ACI

The Community Development Operation Model of Ban Nam Sai Community, Thung Benja Sub-district, Tha Mai District, Chanthaburi Province

Pongsatean Luengalongkot *
Political Science and Law, Burapha University, Thailand
E-mail: pongsatean@go.buu.ac.th
*Corresponding author

(Received: 31 March 2023, Revised: 21 June 2023, Accepted: 4 July 2023)
https://doi.org/10.57260/rcmrj.2023.264522

Abstract

Community development operations are important because they help strengthen communities. The objectives of this research were to analyze and examine the consistency of the community development operations (CDO) model with empirical data, and to study the weight of direct, indirect, and total effect of factors influencing on CDO of Ban Nam Sai Community, Thung Benja Sub-district, Tha Mai District, Chanthaburi Province. The population in this study was 173 people who are representing households living in Nam Sai Village. The samples were 121 people, calculating by Taro Yamane's formula. The research tool in this study was the questionnaire-based survey. Analyzed and examined the consistency of the community development model of Ban Nam Sai community with empirical data based on the model goodness of fit indices used a Structural Equation Model. Analyzed weight of direct, indirect and total effect of causal factors on community development operation of Ban Nam Sai community by used a Structural Equation Model with statistic Path analysis. The results were found that The CDO model of Ban Nam Sai community developed consistent with the empirical data. It was also found that Leadership, public participation and community communication had direct effects on community development operations of Ban Nam Sai community. Besides, community communication was found a direct effect on public participation. Among these studied variables, leadership was found to have an indirect effect on community operations of Ban Nam Sai Community through public participation and community communication. Community communication also had an indirect effect on the community development operation of the Ban Nam Sai community through public participation. The total effect on community development operations of Ban Nam Sai community. The highest total influential factor was public participation, followed by leadership and community communication respectively. Suggestion from the research results, the community development operation model of Ban Nam Sai Community is suitable for use. The model should be developed and applied to use to the similar context of communities/villages for further community development.

Keywords: Community development operation model, Public participation, Leadership, Community communication

Introduction

The development revolution had started its course after world war II. The war-winning countries attempted to help restorative poor and emerging countries to develop and escape poverty. Those activities consisted of the principles of the development theory to create modernity and economic growth (Sujjanan, 2006, p. 42). As a result, the United Nations was established in late 1945 to assist in expediting the development of countries. At the same time, the World Bank was established to support financial problems in the countries that got impacted by the war. This was called the beginning of global development. Moreover, the Association of South-East Asian Nations was established, to support the development of the politics, economics, social, culture, agriculture, and the well-being of the people of the member of ASEAN countries. They had a series of meetings in Bangsaen and Bangkok before they announced the Bangkok Declaration in 1967. The objective was to develop communities and eliminate poverty, to reduce inequality as well as to increase the well-being of the people (Department of ASEAN Affairs, 2013). The policy had been applied in Malaysia, one of the members of ASEAN. The highlight point of it was that this policy was in line with national economic policy. It also emphasized community development through a public participation model managed by their local governors. This policy helps to construct the development of the Malaysian community to be successful nowadays (Siripaisan & Saksung, 2009). In Thailand, the Ministry of the interior mainly focuses on community development. It was divided into two main goals including a strong community and a safe community (Department of Community Development, 2017). Thailand has begun entering the era of serious development according to the world trend that recognizes the importance of development. Thailand has been developed from an agricultural country in the past to become an industrialized country, including the development of 5 G technology. During the development procedure, there were many changes left behind. One of them was the environmental matter, both internally and externally. These changes had an impact on the economy, society, politics, and even culture in the Thai community. To respond to these problems, the Thai community had to adjust the community development model to accommodate the revolution. This model helps guiding the community development in the right direction and particularity (Chiracharat, 2005, p. 25-26). The goal was to create growth that would eventually lead to solutions that meet the needs of the local community. Besides this, the development of communities is highly important as it impacts the quality of life for the population within those communities. Therefore, community development can have diverse effects on various aspects such as the economy, society, environment, and mental health of the population. Also, the aforementioned changes have resulted in a need for public support and competent community leaders to develop community activities.

The leader is the most important factor for executing community development. The characteristics of leaders are those who must possess leadership quality and a spirit of sacrifice for accomplishing their work. Moreover, they must be coordinated and communicated with stakeholders on all projects. They have to listen to other stakeholders in thinking and making decisions together. If the leader doesn't have enough leadership skills as mentioned above, it will pose serious challenges to the success of community development. One of the most important factors of leadership for the community is the competency in managing the organization to be strong and self-reliant. The main ability is leading people to work together to achieve the organization's goals (Makasiranon, 2006, p.19). This is consistent with Prasertsri (2001, p. 11), who stated that leadership is the ability to motivate a team to carry out activities that will help achieve organizational goals. For this reason, it can be concluded that the most important factor in any administration is the leader. Competent leaders will be able to help make their local communities highly successful (Santiwong, 2000, p. 204; Khunchlalat, 1997, p. 11). Especially, the communities that have been developed in the right way will sustainably meet the needs and expectations of their people (Phucharoen, 2004, p. 138). The Department of Community Development and Ministry of Interior had a mission to grow community management in terms of economy, society, politics, governance, and environment. To maintain these changes, there are five strategies such as creating a peaceful and happy community, building capability in community administration, promoting the creative economy, strengthening governance and stability of community capital as well as strengthening the performance of the organization (Department of Community Development, 2015, p. 64). The strategies are aimed at the villages/local community level. Even though the implementation of the project is the smallest in Thailand, but it's also the most important accomplishment for developments in all dimensions. If we can create solid principles for development and self-reliant for every village today, Thailand will have a stable foundation and vital strength to become a developed country in the future. Nam Sai village is located in Moo 11, Thung Bencha Sub-district, Tha Phra District, Chanthaburi Province. It is a new village that was separated from Moo 5, Thung Benja Sub-District, Tha Mai District, Chanthaburi Province. It has been managed by Mrs. Jidapa Thanamul since its inception until now. The geography of Ban Nam Sai contains interspersed swamps with small hills and a large swamp in the middle of the village where the villagers called "Nong Nam Sai". Therefore, this is the reason that this village was named "Ban Nam Sai" or the clear water home. Ban Nam Sai committee has ruled and adopted the sufficiency economy approach as a guide for supporting their living (Nam Sai Village, 2015, p. 2). This approach was applied to the village committee and its villagers. The community development operation of Ban Nam Sai community has been executed in 10 activities (Department of Community Development, 2014, p. 8) such as collecting data for rural development, performing the community plan, implementing community learning centers, promoting democracy, maintaining the environment and natural resources, enhancing sufficient economy philosophy, preventing and solving drug issues, solving poverty issues, promoting career, and raising community fund. From the past performance, it was found that the village of Nam Sai had been successfully developed which resulted in a self-reliant and sustainable village in the development of both economic and social aspects. This was an indication of a good role model of a good village (Nam Sai Village, 2015). This village was also a community that received an outstanding national award; therefore, it is evident why the researcher chose to investigate the operational management of this community development model. Moreover, focusing on the factors contributing to the success of the implementation which fulfills villagers' needs alongside the sustainable development.

According to these aforementioned reasons, the researcher is interested in studying the model of community development operation of Ban Nam Sai community, primarily due to the success of the community development model and the award of an outstanding village on the national level. For the objectives of this research were to analyze and examine the consistency of the community development operations (CDO) model with empirical data, and to study the weight of direct, indirect, and total effect of factors influencing on CDO of Ban Nam Sai Community. For the research hypothesis testing were test the community development operation model of Ban Nam Sai Community is consistent with empirical data and the casual factors had a direct, indirect and total effect on the community development operation model in the area study. Moreover, the researcher wants to make an inclusive investigation of how it achieved its success. If we know the community development operation model of Ban Nam Sai community, this model can be applied for development in other communities effectively. Thus, it will also serve as the feature to uphold efficient and effective development.

Research objectives

1. To analyze and examine the consistency of the community development operations model of Ban Nam Sai Community, Thung Benja Sub-district, Tha Mai District, Chanthaburi Province with empirical data.

2. To study the weight of direct, indirect, and total effect of factors influencing on community development operations of Ban Nam Sai Community, Thung Benja Sub-district, Tha Mai District, Chanthaburi Province.

Literature Review

The community development operation model of Ban Nam Sai Community in the area study is consistent with the empirical data. From the review of related researches on the topic, the researcher adopted the model of operating based on the strategic plan of Luengalongkot (2019) showed that leadership staff participation and information technology had a direct effect on the operating based on the strategy of Laem Klat Sub-District Administrative Organization. Leadership had an indirect effect on the operating based on the strategic plan of Laem Klat Sub-District Administrative Organization through staff participation and the information technology, Information technology had an indirect effect on the operation of Laem Klat Sub-District Administrative Organization through staff participation. Moreover, the causal factors had a direct, indirect, and total effect on the community development operation model of Ban Nam Sai Community. There are three factors were found with a direct effect on community development such as leadership, public participation, and community communication (Lowe et al.,1996, p. 385-425; Malarat, 2008, p. 151 - 165; Khantasit, 2014; Klongsara, 2008; Gilley, Gilley, & McMillan, 2009, p.75-94; Namburi, 2019, p 183-197)**.** Leadership has an indirect effect on the community development operations of the Ban Nam Sai community through public participation (Suwanklang, 2014, p. 195-207; Nontanathorn, 2015, p. 48-58; Loganit & Luengalongkot, 2017). Leadership has an indirect effect on the development operation of Ban Nam Sai community through community communication (Klongsara, 2008; Nokvichien, 2009). Community communication had an indirect effect on the community development operation of the Ban Nam Sai community through public participation (Klaewkla, 2005, p. 72-74; Yotsorn, 2005, p. 94-96)

According to the literature reviews above, the researcher conducted a conceptual framework as shown in figure 1.

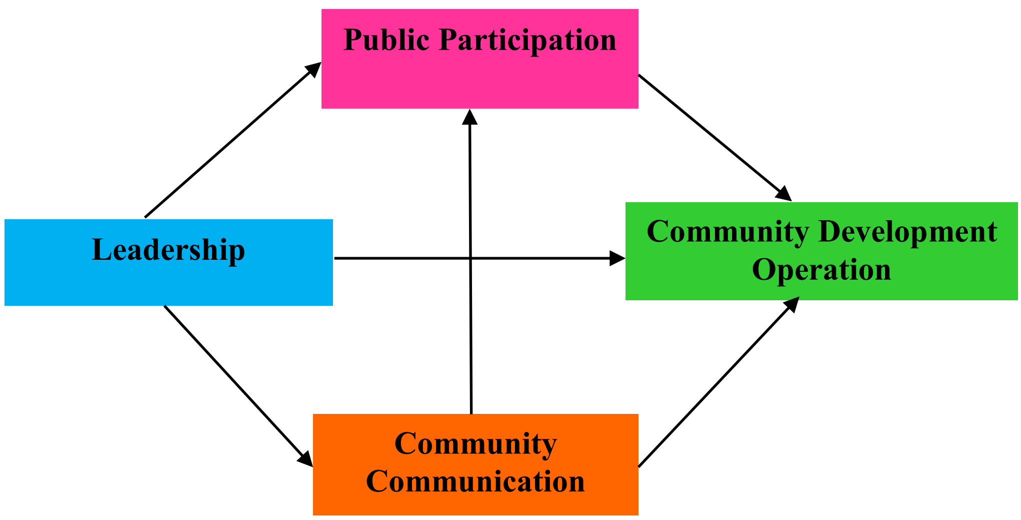


Figure 1 The conceptual framework (Source: Researcher, 2023)

Methodology

Population and Sample

Population in this study was 173 people presenting households who are living in Nam Sai Village (Ban Nam Sai, 2016). The sample was selected from the representative household in Nam Sai Village, which participated in all 10 activities such as collecting data for rural development, performing the community plan, implementing community learning centers, promoting democracy, maintaining the environment and natural resources, enhancing sufficient economy philosophy, preventing and solving drug issues, solving poverty issues, promoting career, and raising community fund (Department of Community Development, 2014, p. 8).

Sample Calculation: A total of 173 target populations were used in this study. The sample size was calculated from the target population using the Taro Yamane formula (Yamane, 1970) at 95% confidence level with an acceptance ratio of 0.05. The total sample was 121 people. After calculating the number of samples, the researcher chose the sample using random sampling technique, following by the lots (Srihong, 2000, p.9). First, make a list of representative households as the population. Then, numbering them in the list without any omissions or duplications. After that, the selected numbers were drawn according to the required number. The researcher had access to the sample group by inviting and explaining research participation. Research participants know the purpose and procedure of the research and ask for cooperation in collecting data by clarifying their rights at the sample group. Participants could decide to participate or refuse to participate in this study if they feel uncomfortable with the questionnaire. The obtained questions contained no negative effect on the sample group. However, they have the right to refuse the answering some inconvenient questions.

Research Instrument

The questionnaire was the research instrument of this study. The researcher used the developed conceptual framework and hypothesis in step 1 to create the questionnaire. The sample group consisted of 121 people representing households living in Nam Sai Village, divided into three parts as following:

Part 1: There were five questions about the general information of the respondents. The characteristics of the questionnaire displayed in the form of checklist questions which consisted of gender, age, education level, marital status, and occupation.

Part 2 was the questions about the factors affecting the community development operations of Ban Nam Sai community, namely leadership, public participation, and community communication. There were 12 questions in total, each of which was characterized in the 4-level rating scale.

Part 3 was the question about the community development Operations of Ban Nam Sai community by executing ten activities with 35 questions included. the 4 levels of the rating scale were applied in this part.

For Part 2 and Part 3, the questionnaires were characterized by a 4-level Rating Scale, including strongly agree, agree, disagree, and strongly disagree. The questionnaires' criterion was presented as followed:

Table 1 The questionnaires' criterion was presented as followed:

Scales	Scores	Descriptios
Strongly Agree	4	The operations of community development were extremely good.
Mildly Agree	3	The operations of community development were very good.
Mildly disagree	2	The operations of community development were a little good.
Strongly disagree	1	The operations of community development were bad.

The researcher conducted the construction and validation of the tool quality by testing the research tools as followed.

1. The questionnaires were sent to the experts to check the content validity. The purpose was to check the quality of content covering the objectives. Three experts were working along with this process. The value of IOC is more than 0.5.

2. Estimating reliability coefficients by bringing questionnaires that passed for content validity to try out with 30 people of similar sample groups. Cronbach Alpha was used to determine the reliability of the research tool. The coefficient of the questionnaire was found to be 0.983 of Cronbach Alpha, indicating that reliability was high enough for making data collection.

Quantitative data collection: The researcher created the questionnaire to use as a tool for data collection. The basics concepts, theories, literature review as well as researches related to the community development model of Ban Nam Sai community, Thung Benja Sub-district, Tha Mai District, Chanthaburi Province were used as a guideline for determining the scope of the questionnaire. The questionnaires were distributed according to the number of specified samples by data collection techniques. The complete version of the questionnaire was distributed as followed:

1. Distributing the questionnaire to the sample of 121 representative households who are living in Nam Sai Village to answer the questionnaire.

2. The researcher prepared the A4 size document envelopes for packing the completed questionnaires. After completing the questionnaire, the respondents were asked to put the finished questionnaire in an envelope and seal it. Then, the questionnaire's envelopes were kept in the questionnaire box prepared by the researcher.

3. After distributing the questionnaire successfully, the researcher examined the completeness of the questionnaires. There were 121 returned complete questionnaires which represented 100 percent.

4. Analyzing and evaluating data using a software program for social science research.

5. To achieve this procedure, the researcher had already explained objectives and guidelines for answering the questionnaire to the sample group to understand how to fill out the documents and clarify the project participants. Then, letting participants express their consent to join the program in the consent document by signing in the consent document or oral speech.

Data analysis

Data analysis of this research was divided into three steps as followed:

1. General information was analyzed by descriptive statistics, including frequency and percentage.

2. Analyzed and verified the consistency of the community development model of Ban Nam Sai community with empirical data based on the model goodness of fit indices used a Structural Equation Model (SEM) by the mathematical package program to estimates regression parameters to find the relationship between variables which must find the corresponding of the model estimate structural models and measurement models.

3. Analyzed weight of direct, indirect, and total effect of causal factors on community development operation of Ban Nam Sai community, Thung Benja Sub-district, Tha Mai District, Chanthaburi Province by used a Structural Equation Model (SEM) by using a mathematical package program with statistic Path analysis.

Results

1.The results of the analysis and examination of the community development operation model of Ban Nam Sai community were consistent with the empirical data based on the model fit indices consisting of χ^2 = 1.449, *df* = 2, *p-value* = 0.484, χ^2 /*df* = 0.724, CFI = 1.000, TLI = 1.006, RMSEA =0.000, SRMR = 0.016. These indices were described in table 2. (Hooper et.al., 2008)

Table 2 Model fit indices of Ban Nam Sai community development model with empirical data

Criteria Index	Model fit criteria	Scores	Results
χ^2/df	< 2.00	0.724	Passed
p-value	> 0.05	0.484	Passed
TLI	> 0.95	1.006	Passed
CFI	> 0.95	1.000	Passed
SRMR	< 0.08	0.016	Passed
RMSEA	< 0.07	0.000	Passed

2. The weight of direct, indirect, and total effect of factors affecting community development operation of Ban Nam Sai community were presented in table 3:

Table 3 Weight of direct, indirect, and total effect of factors affecting community development operation of Ban Nam Sai community.

Predictive Variables	Community development operations (F4)				Community communication (F3)				Public participation (F2)		
	DE	IE		TE	DE	IE		TE	DE	IE	TE
		F3	F2			F3	F2			F3	
Leadership (F1)	0.293*	0.027**	0.192**	0.512**	0.681**	-		0.681**	0.333**	0.301**	0.634**
Public participation (F2)	0.577**		-	0.577**							
Community communication (F3)	0.040**	-	0.255**	0.295**					0.442**		0.442**

Notes: 1. **p* < .05, ***p* < .01 2. DE = direct effect, IE = indirect effect TE = total effect

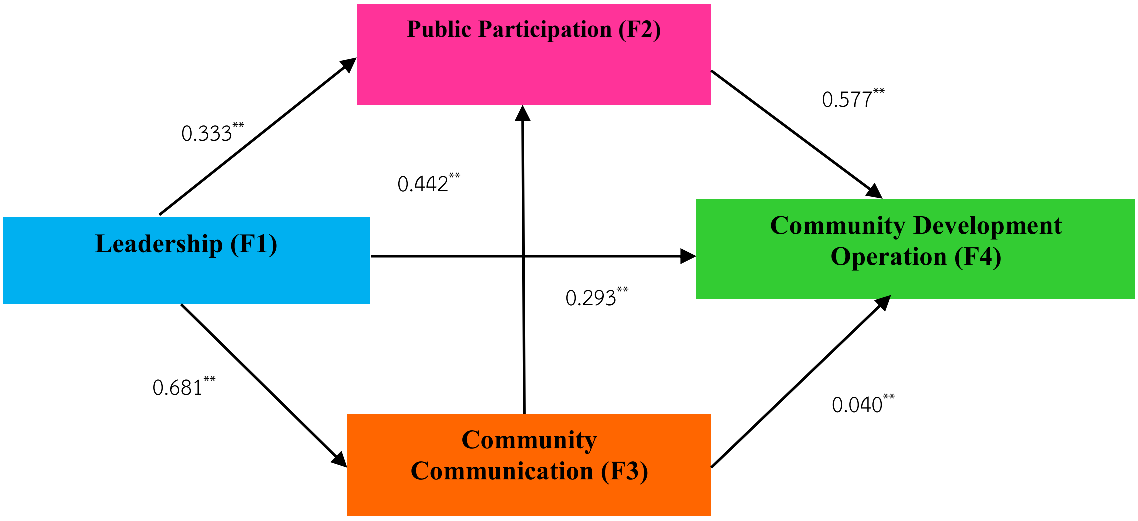
Leadership, public participation and community communication had direct effects on community development operations of Ban Nam Sai community. Besides, community communication was found a direct effect on public participation.

Table 4 The results of the research hypothesis testing

Hypotheses	Results
1. The community development operation model of Ban Nam Sai Community, Thung Benja Sub-district, Tha Mai District, Chanthaburi Province is consistent with empirical data.	Accepted
2. The casual factors had a direct, indirect, and total effect on the community development operation model of Ban Nam Sai Community, Thung Benja Sub-district, Tha Mai District, Chanthaburi Province.	Accepted

Discussions

1.The results of the analysis of the development model of Ban Nam Sai community were consistent with empirical data that is in-lined with the research of Hawking et al. (2004, pp. 877-880) who investigated the strategic implementation in Australia. It is also consistent with the research of Luengalongkot (2019) who studied the operational model according to strategic plans of Laem Klat Sub- District, Administrative organization in Trat Province. Most of the factors were similar to the operation of the development model of Ban Nam Sai community as the developed model was consistent with the empirical data. It can be presented that the community development operation model of Ban Nam Sai community is comprised of three factors such as leadership, public participation, and community communication. Besides, when examining the model, it was found that leadership had a direct effect on community development operations, public participation, and community communication. Public participation and community communication had a direct effect on community development operations when community communication had a direct effect on public participation. Moreover, leadership had an indirect effect on community development operations through public participation and community communication. Leadership also had an indirect effect on public participation through community communication. In the model, public participation and community communication had a direct effect on the operation of community development. Moreover, community communication had an indirect effect on community development operations through public participation. The total effect on community development operations of Ban Nam Sai community. The highest total influential factor was public participation, followed by leadership and community communication respectively. Therefore, we should emphasize the importance of public participation to develop the community, following fulfilling people’s needs and satisfaction (Luengalongkot, 2019; Lowe, Kroeck, & Sivasubramaniam,1996, pp. 385-425; Malarat, 2008, pp. 151 - 165; Gilley et al., 2009, p.75-94; Loganit & Luengalongkot, 2017; Nokvichien, 2009; Yotsorn, 2005, p. 94-96). In community development, leaders who are considered as the representative of development work must possess leadership and a self-sacrificing mindset. They must also be competent to coordinate and communicate with all stakeholders, including thinking and making decisions about the development projects. If leaders lack leadership skills, they will not have enough ability in dealing with these activities. The results of the community development model were presented in figure 2.



χ^2 = 1.449, *df* = 2, *p-value* = 0.484, χ^2 /*df* = 0.724, CFI = 1.000, TLI = 1.006, RMSEA =0.000, SRMR = 0.016

Figure 2 Community Development Operation Model of Ban Nam Sai Community
(Source: Researcher, 2023)

2. The weight of direct effect, indirect effect, and the total effect of factors affecting community development operation of Ban Nam Sai Community, Thung Benja Sub-district, Tha Mai District, Chanthaburi Province.

2.1 The weight of direct effect on community development activities of Ban Nam Sai community were presented as followed:

Leadership had a direct effect on the CDO of Ban Nam Sai community. This finding was consistent with Thalenoi (2016). The study focused on the factors affecting effective administration according to the principles of good governance at Hua Hin tourist center, Hua Hin Sub-District, Hua Hin District, Prachuap Khiri Khan Province. It was found that leadership influenced the effectiveness of management implementation which was the method to achieve the development of good governance. Considering the details of this factor, leadership had a direct effect on the community development operation of Ban Nam Sai community. The researcher realizes that leadership is a characteristic of individuals who can dedicate themselves to the success of community goals. Also, they can build confidence and support the team to achieve its community goal. It was similar to the outlook of (Yukl, 2002). He understood that leadership smoothens the community development operation. The followers accept a leader who has leadership skills and can build reliance for the team. So, they will obey the instructions of the leader accordingly. When comparing the mentioned ideas with the actual results, the leaders of the Ban Nam Sai community had enough knowledge and the ability for community development. They have good role models and selflessness, enabling them to motivate stakeholders to cooperate in development (Lowe, Kroeck, & Sivasubramaniam,1996). As a result, the community development of the Ban Nam Sai community was gotten an effective outcome. Therefore, it can be concluded that leadership has a direct influence on the community development operation of Ban Nam Sai community (Luengalongkot, 2020).

Public participation had a direct influence on community development operation of Ban Nam Sai community is in line with the concept of Anukulayuthon (2005) who studied the model of urban development organization for sustainable community development: A case study of Ban Eua Arthorn Rangsit Klong Sam. The results of the research showed that public participation in the area influenced the operational effectiveness of development organizations in the city. Moreover, it was consistent with the Khantasit (2014) who studied the management for sustainable community development in the Upper Mekong River. It was found that public participation had a direct effect on the implementation of community development. Participation is more encouraging and efficient to work together than just only fulfill the orders. Public participation in thinking and making decisions encourages them to feel possession of their works. Considering the details of the public participation, it had a direct influence on the development operation of Ban Nam Sai community. The researcher believes that participation happens when community leaders allow related people to take a part in the community development process. This includes planning and making recommendations for the leader's decisions.Lind (1993) figured that participation will provide greater encouragement for the people to work together in development more efficiently than simply agreeing to follow orders. When comparing the concept with the actual work performance, it was found that Ban Nam Sai community adhere to the principle of participation in the administration, by allowing everyone to participate in every process, starting from setting up a plan until the implementation of the community development plan. As a result, the implementation of community development plan of Ban Nam Sai community has been successfully implemented according to the objectives. It could be concluded that public participation had a direct influence on the community development operation of Ban Nam Sai community (Chavaha et al., 2020; Luengalongkot, 2021).

Community communication had a direct effect on the development operations of Ban Nam Sai community. It was consistent with the concept of Klongsara (2008) which studied the local community development process in Koi Rut Takwa, Nong Chok District, Bangkok. The finding presented that communication influenced significantly on community development operations. Additionally, the findings were consistent with the research results of Gilley, Gilley and McMillan, (2009, pp.75-94), who studied organizational changes, motivation, communication, and effective leadership. Their finding showed the communication does in fact heavily influenced development. Considering the community communication, there is a direct effect on the community development operations of the Ban Nam Sai community, too. The researcher thought that community communication is an important factor affecting the development activities of Ban Nam Sai community because communication in the community allows people to get information, as well as allowing them to develop and solve problems in accordance with each other. Comparing the concept with the actual practice, it was found that in Ban Nam Sai community, leaders can connect to all members thoroughly and can also fully understand information regarding community development. It is included using electronic media for communication and coordination within the community, such as having a group chat system to communicate important matters and updating every member on relevant information. Keller (1980, p. 246) pointed out the factors affecting operational effectiveness were the import of new technologies to help residents adapting to the flow of information in the community. As a result, the community development operation of the Ban Nam Sai community had been successfully implemented according to the community objectives. It could be concluded that community communication had a direct effect on community development operations of Ban Nam Sai community (Jermsittiparsert & Wajeetongratana, 2019).

Community communication has a direct effect on public participation. This finding was similar to the concept of Namburi (2019) who presented and explained a paper on participation theory in public administration. The results showed that community communication influences public participation significantly. Because communication is the process of conveying information, leaders can understand the sentiment and the needs of their people more clearly than ever before. This method can be applied in the community to enhance more understanding of people about the goals of the community development operation in Ban

Nam Sai community. This results in participation in initiatives, co-planning, decision-making, and implementation of community development plans. It can be concluded that communication in the community has a direct effect on public participation.

2.2 The weight of indirect effect on community development operations of Ban Nam Sai community, Thung Benja Sub-district, Tha Mai District, Chanthaburi Province.

Leadership has an indirect effect on the community development operations of Ban Nam Sai community through public participation. This influencing direction was in line with the concept of Nontanathorn (2015, p. 48-58), who studied the corporate social responsibility of leadership influencing the corporate image of Suvarnabhumi Airport. The findings mentioned an indirect effect of leadership on the development of Suvarnabhumi Airport passing by the participation of stakeholders. It is also corresponding with Loganit & Luengalongkot (2017). Their study was about the administrative behavior of local administrative organizations in Chanthaburi Province. It was found that leadership had an indirect effect on community development operations through public participation. Considering in detail the factor of leadership indirectly influenced community development operations of Ban Nam Sai community through public participation. The researcher realizes that community leadership is a significant factor influencing public participants. It is a catalyst for community activities which made people more willing to carry out their assigned missions. Public participation was considered a significant factor for the community leaders to engage people in community activities. Moreover, it could absorb people to enroll in the management and development mission as well as joint planning and suggest ideas for decision-making with the leader. According to research findings, the community development operation of the Ban Nam Sai community has been successfully implemented and also achieved the community objectives. It can be concluded that leadership had an indirect effect on the development operations of Ban Nam Sai community through public participation (Wongsurawat & Jermsittiparsert, 2020).

Leadership had an indirect effect on community development operations of Ban Nam Sai community through community communication. This finding was similar to Klongsara (2008), who investigated the development operation of the local community in Khoerut Takwa, Nong Chok District, Bangkok. The results showed that leadership had an indirect effect on community development operations through communication and perception. It's also consistent with Nokvichien (2009) researched on community development: a case study of Mai Reang community, Mai Reang Sub-district, Chawang District, Nakhon Si Thammarat Province. The result was that leadership had an indirect effect on community development operations through community communication. Therefore, leadership was a significant factor that had an indirect effect on the development operations of Ban Nam Sai community through community communication. The researcher thought that leadership is a special individual with highly capable competency and persistently trying to learn and practice their job. The followers need a leader who could motivate them and lead the organization to success for their organization (Loganit & Luengalongkot, 2017). The effect of leadership through community communication showed the importance of communication with community development. Moreover, it can be used to spread information to all members through electronic media. It was evidence that introducing new technology to support communication development help increasing the work effectively (Keller, 1980, p.246). As a result, the community development operation of Ban Nam Sai community was successful. In conclusion, we could conclude that leadership had an indirect effect on the development operations of Ban Nam Sai community through community communication (Kasritong & Luengalongkot, 2020).

Community communication had an indirect effect on the community development operations of the Ban Nam Sai community through public participation. This finding was consistent with the research of Klaewkla (2005, pp. 72- 74), who studied the participation of community's organizations in drug prevention and solution: a case study of Muang Kanchanaburi District, Kanchanaburi Province. It was found that communication had an indirect effect on the operation of development and solving of community problems through public participation. Community communication can use in two-way functions among people in the village, both formal and informal activities in order to allow people to participate in community development operations, including thinking, making decisions, participating in every work, and taking part in the benefits (Khantasit, 2014). The objective was to achieve the purpose of community development and to create a community union. The output resulted in the development operation of Ban Nam Sai community. Therefore, community communication was indirectly influenced the community development operations of Ban Nam Sai community through public participation (Thabhiranrak & Jermsittiparsert, 2019).

2.3 The total effect on community development operations of Ban Nam Sai community. The highest total influential factor was public participation, followed by leadership and community communication respectively. These findings were similar to the research of Khantasit (2014), which studied on the management for sustainable community development in the upper Mekong River. It was found that public participation had a direct effect on community development operations with the highest weight. This is because the community had activities to support public participation. So, people could respond and adapt the opinions around them for making decisions or improving development. Therefore, it was reasonable proof to confirm that public participation had the highest effect on community development operations of the Ban Nam Sai community.

In summary from the research results, the community development operation model of Ban Nam Sai Community is suitable for use. The model should be developed and applied to use to the similar context of communities/villages for further community development. To obtain more in-depth information, the researcher suggested that future research on the community development operation model of Ban Nam Sai community should focus on its usage and evaluation.

Conclusion and suggestions

In summary from the research results. It was found that Leadership, public participation and community communication had direct effects on community development operations of Ban Nam Sai community, Thung Benja Sub-district, Tha Mai District, Chanthaburi Province. Besides, community communication was found a direct effect on public participation. Among these studied variables, leadership was found to have an indirect effect on community operations of Ban Nam Sai Community through public participation and community communication. Community communication also had an indirect effect on the community development operation of the Ban Nam Sai community through public participation. The total effect on community development operations of Ban Nam Sai community. The highest total influential factor was public participation, followed by leadership and community communication respectively.

The model should be developed and applied to use to the similar context of communities/villages for further community development. To obtain more in-depth information, the researcher suggested that future research on the community development operation model of Ban Nam Sai community should focus on its usage and evaluation.

New knowledge and the effects on society and communities

The community development operation model of Ban Nam Sai Community is new knowledge and suitable for use. This model effects on society and communities by helping guide the community development in the right direction and particularity. It will also serve as the feature to uphold efficient and effective development. This model can be applied for development in other communities effectively.

Acknowledgments

The researchers would like to express our sincere gratitude to the Faculty of Political Science and Law, Burapha University, for supporting this research. This paper is part of a research project on Model of The Operation Community Development in Bann Nam Sai, Thung Benja Sub-District, Tha Mai District, Chantaburi Province.

References

Anukulayuthon, K. (2005). *Urban development organization model for sustainable community development. A Case Study: Ban Eua Arthorn Rangsit Klong Sam*. Master of Urban Planning and Environment Thesis, Major of Urban Planning and Environment, Department of Urban Planning and Environment, Kasetsart University. (In Thai)

Chavaha, C., Lekhawichit, N., Chienwattanasook, K., & Jermsittiparsert, K. (2020). The Moderating Effect of Effective Commitment among the Psychological Empowerment Dimensions and Organizational Performance of Thailand Pharmaceutical Industry. *Systematic Reviews in Pharmacy,11*(11), 697-705. DOI: 10.31838/srp.2020.11.100

Chiracharat, S. (2005). *Strategic management. Songkhla*: Prince of Songkla University. (In Thai)

Department of ASEAN Affairs. (2013). *We are ASEAN, The ASEAN Community 2015*. Bangkok: n.p.

Department of Community Development. (2014). *Handbook for supporting volunteer leader of community development operating model*. Bangkok: Community Development Department.

Department of Community Development. (2015). *Public service plan of the community development department for the year 2016*. Bangkok: BTS Press Co., Ltd.

Department of Community Development. (2017). *Action Plan for the Department of Community Development Year 2018*. Bangkok: Amarin Printing and Publishing Public Company Limited.

Gilley, A., Gilley, J. W., & McMillan, H. S. (2009). Organizational Change: Motivation, Communication, and Leadership Effectiveness. *Performance Improvement Quarterly*, *21*(4), 75-94. https://doi.org/10.1002/piq.20039

Hawking, P., Stein, A., & Foster, S. (2004). *Change Management: The real Struggle for ERP System Practice.* USA.: Idea Group Publishing.

Hooper, D., Coughlan, J. & Mullen, M. (2008). Structural Equation Modelling: Guidelines for Determining Model Fit. *Electronic Journal of Business Research Methods, 6*(1), 53-60. https://academic-publishing.org/index.php/ejbrm/article/view/1224

Jermsittiparsert, K., & Wajeetongratana, P. (2019). The Role of Organizational Culture and It Competency in Determining the Supply Chain Agility in the Small and Medium-Size Enterprises. *International Journal of Innovation, Creativity and Change, 5(2),* 416-431. https://www.ijicc.net/images/Vol_5_Iss_2_Spec_Ed/30_Srihirun_P438_2019R.pdf

Kasritong A., & Luengalongkot P. (2020). Factors Influencing Effectiveness of the Women Empowerment Funds. *Psychology and Education*, *57*(8), 70-77. http://psychologyandeducation.net/pae/index.php/pae/article/view/707

Keller, R. (1980). *Transformational leadership and the performance of research and development Project* Groups. Journal of Management, *18*(3), 489-502. https://doi.org/10.1177/014920639201800030

Khantasit, T. (2014). *Management for Sustainable Community Development in the Upper Mekong Basin*. Doctor of Public Administration Thesis, Department of Public Administration, Graduate School, Valaya Alongkorn Rajabhat University. Under the Royal Patronage of Pathum Thani Province. (In Thai)

Khunchlalat, K. (1997). *Leadership.* (2nd ed.). *Chonburi*: Department of Educational Administration at Burapha University. (In Thai)

Klaewkla, T. (2005). *Community Organization's Participation in Drug Prevention and Solution: A Case Study of Muang Kanchanaburi District, Kanchanaburi Province*. Master's Thesis, Kanchanaburi Rajabhat University, Social Sciences for Development. (In Thai)

Klongsara, N. (2008). *Process of local community development, Khoerut Takwa, Nong Chok District. Bangkok*. Master thesis of Arts, Major of Social Science for Development, Graduate School, Phranakhon Rajabhat University. (In Thai)

Lind, L. (1993). Management styles and stress (Self Esteem, Type a Behavior). *Dissertation Abstracts International, 54*(3), 1712.

Loganit, W., & Luengalongkot, P. (2017). The Behavior Executive of the Local Administrative Organization in Chantaburi Province. *FEU Academic Review Journal, 11*(1), 161 – 171. https://so01.tci-thaijo.org/index.php/buacademicreview/article/view/218815

Lowe, K., Kroeck, G., & Sivasubramaniam, N. (1996). Effectiveness correlates of transformational and transactional leadership: A meta-analytic review of the MLQ literature. *Leadership Quarterly, 7*(3), 385-425 . https://doi.org/10.1016/S1048-9843(96)90027-2

Luengalongkot, P. (2019). A Model of operating based on strategic plans of Laem Klat Sub-District Administrative Organization in Trat Province. *In Proceedings of International Conference 2019*, Burapha University Chon Buri, Thailand, 102-112.

Luengalongkot, P. (2020). Factors affecting the achievement of the operational goals of the National Village and Urban Community Fund. *PalArch's Journal of Archaeology of Egypt/ Egyptology, 17* (4), 1134-1147. https://archives.palarch.nl/index.php/jae/article/view/8751

Luengalongkot, P, (2021). Influence of Good Governance on Service Quality: A Case Study of Phanatnikhom Town Municipality. *Journal of Legal, Ethical and Regulatory Issues, 24 (Special Issue 1),* 1-9. https://www.abacademies.org/articles/influence-of-good-governance-on-service-quality-a-case-study-of-phanatnikhom-town-municipality-thailand-11768.html

Makasiranon, V. (2006). *Development of a learning organization.* (3rd ed.). Bangkok: Thamkamon Publication. (In Thai)

Malarat, A. (2008). Development of a causal relationship model of factors affecting the success of the health community network management.: A mixed-method research. *Journal of Behavioral Science*, *Naresuan University, 14* (1), 151 - 165. (In Thai)

Namburi, S. (2019). Theory of participation in public administration. *Academic Journal, 2*(1), 183-197.
Nam Sai village. (2015). *The results of consideration for the best village headman selection for the fiscal year 2015*. Copy documents, Chanthaburi.
Nam Sai village. (2015). *The works of the villages that entered the contest under the Outstanding Village Selection Project*. Copied documents of Chanthaburi. (In Thai)
Nam Sai village. (2016). *Community Plan 2016-2018*. Copy documents, Chanthaburi. (In Thai)
Nokvichien, T. (2009). *Community Development: A Proof of Participation in Mai Reang Community, Mai Reang Sub-district, Chawang District, Nakhon Si Thammarat Province.* Master of Arts Thesis (Political Science), Major in Political Science, Department of Political Science and Public Administration, Graduate School, Kasetsart University. (In Thai)
Nontanathorn, P. (2015). Causal Factors of Socially Responsible Leadership Influencing Organization Image of Suvarnabhumi Airport. *Journal of the Association of Researchers*, *20*(2), 48-58. https://so04.tci-thaijo.org/index.php/jar/article/view/241759 (In Thai)
Phucharoen, W. (2004). *Learning Organization and Knowledge Management.* (3rd ed.). Bangkok: Sam Lada Limited Partnership.
Prasertsri, R. (2001). *Leadership, Bangkok*: Thanat Printing Co., Ltd. (In Thai)
Suwanklang, R. (2014). *Development of the effective teams' model from an organization that has received the National Quality Award*. Master of Science Thesis, Major of Administrative Technology, Faculty of Human Resources, National Institute of Development Administration. (In Thai)
Santiwong, T. (2000). *Organization and administration.* (11th ed.). Bangkok: Thai Wattana Panich. (In Thai)
Siripaisan, S., & Saksung, A. (2009). *Multicultural Social Policy Implementation in the State of Kedah and Penang, Malaysia, 1970–2008*, Bangkok: Research Fund Office. (In Thai)
Srihong, C. (2000). *Research Methods*. n.p. (In Thai)
Sujjanan, J. (2006). *Education and community development*. Bangkok: O.S. Printing House. (In Thai)
Thabhiranrak, T. & Jermsittiparsert, K. (2019). Towards Sustainable Functioning of Organization: Women Empowerment and Corporate Management Culture. *Journal of Security and Sustainability Issues, 9*(1), 321-332. DOI: 10.9770/jssi.2019.9.1(24). DOI:10.9770/jssi.2019.9.1(24)
Thalenoi, T. (2016). *Factors affecting the efficiency of administration according to the principles of good governance, Hua Hin Tourist Police Station, Hua Hin Sub-District, Hua Hin District, Prachuap Khiri Khan Province*. Master Thesis of Public Administration, Graduate School, Stamford International University.
Wongsurawat, K., & Jermsittiparsert, K. (2020). The Moderating Effect of Leadership on the Relationship of Employee Satisfaction, Customer Orientation, and Organization Performance. *Systematic Reviews in Pharmacy, 11*(6), 280-289. DOI: 10.31838/srp.2020.6.45
Yamane, T. (1970). *Statistics: An Introductory Analysis*. (2nd ed.). Tokyo: John.
Yotsorn, N. (2005). *Factors influencing project participation. Model of Competence Maturity (CMM) of employees of Gosoft (Thailand) Company Limited*. Master thesis of Srinakharinwirot College, Business Administration. (In Thai)
Yukl, G. (2002). *Leadership in Organization*. (5th ed.). Upper Saddle River, New York: Prentice-Hall.

The study of Information and Communication Technology Knowledge of Teacher Professional Students Phetchabun Rajabhat University

Pattawut Wongsak * and Thanawat Chalermpong
Phetchabun Rajabhat University, Thailand
E-mail: pattawut.won@pcru.ac.th* and thanawat@pcru.ac.th
*Corresponding author
(Received: 14 March 2023, Revised: 19 June 2023, Accepted: 4 July 2023)
https://doi.org/10.57260/rcmrj.2023.264216

Abstract

This study intends to examine the five areas in which teacher professional students at Phetchabun Rajabhat University are knowledgeable about information and communication technologies. However, the target group used in this research was purposive sampling. In this research being an applies research, the research model to be used is quantitative research. The tools used in the study are the knowledge of information and communication technology. The statistics used in data analysis are mean ($\overline{x}$), standard deviation (S.D). According to the findings, the sample group possessed solid information technology competence. In any event, the findings of a study on the technological literacy of Phetchabun Rajabhat University students majoring in teaching indicated that these students had generally strong information technology access abilities. It was discovered that pupils of instructors had the best technological understanding after classifying knowledge of access to technology into five categories, there is little utilization of creative and technological managerial abilities. From the foregoing results, it demonstrates that the information technology literacy of teaching professional students has other elements that make the skills in the very excellent and least, such as the environment of the technology users, etc.

Keywords: ICT literacy, Integrated learning, Retention

Introduction

The new national strategy, which stresses the use of science and technology in teaching and learning and includes a strategic action plan with five goals to drive it, is being used to reform education in Thailand. Is to train workers to be capable of thriving in the digital economy and society. (Action plan to guide the five-year Development Plan for the Digital Economy and Society from 2017 to 2021). The Thai government is now conscious of the urgent need to employ digital technology as a key tool in the country's transformation towards stability. prosperous and sustained, on September 30, 2015, the Cabinet decided that the nation's information and communication technology (ICT) master plan would be replaced with a development plan for the digital economy and society that would be created by the Ministry of Digital Economy and Society. By adopting contemporary, diverse digital technologies, businesses, people's lives, and government operations will be transformed, leading to economic prosperity that is competitive on the international stage and enhancing social stability in the nation. This is the goal of the government's Digital Economy and Society policy, which will be implemented in accordance with this framework. This teaching communication focuses on how to develop knowledge for students, rather than on teaching and learning in the classroom, in addition to introducing new innovations to the creation of contemporary teaching materials. Nevertheless, the emphasis will be on how to manage the knowledge of students who use ICT media, with ICT media focusing on utilizing computers as the heart in developing instructional material, other factors to consider include the number of classes and study time. (Ausubel, 1963) In addition to creating modern teaching materials that emphasize the use of ICT, teachers also need to be skilled in using this teaching method as well. In addition, Rajabhat University development plan, which focuses on students to develop innovations to enhance learning management in the 21st century and toward education 4.0, identifies the production and development of teachers as the second strategic issue (New strategy of Rajabhat University for local development according to the 20-year royal policy, 2017–2036).

The knowledge and skills necessary to use information and communication technology, including access to information, management, integration, evaluation, and creation through the application of creative design and extensive use of information technology, are therefore required of learners or youth who are a significant force in driving the nation's development. (Barman & Michacel, 1989) The emphasis on self-study in order to apply the learned information to develop new innovative media centers on how to instill knowledge into learners since teaching and learning in the present era focuses on students having learning abilities for the 21st century. According to the action plan to guide the strategic development of the 5-year Digital Economy and Society Development Plan 2017–2021 and the new national strategy that places an emphasis on the introduction of science and technology to be used in teaching and learning so that students are prepared to learn in various fields. Knowledge of such information and communication technology will aid in the creation of various learning processes that can be used to extend knowledge and also prepare students and youth to bring the knowledge gained to further the development of the nation, this will help develop manpower that is prepared for the digital economy and society era.

The researcher would like to use Denmark as an example. Denmark is a country in Europe with the highest e-Government average in the European area and the highest e-Government average out of the 193 member states of the United Nations, with a trend of increasing averages since 2018. Denmark has created a digital strategy that focuses on using electronic systems to link technology to activities and systems utilized by the national and municipal governments. Denmark has a strategy that uses a digital key called NemID to enable residents to access more than 100 governmental services quickly and securely. A secure mailbox is used by both the public and private sectors on all platforms to facilitate communication between the government and the nation's citizens. (Senn, 2004) With the second-highest digital government average in the E-Government Index and one of Asia's most technologically proficient nations, South Korea is regarded as a pioneer in the use of e-government for public administration. The Ministry of Home Affairs and Interior published a vision and strategic plans regarding e-Government in the 21st century in 1998 with the goal of becoming a high-quality government that offered cutting-edge electronic services to the citizens of the nation. Such a scheme has set up a one-stop service agency that is prepared to push non-stop service non-stop service as well as entirely connecting information systems to serve customers anytime, anywhere in a transparent and verifiable manner.

Therefore, those who will be teachers in the future must play a significant role in ensuring that these students or youths have the knowledge and aptitude to understand and apply information and communication technology, as well as the ability to design imaginative works for students to apply knowledge in teaching and learning, these teachers must be professionals. (Billings, 2002) The standards of professional knowledge and experience of teacher’s practitioners of the regulations of the teacher’s council of Thailand on standards the profession and professional ethics say that the teacher practitioner must have standards of professional knowledge and experience. Standards for teachership, professional experience, curriculum development, learning management, psychology for teachers, educational measurement and evaluation, classroom management, educational research, innovation, and educational information technology, as well as standards for knowledge, language proficiency, and technology. Because information and communication technology literacy are an essential ability that must be employed in the teaching and learning process to teach learners of them, instructors of professional students must have a working understanding of information and communication technology. To follow the guidelines of the new national strategy, which emphasizes the use of science and technology in teaching and learning, educators should place more emphasis on encouraging students to learn on their own so they can apply the knowledge they have acquired to create new innovative media, build a body of knowledge for students, and be able to use it in other contexts. Also, in accordance with the action plan to support the five-year Digital Economy and Society Development Plan 2017–2021, which aims to create a workforce prepared for the country's continued development in the digital economy and society period. (Caine & Caine, 1991)

Thus, instruction in technology and communication literacy among teaching students is seen as vital for understanding of information and communication technology and is a talent that is crucial for both their own and their future students' learning in the modern classroom. So that those entering the teaching profession will be able to put the information they have learned to use in their own teaching and learning, helping the nation to advance and improve in quality.

Research Objectives

To study perceptions of information and communication technology among teaching profession students of Phetchabun Rajabhat University.

Methodology

The stages involved in conducting a study on training professional students' use of information technology and media literacy are as follows:

1. The target group used in the research: the target group for the study was the Phetchabun Rajabhat University teaching profession students, who studied in undergraduate years 1-4 in the academic year 2018, totaling 1372 individuals, the samples used in this study were the Phetchabun Rajabhat University teaching profession students, who studied in the first year of their bachelor's degree in the academic year 2018, totaling 286 individuals. However, the target group used in this research was purposive sampling. The individual who will teach in the future must play a significant role in the development of such students or youth in order to have the knowledge and skills to understand information and communication technology, specifically access to information, management, integration, evaluation, creation, application, design, and create results for students to apply their knowledge in teaching and learning.

2. Research instruments utilized in the study: a questionnaire on the understanding of information and communication technology among Phetchabun Rajabhat University students pursuing careers in teaching served as the study's instrument.

3. Development of research instrument: the following five steps were used in the creation of a research questionnaire on education, information technology literacy, and communication for students pursuing careers in teaching;

3.1 Research and gather data from books, articles, and research connected to information and communication technology understanding of teaching professional's students for use as educational data.

3.2 In order to build the questionnaire in line with the research on information and communication technology literacy, study data regarding data was used as the information.

3.3 Use reference materials, textbooks, and relevant research to learn how to develop questionnaires.

3.4 Use the data collected to build a questionnaire, the questions were then grouped into five categories in accordance with the understanding of information and communication technologies, including: area 1 use of information and communication technologies is accessible, area 2 information and communication technology management, area 3 integration of information and communication technology, area 4 evaluation of effective data selection, and area 5 creative design of works from information and communication technology.

It was decided on the format of the information and communication technology knowledge test for teaching professionals, which was a 3-part questionnaire with a 5-level estimate scale; Part 1: general Information of Respondents is a choice, Part 2: students who are teaching professionals' information and communication technology knowledge There are five estimating levels on the scale, the following factors can be used to assess someone's level of information and communication technology knowledge; (1) the average of 4.50 – 5.00 represents the highest level of information and communication technology knowledge, (2) the average of 3.50 – 4.49 means the knowledge of information and communication technology is high, (3) the average of 2.50 – 3.49 means information and communication technology knowledge level is medium, (4) the average of 1.50 – 2.49 means knowledge of information and communication technology is low, (5) the average of 1.00 – 1.49 means the lowest level of information and communication technology knowledge, and Part 3: other suggestions.

3.5 One measurement and evaluation expert reviewed the completed questionnaire to ensure that it was accurate and that teaching professional students' knowledge of terminology related to information and communication technology was up to date. The measurement and evaluation experts did this by doing the following; professionals with the necessary training in measurement and evaluation have six years of teaching, measuring, and evaluating experience.

3.6 Submit the amended questionnaire, as advised by measurement and evaluation experts, and must have the qualifications of an expert who must have experience in information technology, especially in the field of communications, to the experts for review and repair of any errors in the content, suitability of the language, and the subject matter to be assessed. All four experts offered their comments based on the information's substance and language, taking into account the language's appropriateness as well as any areas for development;

3.6.1 Information content expert there is a feature experience in teaching innovation and educational technology, having experience in teaching innovation and technology in education, and planning and developing instructional media for 3 - 5 years or more.

3.6.2 Thai for Communication, Thai for Teachers, Thai Language Learning Management, and Fundamentals of Thai Language have been taught by trained language experts with three to five years or more of teaching experience.

3.7 Determine the expert's score to determine the content consistency (Index of Consistency: IOC) between the question and the objective to be measured, which is determined using the formula;

+1 point when making sure that the item has content that corresponds to the variable you want to study.

0 points when it is not sure that the contents of the item are consistent with the variables to be studied.

-1 point when it is certain that the content of the item is inconsistent with the desired variable.

Take the outcomes from the expert's consideration to choose the question that the expert has considered that the question is compatible with the stated terminology definition, taken to discover the mean, and taken to compare the criterion larger than or equal to 0.5. (Lasuwong, 1981) The content validity study of the questionnaire with the specification of particular terms to be tested produced findings that ranged from 0.66 to 1.00, indicating that the questions are correct in their substance and can be measured in accordance with the intended purpose.

3.8 To gather data, the Phetchabun Rajabhat University teaching profession students published the original questionnaire on their understanding of media and information technology.

Results

From research on the study of information and communication technology knowledge of teacher professional students Phetchabun Rajabhat University, it was found that the knowledge of information technology and communication of the teaching profession students of Phetchabun Rajabhat University in the overall level was at a high level ($\overline{x}$=4.10, S.D.= 0.72) divided by components into 5 aspects as follows;

Part 1: Phetchabun Rajabhat University teaching professional's students have widespread access to information and communication technologies at a high level ($\overline{x}$ = 4.06, S.D. = 0.74). In a society where people feel that accessing and exploiting digital technology and information is the cornerstone for success both economically and socially, students must understand the Internet and many means of accessing it, as well as its advantages and the drawbacks of each channel. For students to be able to use search engines to get the information they need on the Internet, it is also critical that they understand various digital media formats, including the apps that are now in use.

Part 2: Overall management of information and communication technology was at a medium level among Phetchabun Rajabhat University teacher professional students ($\bar{x}$ = 3.94, S.D. = 0.74). In this regard, students have an understanding of information technology management that can be classified into three key management strategies: (1) information system strategy, (2) information technology strategy, and (3) management information system strategy. The organization's operational methods, i.e., the information systems that will be required, who will use them, and how they will be utilized to all forms of work, must be tied to and consistent with these three strategies. What management system is employed to distribute resources and control how they are utilized, and what information technology is employed to create a system to achieve its goals.

Part 3: Teacher professional students of Phetchabun Rajabhat University had overall integration of information and communication technology at a high level ($\bar{x}$ = 4.15, S.D.= 0.74). It was found that students have knowledge of and understanding of computing technology, which is an electronic device that can be used by generated instructions, also known as “Program” or a set of created instructions, create jobs, make information, compute, and conduct business on the Internet. It is essential to incorporate database technology as a source of data stored in the form of “Digital Code” to be developed alongside computer technology because computer technology is useless without data or programs that can be stored and retrieved quickly in large quantities to meet the needs of students. Additionally, telecommunication technology, sometimes known as telecommunication technology, is a type of communication technology that makes it simpler to link information through an operating system.

Part 4: Teaching professional students of Phetchabun Rajabhat University had an overall assessment of effective data selection at a high level ($\bar{x}$ = 4.17, S.D.= 0.73). Another important aspect of digital literacy is information literacy, which involves the ability to determine the information that kids need, literacy, techniques for finding that information online, and understanding of the evaluation and use of that information. Since libraries were the original target audience for information literacy, it is also a good fit for the current digital era, when there is a wealth of unfiltered internet information, making it crucial to be able to critically evaluate sources and material, according to an assessment of the development of learning management skills among students using information technology media.

Part 5: Teacher professional students of Phetchabun Rajabhat University had a high overall level of creative design of information and communication technology ($\bar{x}$ = 4.18, S.D.= 0.67). It goes beyond merely knowing how to use a word processor and send emails when students are proficient in using a variety of digital media tools to generate content and communicate effectively. This involves producing using digital media. Nevertheless, it also calls for the ability to adapt what students produce for a variety of contexts and target audiences, the ability to create and communicate using rich media, such as images, video, and audio, as well as the ability to effectively and responsibly engage in Web 2.0 features like blogs, image and video sharing, and other social media platforms.

In this regard, the recommendations of Phetchabun Rajabhat University teaching professional students regarding their knowledge of information technology and communication reflect that “Digital literacy” refers to the ability to bring tools, equipment, and technology that are currently available digital devices, such as computers, phones, tablets, computer programs, and online media, and make the most of it. Whether in communication, operations, and cooperation, or utilized to enhance work processes or work systems in the organization to be cutting-edge and productive.

Discussions

In light of this, the findings of a study on the technology literacy of Phetchabun Rajabhat University teaching professionals revealed that, when knowledge of technology access is divided into five areas, teaching professionals have generally strong information technology access abilities. It was shown that teacher professional students had the finest technological knowledge in terms of utilizing creative faculties and little in terms of managing technology. According to the aforementioned findings, additional factors, such as the environment in which technology users operate, etc., influence the information technology literacy of teaching professional students to either the highest or lowest degree. Therefore, the researcher can discuss the results as follows;

Findings 1: Access to the use of information and communication technology, students must comprehend the internet and have access to it through a variety of channels if they are to acquire and utilize digital technology and information as a basis for development and economic success. It is also required to comprehend the many forms of digital media and how they are used today in order to effectively utilize the "Search Engine" to locate the requested information from the Internet, as well as the advantages and disadvantages of each channel. This is in line with the research of Panjatawee (2017) on Factors Affecting the Adoption of Information System A Case Study of the Institute of Physical Education Chiang Mai Campus, the goals were to research factors influencing how well people utilize information systems and to develop a formula for predicting how well people at the Institute of Physical Education, Chiang Mai Campus, will use information systems. There were three factors identified as influencing the acceptance of information system use by staff at the Chiang Mai Campus of the Institutes of Physical Education: the support of supervisors for information technology, the expectation of information technology efficiency, and the perception of information technology benefits, at the statistical significance level of 0.05. General status factors, attitude factors toward information system use, perceived ease of use of information systems, and the ability to form predictive equations and accept the use of information systems as standardized scores were the factors that did not have an impact on acceptance of information system use.

Findings 2 : Information and communication technology management, planning, acquiring, gathering, storing, managing, and communicating information to users for the purpose of effective utilization while utilizing information technology as a tool is known as information management, to enhance Improve the organization's managerial and operational skills, foster innovation, boost its competitiveness, and make efforts to become a learning organization. This is consistent with the research of Thitikornprapapong (2015), who researched the information technology management affecting to internet using the learning processes of teachers in school under Phetchaburi Primary Educational Service Area Office 2. The research results showed that; the information technology management in school, as a whole and each aspect, were at a high level, the infrastructure was at highest ranked, followed by the promotion to using information technology, the human resource development, and the management, respectively.

Findings 3: Integration of information and communication technology, by connecting communication technology, computer technology, and database technology, information technology integration for public administration plays a crucial role in the transformation of information service models. Students learn how to facilitate communication with service recipients or stakeholders through the integration of information and communication technology. This includes communication and collaboration between information systems inside and outside the organization, which is a crucial tool for gaining access to the agency's services and achieving management and service provision goals. This is consistent with the research of Bunruangjak (2016) who researched on integration information technology to administrate, the research results showed that; integration information technology to administration is an important for transforming. Methods of public data service with technology connecting, computer technology, and database technology are connecting with user or stakeholder including connecting with internal and external information technology system. These are important tools to reach government services for management and services achievement. In addition, improving of government working efficiency, and improving of information technology services for developing economy and society are important tools to reach government services. These are close and will cooperate from government, private, and people. With the expectation, Thai Government System will change to new administration, process, and efficiency.

Findings 4: Assessment of effective data selection, information evaluation is the process of determining whether material from a search is valuable, credible from an academic standpoint, and chosen from a variety of information sources, including libraries and the Internet, by assessing the information, it is possible to gain important information and apply the information effectively. Unused information, such as information that does not satisfy demands, the content of which is outdated, or material that is academically unreliable, may all be evaluated. This, however, is consistent research with Chatan (2019), which claims that information assessment principles evaluate the credibility and modernity of information, taking into account whether or not it is credible information and how reliable it is, the credibility assessment has details to take into account, such as; while evaluating the reliability of sources for information and communication technology, one should take into account how the sources were gathered, institutional sources are the most trustworthy sources of information and communication technology.

Findings 5: Designing works from information and communication technology creatively, using communication and information to inform the design of a piece technology used artistically is a choice made to improve one's quality of life for both the individual and others around them, it should also be safe, appropriate for local conditions, and environmentally friendly. In this sense, creating works from information and communication technology creatively is a process of transferring ideas about how to solve issues or satisfy wants, resulting in the production of prototypes of items that assist, convenient in everyday life, or describe a technique as a framework for problem-solving and reporting to offer a method that includes taking action to address a need or address an issue in order to accomplish a certain goal. This is consistent with the research of Jongpattanakorn (2019) who studied information systems design for an information technology project in a special problem course, this research was aimed to study and design information systems for instructional purposes which were used as a case study in an information technology project. The sample group was 17 students who studied special problem course. Methods of data collection were questionnaire and working-software. Key performance indicators in this study included 17 information systems, usability of the systems, the systems accuracy and completeness. The instruments comprised time for developing the systems, document, and results of the systems performance evaluation. Data were analyzed in terms of percentage and mean. The result of this research showed that 15 from 17 information systems making up 88.24% could be delivered on time.

As a result, it is clear that educators need to prepare their students for a world in which digital learning content will displace traditional learning materials and play an important role in education. General textbooks will no longer be used in place of course materials that are based on basic theory because the latter are subject to sudden changes. Digital learning content will replace it since it can be readily modified afterwards, similar to computer and science content. Digital learning content will enable people who are interested in a variety of areas to get knowledge from the subject matter, without having to visit an educational institution, as the usual book manufacturing process takes a long time. The creation and innovation of new forms, which will make the material more accessible and engaging, is also important for the future of digital learning content. It will not simply depend on readers. Additionally, when more newspapers, journals, magazines, and other print publications are created in a digital format in the future, the learning content digitalization will result in a change in the print market. (Reungsri & Dhedchawanagon, 2021)

Conclusion and suggestions

Digital literacy, also known as information technology and media literacy, is the ability to utilize modern digital tools, devices, and technologies, such as computers, phones, tablets, computer programs, and online media, to the fullest extent possible for communication, performance, and collaboration, is utilized to create more contemporary and effective work procedures or systems inside the company. It is also a fundamental digital skill that will assist everyone in operations, communication, and collaboration with others in a way that allows them to “work less but get more impact”, and it will assist government organizations in creating value (value co-creation), and operational value (scale economies), as they move towards Thailand 4.0. It is also a tool to assist everyone in learning and growing so they may find suitable employment possibilities and further their careers in government (learn and growth). According to the research on information technology management's findings, the management aspect was average and at the lowest level. As a result, the researcher advised those involved in the study's management to plan and design information technology systems and to communicate in a way that will meet the needs of all students using technology. Additionally, information technology management should be managed, promoting the use of information technology, and personnel development affecting the use of the Internet in organizing the learning process of students in educational institutions, so management of these five areas should be promoted even higher, and those in charge of education management should reorganize basics to be more successful because students will have a better and more effective learning process if educational institutions operate on information technology and effectively communicate in university.

New knowledge and the effects on society and communities

The technological proficiency of Phetchabun Rajabhat University vocational students will inevitably lead to future applications in the placement of full-time instructors in schools where the school and community will need to work together. On the topic of community education technology and resource-combining community education innovation, instructors can use the knowledge they have acquired to manage learning for students and for the community. (Khantakhet, 2015) At the local and societal levels, science and technology are combined with the knowledge and human capital of the neighborhood and community for the development of the operating system and self-management of the community for the community and community members from individual level families with various types of associations, as well as community-based groups of interests with common issues to practice and learn. In order to produce economic results, create opportunities, and increase the capacity to achieve goals in line with the sufficiency economy philosophy and new solutions for Thai and global society, one must act in a way that promotes the general welfare of the community, effectively address the problems that individuals and communities face, and address problems in a way that addresses them. (Klinkaset, 2010)

The community transforms into a learning and social action unit to dynamically control change by limiting opportunities for future generations while also being consistent and in accordance with community and local ready situations. Communities should be able to control their own growth in line with that of external societies, including social and cultural movements, communication, and information, in addition to fostering a strong sense of community. In order to strengthen communities and promote civic virtue, as well as to increase opportunities for initiative-taking, contribute to society's general well-being, and bring about the changes that people in society are increasingly desiring, social and structural reforms are required. (Benjatheprasamee, 2017)

References

Ausubel, D. P. (1963). *The psychology of meaningful verbal learning; an introduction to school learning.* New York: Grune & Stratton.

Barman, C. R., & Michacel, K. (1989). *“The Learning Cycle,” Science and Children, 26*(7), 30–32. April. Lawson.

Benjatheprasamee, P. (2017). *Development of a curriculum to enhance the competency of blended learning management for computer teachers to promote students' knowledge of information and communication technology.* Elementary level. (Doctor's thesis). Phitsanulok: Naresuan University. (In Thai)

Billings, R.L. (2002). Assessment of Learning Cycle and Inquiry – based Learning in High School Physics Education. *Masters Abstracts International, 40*(4), 840. https://doi.org/doi:10.25335/M5V40K71V

Bunruangjak, W. (2016). *Integration Information Technology to Administrate.* Department of Public Administration, Faculty of Political Science. and public administration Rajabhat Maha Sarakham University. (In Thai)

Caine, R. N., & Caine, G. (1991). *Making connections: Teaching and the human brain.* Menlo Park, CA: Innovative Learning.

Chatan, S. (2019). *Assessing the reliability and up-to-date information.* Bangkok: Ratchawinit Secondary School. (In Thai)

Jongpattanakorn, S. (2019). *Information systems design for an information technology project in a special problem course.* Project on Computer Major Establishment, Faculty of Liberal Arts and Science, Kasetsart University, Kamphaengsaen. (In Thai)

Khantakhet, T. (2015). *Development of a blended learning model emphasizing technology literacy features.* Information and communication for university students Academic and Social Science Research Journals Year 10, Special Issue (Education - Education), July 2015. (In Thai)

Klinkaset, K. (2010). *Information and communication technology use behavior for the study of Graduate student, Faculty of Decorative Arts, Silpakorn University.* (Independent research Bachelor's Degree). Bangkok: Silpakorn University. (In Thai)

Lasuwong. K. (1981). *Educational Psychology.* Bangkok: Department of Guidance and Educational Psychology, Srinakharinwirot University Prasarnmit. (In Thai)

Panjatawee, S. (2017). *Factors Affecting the Adoption of Information System A Case Study of the Institute of Physical Education Chiang Mai Campus.* Business Administration, Chiang Mai Rajabhat University. (In Thai)

Reungsri, S., & Dhedchawanagon, K. (2021). Context and Factors Affectingthe Process of Preparing Teachersfor Multicultural Classrooms. *RMUTL Journal of Business Administration and Liberal Arts, 9*(1), 59-76. https://so05.tci-thaijo.org/index.php/balajhss/article/view/247575 (In Thai)

Senn, J. A. (2004). *Information technology: Principles, practices, opportunities.* (3rd ed.). Upper Saddle River, NJ: Pearson.

Thitikornprapapong, K. (2015). *The information technology management affecting to internet using the learning processes of teachers in school under Phetchaburi Primary Educational Service Area Office 2.* Educational Administration, Phetchaburi Rajabhat University. (In Thai)

Role of Hundi in Border Trade Payment of Northern Thailand-Myanmar Before and After 2021 Military Coup

Nisit Panthamit *

Faculty of Economics and Center for ASEAN Studies, Chiang Mai University, Thailand

Somsak Wongpanyaptaworn

Independent Researcher, Thailand

Pimonpun Boonyasana

Faculty of Economics, Chiang Mai University, Thailand

Paisan Panthamitr

Independent Researcher, Thailand

E-mail: nisit.p@cmu.ac.th*, somsak.lvp1@gmail.com, pui.econ@gmail.com and papantha@hotmail.com

*Corresponding author

(Received: 28 April 2023, Revised: 15 August 2023, Accepted: 22 August 2023)

https://doi.org/10.57260/rcmrj.2023.265145

Abstract

Myanmar considers border trade more important than international trade. Due to the economic sanctions imposed by the West since the military government took power in 1996 up until the latest one in 2021, Thailand -Myanmar border trade has been characterized by more informal trade than previously. Border trade has developed despite being subjected to long-standing international trade barriers.

This study aims to convey an understanding of how the informal border payment, "Hundi", works as the border-trade -payment between Myanmar and Northern Thailand. Even though hundi is an informal transfer system it is widely used as an alternative banking system. Especially, hundi is used in the financing of legitimate businesses, to prevent exacerbating the problems of access to credit of different states. This study draws on available literature and open-source reporting, as well as extensive field research by interviewing trusted sources for more than 30 informants (i.e., border-trader, money changer, money transfer operators, business leaders, hundi operators, immigrant labors, government officials, commercial banking staffs) in the northern part of Thailand with the border city in Shan state, Myanmar during 2017-2022.

This study found that hundi plays a significant role as both a substitute and complement to cross-border trade and payment across the border of Myanmar-Thailand. After the recent political instability, and expansion from a formal banking sector to a mobile money services, in the short term, we are unlikely to see an elimination of the hundi system completely.

Keywords: Border trade, Informal trade, Informal payment, Hundi, Thailand-myanmar, Northern thailand, Military coup

Introduction

Myanmar and Thailand Trade relation; Why Borders matter?

The trade relation between Myanmar and Thailand has been developed before the founding of the Union of Myanmar, a pre-colonial system before King Mindon's regime (1852–1878); whereby it had little regular commerce with the Kingdom of Thailand and the Kingdom of Mon (Mon state in Myanmar). Thailand shares an approximated 2,400 kilometers border with Myanmar. There are various border trade issues, including the smuggling trade that plays one of the most important roles within the sphere of economic activity between the two countries. There are five border trade posts between Myanmar and Thailand. Myawaddy border trade post is the largest Myanmar-Thailand border trade post, with a share of 39% of the total border trade value of the two nations; Tachileik border trade post is the second largest (Figure 1). The border trade share of Myanmar-Thailand is shown in the following Figure 1.

Figure 1 Myanmar **-** Thailand Border Area

As mentioned in the figure, border trade value from China is the highest among the neighboring countries. It stands the biggest trade partner of Myanmar. Thailand stands the second largest and India, Bangladesh stands the third and fourth respectively. Natural gas, minerals, marine products, Jade are the major export commodities and agriculture products, wood product, clothing and all exportable commodities are also exported. Crude oil, petroleum products, machinery and equipment, transport equipment, construction materials, fertilizer, cement, edible oil, food products, fabric and plastics resin are the major import commodities. Myanmar's main exports partners are neighboring countries and other trading partner countries are Japan, South Korea, Germany, Indonesia, and Hong Kong. According to Commerce Ministry data, Myanmar is Thailand's sixth-largest trading partner in ASEAN, and its seventh largest in the world. China has more favorable conditions concerns with Myanmar because the highways and road transportation are better than others. One main benefit is that Myanmar people are familiar with the products that are imported from China. As China is the country of advanced technology, imported goods from China have variety of choice such as machine and accessories, electronic goods and technology products. The border trade helps to increase the employment opportunities for many workers and creates income. It can improve the security in the area and promote the transportation facilities in those areas and is beneficial for the social sector. On the other hand, there are also still negative signs in some of the political, social and economic obstacles. Thirteen border trade posts have been opened and there are many places that have still to open border trade posts. The name of the border trade posts, and the respective areas are shown in the following table.

Table 1 Border trade posts of Myanmar with neighboring countries

No	Border Trade Post	Trade Partners	Date of Open
1	Ta Mu	Myanmar-India	5.9.1995
2	Maungtaw	Myanmar -Bangladesh	5.9.1995
3	Kawthanung	Myanmar-Thailand	1.6.1996
4	Tachileik	Myanmar-Thailand	16.3.1996
5	Muse (105 mile)	Myanmar-China	12.1.1998
6	Lwejel	Myanmar-China	23.8.1998
7	Myanwaddy	Myanmar-Thailand	16.9.1998
8	Sittwe	Myanmar-Bangladesh	11.12.1998
9	Myeik	Myanmar-Thailand	1.7.1999
10	Laiza	Myanmar -China	1.5.2000
11	Chinshwehaw	Myanmar-China	19.10.2003
12	Rhi	Myanmar-India	10.12.2003
13	Na Bu Lal	Myanmar-Thailand	29.3.2012

Source: Ministry of Commerce, Myanmar

The border trade of Myanmar-Thailand border trade posts became official in 1996. Even though the border trade is informal, people have been employed to carry goods across the border along the river and hill paths. Myanmar is of vital strategic economic importance to Thailand, because it provides large amounts of natural gas utilized for electricity. Border trade posts between Myanmar-Thailand provide job opportunities for local residents, as well as free flow of goods and services. The major import of Myanmar from Thailand are car and motorcycle accessories, computer- related products, electronic accessories, industrial manufactured goods, electronic machinery, etc. Natural gas, consumer goods, fuel, raw material, intermediate goods, animal, vegetables, metal, wood, and food products are also major export products of Myanmar to Thailand.

Historically, the cross-border trade took place with the objective to allow the exchange of goods between local people living in the immediate neighboring areas. However, after the upper North of Thailand became associated more and more with the neighboring countries politically, commercially, and in other international relations aspects which led to the opening of trade facilitation at the border areas between Thailand, Lao PDR and southern part of China, border trade volume has grown continually with a prediction to expand even more in the future. The border trade boom began in 1997 when the border trade flow in Northern Thailand had the value of 5,932.94 million baht, a 32.51% increase from the 1996 level. The total 1997 northern border trade volume comprised 5,382.99 million Baht of Thai-Myanmar trade (90.74%), 402.59 million baht of Thai-Laos trade (6.78%), and 149.36 million baht of Thai-Chinese trade (2.48%) (Panthamit, 2016). However, since the pandemic and coup, China's border is closed, so the trade volume of Myanmar's border trade with Thailand has become the largest trading volume in fiscal year 2022-2023 (65.6%), Myanmar-China (30.2%) instead. (see Table 2)

Table 2 Border Trade of Myanmar with neighboring trading partners in fiscal year 2022 (1-4-2022 to 31-3-2023) compared to the same period of 2021 (1-4-2021 to 31-3-2022)

unit: million USD

Border Trade Partner	Export	Import	Trade volume	Export	Import	Trade volume
Myanmar-China	2513.835	561.938	3075.773	1922.038	420.879	2342.917
Myanmar-Thailand	3479.87	1876.142	5356.012	3413.489	1676.468	5089.957
Myanmar-Bangladesh	32.377	0.175	32.552	32.968	0.886	33.854
Myanmar- India	10.017	6.378	16.395	45.822	4.782	50.604
Myanmar-Laos	-	-	-	-	-	-
TOTAL	6086.246	2484.552	8570.798	5414.317	2338.213	7752.53
Border Trade Partner	**Export(%)**	**Import(%)**	**Trade volume(%)**	**Export(%)**	**Import(%)**	**Trade volume(%)**
Myanmar-China	41.30	22.61	35.96	35.5	18	30.22
Myanmar-Thailand	57.17	75.51	62.49	63.04	71.70	65.65
Myanmar-Bangladesh	0.53	0.01	0.38	0.61	0.05	0.44
Myanmar- India	0.16	0.26	0.19	0.85	0.20	0.65
Myanmar-Laos	-	-	-	-	-	-
TOTAL	100	100	100	100	100	100

Noted: - No data available

Source: Department of Border Trade, Ministry of Commerce (https://www.commerce.gov.mm/en/dobt/border-trade-data)

The characteristics of the population in Myanmar are ethnically diverse throughout the country. The Thai-Myanmar border varies according to the political environment of each ethnic group in Myanmar. The case of border trade through Mae Sot checkpoint which borders the city of Myawaddy, Karen State, is a group of areas occupied by the Karen ethnic group. Another main border-trade point is between Mae Sai District in Chiang Rai province bordering the Shan State. There are a large number of diverse ethnicities in Shan state (including Akha, Danu, Kachin, Karen, Lahu, Lisu, Shan, Ta-ang (Palaung), Taungyo, Yin-nit Yin-kya and Wa). The Thai-Myanmar border is the longest, making border trade unique and closed. (closed???)

The border trade of Thailand at Chiang Rai province connecting to Shan State, Myanmar takes place in Mae Sai-Tachilek international point of entry area. At present there remains only a few border trade operators, which formerly were large in number but eventually exited the market. The remaining business operators now engage mostly as large wholesalers, and the border trade market is characterized as oligopolistic competition. Therefore, pricing of any commodity can be discussed and mutually determined among these few border trade operators. In term of border trade payment, the commercial bank system is not the popular mode. Traders have only one choice to use cash and in Thai currency due to the unstable Myanmar Kyat (MMK) value. While virtually all trade payments are not made through commercial bank system, certain banking services can be utilized. For both cash and commercial bank as mode of border trade payments, five specific transactional arrangements can be distinguished, namely: (1) trade account clearing by underground money transfer, “hundi”; (2) cash payment in Baht; (3) account clearing among associated/siblings’ companies; (4) opening letter of credit (L/C); and (5) depositing the payment in general Thai Baht account.

This study examines the review of previous research works and fieldwork study to further add with the literature in the informal payment transfer (hence after, hundi) which is a subject that is rarely conducted and in discussed in great details with regards to the role of border-trade payment between Thailand-Myanmar. Thus, the survey and compiled information on the importance of these alternative remittance system for Myanmar, need to be updated.

Research Objective

This study reexamines the following: (1) development of the border trade system between Thailand and Myanmar , hundi between 2017-2022. (2) Role of payments involving stakeholders in the borderland of Myanmar-Thailand, including border merchants, relevant government officials performing duties in the scene and out of the scene, financial agents, and informal foreign exchange operators. (3) investigating the competency of "hundi" mechanism and whether its ecosystem is still mainly active, in particular, in the wake of 2021's military coup in Myanmar whether this has had an impact on hundi system across the border. The study followed El Qorchi (2003) as conceptual framework for this study. The study not only conducted qualitative but also quantitative analyses to describe the hundi system and reach conclusions about its practice.

Theoretical Framework

The theoretical debate on *lawlessness and economics* led by Dixit (2004) proposed the concept of private *mechanisms* — such as long-term relationships, arbitration, social networks to disseminate information and norms to impose sanctions, and for-profit enforcement services — have grown up in place of formal, state-governed institutions. Even in countries with strong legal systems, many of these mechanisms continue under the shadow of the law. Numerous case studies and empirical investigations have demonstrated the variety, importance, and merits, and drawbacks of such institutions. Dixit (Dixit, Lawlessness and Economics: Alternative Modes of Governance, 2004) also argued by examining the theory of private institutions that transcend or supplement weak economic governance from the state. Moreover, this adaption of literature reviews followed from the first work done by El Qorchi (El Qorchi, Munzele Maimbo, & Wilson, 2003)

Methodology

This study consists of two methods of data collection from custom departments of Thailand and Myanmar, then using: (1) quantitative analysis by comparing bilateral trade statistics of Myanmar-Thailand. After that, the data were then described in order both before and after the 2021 military coup. (2) qualitative analysis by document research following the theoretical debate on lawlessness and economics led by Dixit (Dixit, Lawlessness and Economics: Alternative Modes of Governance, 2004) and literature reviews followed from the first work done by El Qorchi (El Qorchi, Munzele Maimbo, & Wilson, 2003) by tracking recent hundi literatures from open sourcing and then applying on the fieldwork to investigate using the snow-balling interviews from 30 trusted sources with questions to fulfill the study objectives (in-depth interviews with key stakeholders, participant observation recordings and other messages). These data were classified into categories according to similar concepts (themes) and interpretation frameworks. These sample group criteria were selected by using a random distribution method from trusted sources that have been contracted within 20 years (snowball sampling) by the research team. Data collection methods consisting of in-depth interviews and focus-group discussion from border trade's stakeholders across the border between northern Thailand and Myanmar had been characterized and analyzed the development of hundi coming from several fieldtrips, workshops, and online interview (during pandemic time in 2019-2020) of two border cities of Thailand and Myanmar. These vast interviews were conducted over a period of seven years, specifically between Nov. 2017 – Dec. 2022.

Results

Border trade between Northern Thailand and its neighboring countries is recognized as commodity flow through four channels **(1) Natural crossing point.** Including the natural trails crossing the international boundary with no official recognition by the two countries. **(2) Temporary border checkpoint**. It is established and opened primarily for the economic reasons upon the request made to and approved by the Ministry of Interior of Thailand. The opening of the border is temporary for a definite period and with no impact on national security. **(3) Permissive crossing point**. It is opened for humanitarian reasons to promote local international relations, as well as to allow trade and exchange in consumer goods and travel movements between the two countries. The types of tradable goods, opening and closing hours, and entry-exit control measures are under the authority of the provincial governor, with approval from the Ministry of Interior, Thailand. Currently there are eleven permissive crossing points in the northern Thailand, seven of which on the Thailand-Myanmar border. **(4) Permanent border checkpoint.** It is an official and bilateral border opening to facilitate trade and travel between countries and to promote international relation and cooperation. Presently, there are five permanent border checkpoints in the northern Thailand, two of which are on the Thailand-Myanmar border and three of which on the Thailand-Laos border.

The characteristics of the population in Myanmar are ethnically diverse throughout the country. Also, Thailand-Myanmar border locations differ according to the political environment of each ethnic group in Myanmar. For example, Mae Sot district borders the Myanmar city of Myawaddy in Karen State, which is an area occupied by the Karen ethnic group. And Mae Sai district borders the Myanmar city of Tachilek in Shan State. The Thailand-Myanmar border is long, making border trade unique and restrictive. Especially, border trade that is not conducted through customs (smuggling) and money transfers outside the official system (hundi), due to illegal activities and transactions. Aung (Aung, 2011) divided the cross-border trade in Myanmar into four categories: legal & documented trade (trade is documented in both Myanmar and the partner country), legal & undocumented trade (tradable products that are not subject to trade restrictions, but undertaken without legal export and import licenses issued by Myanmar's Department of Border Trade), illegal-but-licit & undocumented trade (export and import of products, the importation or exportation of which are restricted by trade authorities), and illegal-and-illicit & undocumented trade (export and import of illicit products, the importation or exportation of which are restricted both by Myanmar and its partner country).

Hundi: Payment and Mechanism

In general, payments incurred from cross-border activities can be settled by two ways: using commercial bank facilities and drawing on international trade agent facilities in the black market. In the first case, importers pay overseas exporters by check, draft, and wire transfer, with or without using a Letter of Credit (L/C). In the latter case, exporters are paid by cash in Baht, Kyat, and US dollar denominations. The development of payments has improved greatly since Myanmar opened up in 2012, with many large commercial banks providing services of international money transfer on imports and exports, as well as money exchange services. However, since the coup in 2021, the informal trade payment has resumed not only for across the border economy between Myanmar and Thailand, but is also applicable inside the domestic economy of Myanmar. The hundi system was widely used during the latest period of military rule, even by international aid groups. In some cases, commissions on transfers have doubled or tripled, with increased rates on both the sending and receiving sides. In November 2019, the mobile money transfer value accounted for 80% of all money transfers value in Myanmar (Rest of World, 2021). Myanmar's economic system requires cash flow over the economy. Even though there is a decline in the amount of money in circulation, there is an ongoing demand for money in daily consumption, which was also proved by the uncertainty in the financial system under the Central Bank of Myanmar (CBM) occurring quite often, causing the Myanmar's people's lack of trust for the country's financial system. Also, there is a lack of accessibility to traditional banking structures and just a quarter of the population has a bank account. It is popular for people to hold cash instead of depositing their money in banks because they fear that they would not be able to withdraw it. Electronic payments had been slow to catch on in Myanmar until around 2020. A widespread bank run following the military takeover in February 2021 led banks to restrict withdrawals. With only limited access to cash for roughly a year, many of Myanmar people began relying on online services (NikkeiAsia, 2023). As online payments became more efficient, money exchange and transfer services began to transform into online services (Reuters, 2021). Facebook is the most popular social media among Myanmar people. Most online money exchange services exist on Facebook. Nowadays, there are a lot of Facebook pages and groups that offer money exchange and transfer services. These pages post the informal exchange rates twice a day and the customers only need to contact them through messenger to transfer or exchange money. The service fee varies according to the banks or the wallet they would like to use. (Several interviews with Thai businessman, trader and money changers in Yangon from 2017 - 2022).

Since the coronavirus pandemic, the online payments and online money transfer services have grown significantly. Myanmar people acquired more trust in online banking and there are not many steps in transferring the money and it is time saving. For instance, if someone living in Thailand wants to transfer money to Myanmar through online service, they do not have to go anywhere, neither do the receivers. First, the sender has to contact the online money transfer service through social media, the service will reply, telling the customer the exchange rate of that time and service fee, also asking the customer how much they would like to transfer and how the receiver will accept the money. After that the service will give their Thai bank account information. Just after the sender had transfer the money into the service provider's bank account, the service provider will transfer money into the receiver bank account or mobile wallet using their Myanmar bank account. The service has both Myanmar and Thai bank accounts. In that case, there is no money in or out of both countries. The service fee is ranging from 2% to 3%. (Interview with money changer in Yangon, Nov. 2022).

An informal transfer system which is widely used as an alternative banking system, "hundi" of border trade of Myanmar -trading partners in Northern Thailand has again become the most popular mode of border trade payment, even though hundi is unable to declare the sources of money laundering regulation under the standard settlement of formal banking system. Due to a failure to operate of its official mechanism, the border-traders are carrying on using hundi as the financial platform across the border of Thailand-Myanmar. Most research works of informal transfer payment have been studies **s**ince the 9/11 incident (September, 11, 2001) in the US, as renewed public interest has focused on informal funds transfer (IFT) systems (Zagaris, 2007) and (Viles , 2008)Hundi is what's known as an "informal value transfer system", varieties of which can be found in many countries around the world. Using agents, money can be remitted domestically or internationally, but the money does not move either physically or through the banking system--instead, the agents that handle the transaction usually settle the debt in another way (Frontier, 2023). The popularity paper by El-Qorchi (El Qorchi, Munzele Maimbo, & Wilson, 2003) has been mostly cited in vast literatures, especially in term of "hawala:". The hundi has also been defined in several deviations depending upon time and region (in Niger, Nita, in Mali, Senegal, and Comoros, Fax; in

Somalia, Hawala; in India, Hundi; in China and Myanmar, Fei-Ch'ien; Philippines, Padala; in Hong Kong, Hui Kuan; in Thailand, Phei Kwan).

The function of hundi has been well accepted for cross-border funds purpose in developing countries, but it has been agreed by both side of the river--regulator and users, whose participate in informal activities. Many positive characteristics of hundi are speed, transaction cost, cultural convenience, and versatility, yet all have contributed to their abuse by the opposite side. Zagaris (Zagaris, 2007) concludes that hundi is robust in jurisdictions where formal banking systems are absent or weak, or where structural obstacles distort foreign exchange and other financial markets. It also can be an inclusion technique for the poor and underserved (Hariharan , 2012). In countries with limited financial capacity, hundi systems play a critical role. The initial growth of hundi was primarily due to their facilitation of trade between distant regions at a time when conventional banking instruments were either weak or absent. But on the negative side, hundi fiscal implications for both remitting and receiving countries because no direct or indirect tax is paid, so it has a negative impact on government revenue applying equally to both legitimate and illegitimate activities that involve the hundi system. Also, flow of capital flight motivations as well as transactions driven by illicit transactions create difficulties for regulator in the wake of heightened international efforts to combat money laundering and terrorist financing used by illicit groups. Not yet selecting the appropriate regulatory and supervisory response requires a realistic and practical assessment and an understanding of the specific country environment in which the IFT dealers operate (El Qorchi, Munzele Maimbo, & Wilson, 2003).

Vast studies were based on using and understanding the idea of “hundi” in practice that is in different names and places across the region. Among them, (Maimbo, El Qorchi, & Wilson, 2003) studies on the operational characteristics of informal such as “Hawala”, which is used predominantly in the Middle East and South Asia., Malaysia (Shanmugam, 2004), Pakistan (Raza, Fayyaz, & Ijaz, 2017), Europe (UK, Germany, The Netherlands, Sweden and Norway (Wang, 2011), Africa (World Bank, 2018) and Central Asia (World Bank, The Money Exchange Dealers of Kabul: A Study of the Hawala System in Afghanistan, 2003); (World Bank, Borderless bazaars and regional integration in Central Asia emerging patterns of trade and cross-border cooperation, 2012), Somalia (Ismail , 2007).

The role of hundi in Myanmar has been well-equipped as international dimensions of the hundi business for Myanmar from a boost from the exodus of political and economic refugees after the crushing of the 1988 national uprising (Downing & Mon, 2017). It has been popular among the remittance purposed by a number of migrants and displaced people (Adams Jr. & Page, 2005); (Hall, 2012); (Deelan & Vasuprasat, 2009); (Kubo, 2015); (Turnell, Vicary, & Bradford, 2010)and (Sandar, 2011) as an important source of foreign exchange in Myanmar. In particular, hundi as a main driver of remittance from Myanmar migrant workers in Thailand has been the most common destination (Kubo, 2015). Myanmar migrants in Thailand send money home unofficially using hundi. Myanmar migrant workers also generated US $2.8 billion in remittances, equivalent to more than 4% of Myanmar's GDP (Tual , 2021). The reason why hundi is so useful for them is due to banking restriction and currency controls (Thompson , 2019).

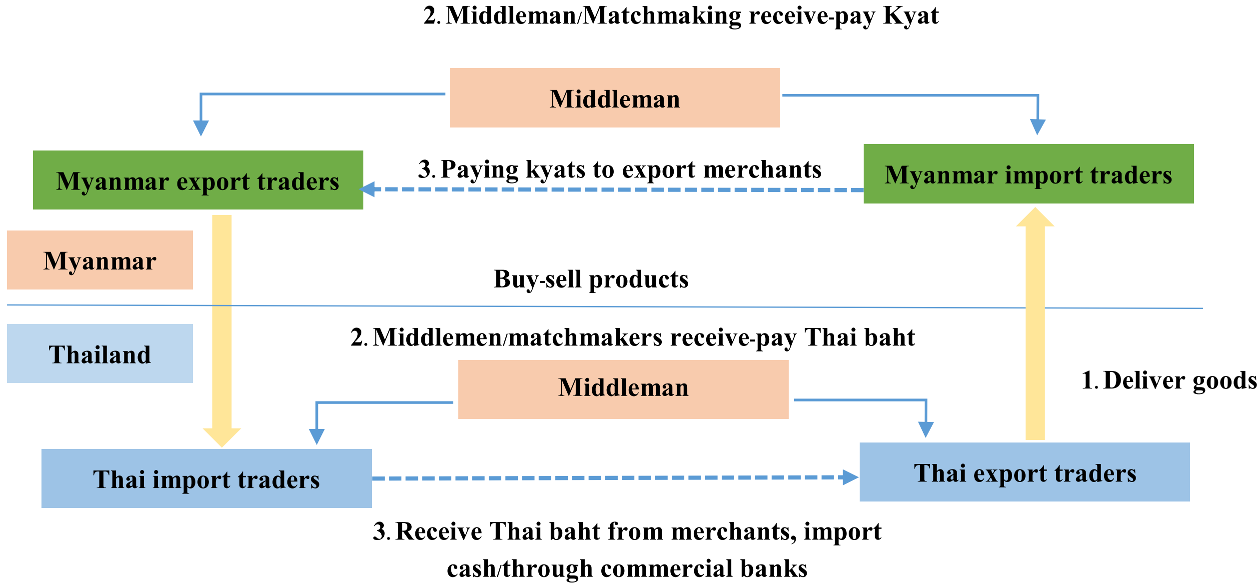


Figure 2 Hundi ecosystem between Thailand- in Myanmar
(Source: Complied by Authors)

The hundi system of border trade is a system that has a clearing system for payment of goods or "clearing agent" which Thai and Burmese merchants developed to use. Hundi operator could be a broker, money remitter, or money exchange dealer whom the client contacts in order to initiate a transfer (Hariharan , 2012). When Thai exporters sell goods to Burmese merchants (usually sold on credit), Thai exporters will receive payment in Baht from Thai importers. With a clearing agent as a contact, the Myanmar importer will make payment in Kyat to the Myanmar exporter. Both Thai and Myanmar clearing agents who perform the same functions as financial institutions, will settle the account of each other. This system is the most persistent and longest standing system of border payments, cash payments in Thai Baht and Kyat for each side. It is the second most popular after payment through the clearing system of hundi payment mechanism However, if paying by cash, there will be cross-border banknotes to pay for the goods. In the case of Thailand, the Bank of Thailand allows the issuance of Thai Baht (THB) to countries that have a border with Thailand no more than 2,000,000 Baht. (see Figure 2)

Discussions

This study examines based on law and economics theorical framework proposed by Dixit (Dixit, 2007) and then the review of previous research works and fieldwork study (starting from 2026-December, 2022) to further add to the literature in the informal trade pattern and informal payment transfer (hundi) which is a subject that is rarely conducted and in discussed in great details with regards to the role of border-trade payment between Thailand-Myanmar. Thus, the survey and compiled information on the importance of these alternative remittance system for Myanmar, need to be updated. This study reexamines the following: (1) development of the border trade system between Thailand and Myanmar by looking back into factors behind the border trade activities that create an informal payment across the border and the relationship periodical evolution of border trade and payment; (2) the role of payments involving stakeholders in the borderland of Myanmar-Thailand, including border merchants, relevant government officials performing duties in the scene and out of the scene, financial agents, and informal foreign exchange operators; and (3) to investigate the competency of the "hundi" mechanism and whether its ecosystem is still mainly active, in particular, given the wake of 2021's military coup in Myanmar has had an impact on residents already reeling from the economic hardships.

From the research on Thailand-Myanmar payments and money transfers from 2016 to 2022, it was found that most of the border payments between Thailand and Myanmar were made through informal trade and payment markets. Both the goods payment and the Myanmar workers remittance use the exchange rates on the informal or black market. The informal payments are based on trust. Thus, it is difficult for new entrepreneurs to use the service, which is a long-term limitation. Most Thai and Myanmar merchants do not change their forms of payment. The choice of payment method is dependent on factors such as familiarity, convenience, and customer preferences. The payment method of wholesale merchants is only cash, and only the Baht currency will be used for trading products from both sides. Because the value of Myanmar's Kyat is not stable, border entrepreneurs completely request customers to pay for goods in Baht only. The same applies to the payment of imported goods, entrepreneurs will pay for the goods in Baht as well. This payment mechanism has been changed dramatically from the previous study of Panthamit (Panthamit, 2016) which found that the Myanmar's border trader can get credit lines from a Thai trading partner. However, the hundi operators are still limited to border traders who have trusted each other for a very long time.

This study also found that border trade is considered more important than international trade in the borderland between northern Thailand-Myanmar. Also hundi acts as the most efficient cross-border tool of settlement even after the 2021 coup d'etat by the military regime in Myanmar. Even though the period of study on this subject is from the opening of the checkpoint in 1996-2022 shows the development of modern technology systems has been advanced. Thus, this result benefits faster payments and is less of a hassle in document management. As a result, there is an informal market in the border trading system between border entrepreneurs via hundi operators across the borderlands. The main conditions that confirm the importance of border trade also come after CBM issued a notification on December 14, 2021, on the use of Chinese Yuan and Myanmar kyat for direct payment at the Myanmar-China border. Later, CBM issued a notification dated March 3, 2022, on the use of Thai baht and Myanmar kyat for direct payment at the Myanmar-Thai border as well (Eleven Media Gruop, 2023).

This paper challenges the reality of classic informal border payment "hundi" for border trade payment between northern Thailand and Myanmar which overlooked the cognizance of the beneficial functions of financing trade and remittances, acting instead as a dead-end solution for the fragile period of Myanmar for almost half of the century. Not only the limitation of overlapping of the law and regulation across the country but also the financial instability across the borderland between the two countries may not be convincing enough to regulate the disclosure and transform the informal transfer payment into a formal one. The policy recommendation is to increase the policy using financial literacy with compliance to the law and regulation of government officials and international organizations to reconsider the reality of borderland's tool, "hundi' to border stakeholders. A complexity is conflicts among the ethnic groups and the economic distress that is occurring across the border of Myanmar-Thailand. It is generally acknowledged that hundi has the potential to make a significant contribution towards economic and sustainable growth, and development as a global phenomenon and improving quality similar to a technological venture in a formal platform.

Conclusion and suggestions

The results of this study reexamine the payment method for the dominant ecosystem of stakeholders' payment between Thailand and Myanmar. It can be explained that the reason Thai–Myanmar border entrepreneurs are still using "hundi", informal ecosystem as a main platform up until 2021 is due to the fact that the use of payment services via Myanmar's financial infrastructure is not in favorable conditions, such as financial institutions not yet being favorable importers or exporters of Myanmar as they must obtain a license with trade underlying, including controlling capital and certain types of goods. Entrepreneurs, especially in Myanmar and Southern China, fear tax inspections from the government officials. This study is in line the same as in Afghanistan, where hundi is used by the major Agran merchant to help them cope with an uncertain business climate from the interruptions of cash flow that are prevalent throughout the Afghan economy (Rahimi, 2020).

During 2012-2021, Myanmar's financial institutions had been developed to fit with international standards and more liberalization. But a recent study from 2016-2022 [1] reconfirmed that the "informal payment ecosystem" across the border of Thailand-Myanmar is still operating as a normal mechanism. The payment of border goods and the transfer of Myanmar workers back to the country through the informal market were not caused by obstacles in the financial institution structure, law, and tax regulations. The border payment system is considered to be a handicap of border trade. The person who caused the delivery of the product can finish the payment as soon as possible without having to waste time on the process, because there are other slow processes in border trade, such as customs procedures, etc. There are also important economic reasons because of the low fees in the informal market, which are more convenient, and faster than bank transfers, even if it is riskier than before. reconfirming that the "informal payment ecosystem" across the border of Thailand-Myanmar is still operating as a normal mechanism. The payment of border goods and the transfer of Myanmar workers back to the country through the informal market were not caused by obstacles in the financial institution structure, law, and tax regulationsA survey found that since the 2021's coup, more hundi operators are increasing due to the deficiency and lack of trust due to the freeze in the money of retail depositors in Myanmar's banking system. Thus, many Myanmar migrants who have a Thai bank account are now becoming hundi operators and also informal suppliers from retail border trade along northern Thailand-Myanmar border trading routes.

The analysis presented in this study draws upon an extensive set of interviews conducted by the authors, with the current and former hundi operators, government officials, local border-trader, and people living in border areas. These interviews were conducted several times between 2017 -2022 in Thailand (Chiang Rai, Chiang Mai, Tak) and Yangon, Myanmar. The paper draws particularly on a series of interviews conducted by trusted sources in terms of "interlocutors" played an important role in terms of trusted sources and also connected the authors to others who were willing to share their works about hundi payments and techniques. This study found that since the coup in February 2021, hundi has been returned steadily to be the basis across the Myanmar-northern Thailand border trade.

[1] From Interview on May, 18-26, 2021.

New knowledge and the effects on society and communities

This is the latest work for border trade payment which has hidden under the informal market of the border trade of northern Thailand-Myanmar for several decades. It has little research analyze this role from the previous study. Particularly after the military coup, the weakness of the state of Myanmar has made hundi return to be on the spotlight and simultaneous mechanism of border trade and payment ecosystem of Myanmar. This paper will be a useful source for academics, development professionals, policymakers, law enforcement agencies and business actors who are eager to understand Myanmar's informal payment system.

Acknowledgments

This research is funded by Faculty of Economics, Chiang Mai University, Thailand (Fiscal Grant Year 2015)

References

Adams Jr., R. H., & Page, J. (2005). Do international migration and remittances reduce poverty in developing countries?. *World Development, 33*(10), 1645-1669. https://doi.org/10.1016/j.worlddev.2005.05.004

Aung, W. S. (2011). *Informal Trade and Underground Economy in Myanmar: Costs and Benefits.* Bangoko: IRASEC.

Deelan, L., & Vasuprasat, P. (2009). *Migrant Workers' Remittances from Thailand to Cambodia, Lao PDR and Myanmar : Synthesis Report on Survey Findings in Three Countries and Good Practices.* ILO/Japan Project on Managing Cross-border Movement of Labour in Southeast Asia Regional Office for Asia and the Pacific.

Dixit, A. K. (2004). *Lawlessness and Economics: Alternative Modes of Governance.* Princeton: Princeton University Press.

Dixit, A. K. (2007). *Lawlessness and Economics: Alternative Modes of Governance.* Princeton University Press.

Downing, J., & Mon, S. (2017, March 6). *frontiermyanmar.* Retrieved from https://www.frontiermyanmar.net/en/transactions-of-trust-and-faith/

El Qorchi, M., Munzele Maimbo, S., & Wilson, J. F. (2003, November 18). Informal Funds Transfer Systems: An Analysis of the Informal Hawala System.

Eleven Media Gruop. (2023, March 4). *Mahar Aung Myay Township, Mandalay, Myanmar*. Retrieved from https://elevenmyanmar.com/news/central-bank-of-myanmarthe-use-of-thai-baht-and-myanmar-kyat-for-direct-payment-at-myanmar-thai

Hall, A. (2012). *Myanmar and Migrant Workers: Briefing and Recommendations.* Mahidol Migration Centre.

Hariharan , A. (2012). Hawala's Charm: What Banks Can Learn F s Charm: What Banks Can Learn From Informal F om Informal Funds Transfer Systems . *William & Mary Business Law Review, 3*(1), 273-308. https://scholarship.law.wm.edu/wmblr/vol3/iss1/8

Ismail , A. A. (2007). Lawlessness and economic governance: the case of hawala system in Somalia. *International Journal of Development Issues, 6*, 168-185. DOI:10.1108/14468950710843415
Kubo, K. (2015). *Evolving Informal Remittance Methods of Myanmar Migrant Workers in Thailand.* Institute of Developing Economies.
Maimbo, S. M., El Qorchi, M., & Wilson, J. F. (2003). *Informal Funds Transfer Systems: An Analysis of the Informal Hawala System.* Washington: International Monetary Fund.
NikkeiAsia. (2023, January 19). *MYANMAR CRISIS.* Retrieved from https://asia.nikkei.com/Spotlight/Myanmar-Crisis/Myanmar-embraces-mobile-payments-under-military-rule
Panthamit, N. (2016). *Liberal economy and northern border trade, Border trade in Mae Sai District*. 71-73.
Rahimi, H. (2020). Hawala as credit: recognizing how hawala supports the business climate in Afghanistan. *Journal of Money Laundering Control ,* 23(1), 224-244. https://doi.org/10.1108/JMLC-07-2019-0053
Raza, M. S., Fayyaz, M., & Ijaz, H. (2017). The hawala system in Pakistan: a catalyst for money laundering & terrorist financing. *Forensic Research & Criminology International Journal, 5*(4), 367-369. DOI: 10.15406/frcij.2017.05.00167
Rest of World. (2021). *Labor*. Retrieved from https://restofworld.org/labor/
Reuters. (2021, October 1). *Myanmar currency trade turns to online groups on Facebook amid crisis.* Retrieved from https://www.reuters.com/world/asia-pacific/myanmars-economic-crisis-fuels-underground-currency-trading-2021-10-01/
Sandar, M. (2011). *Study of Factors Influencing Remittances of Myanmar Migrants (Case Study in Samut Sakhon, Thailand).* Vahu Development Institute.
Shanmugam, B. (2004). Hawala and money laundering: a Malaysian perspective. *Journal of Money Laundering Control, 8*(1), 34-47. https://doi.org/10.1108/13685200510621181
Thompson , R. (2019). Underground banking” and Myanmar’s changing hundi system. *Journal of Money Laundering Control, 22*(2), 339-349. DOI:10.1108/JMLC-04-2018-0030
Tual , S. (2021). *Bangkok Post*. Retrieved from Bangkok Post: https://www.bangkokpost.com/opinion/opinion/2197015/migrants-face-red-tape-nightmare.
Turnell, S., Vicary, A., & Bradford, W. (2010). *Migrant Worker Remittances and Burma: An Economic Analysis of Survey Results.* Burma Economic Watch Macquarie University.
Viles , T. (2008). Hawala, hysteria and hegemony. *Journal of Money Laundering Control, 11*(1), 25-33. https://doi.org/10.1108/13685200810844479
Wang, J. R. (2011). Regulating Hawala: a comparison of five national approaches. *Journal of Money Laundering Control, 14*(3), 210-224. https://www.prio.org/publications/4890
World Bank. (2003). The Money Exchange Dealers of Kabul: A Study of the Hawala System in Afghanistan. *World Bank Working Paper*, 13. Washington , D.C.
World Bank. (2012). Borderless bazaars and regional integration in Central Asia emerging patterns of trade and cross-border cooperation. *The World Bank*. Washington , D.C.
World Bank. (2018). *The Market for Remittance Services in Southern Africa*. Washington, DC, United State of America.
Zagaris, B. (2007). Problems applying traditional anti-money laundering procedures to non-financial transactions, “parallel banking systems” and Islamic financial systems. *Journal of Money Laundering Control, 10*(2), 157-169. doi:10.1108/13685200710746866

Developing Professional Ethics for Teachers by Using Community Processes of Professional Learning Through Information Technology Systems for Students Practicing Professional Teaching Experience in Bachelor of Education Program in Early Childhood Education at Chiang Mai Rajabhat University, the Office of the Private Education Commission

Sirimas Kosanpipat
Faculty of Education, Chiang Mai Rajabhat University, Thailand
E-mail: sirimas_kos@g.cmru.ac.th

(Received: 18 June 2023, Revised: 8 August 2023, Accepted: 29 August 2023)
https://doi.org/10.57260/rcmrj.2023.266145

Abstract

The objectives of this research were: 1) to investigate the current conditions and problems related to a teacher's professional code of ethics of teachers; 2) to analyze factors supporting the success in developing a teacher's professional code of ethics; 3) to develop professional learning community processes in developing teacher's professional code of ethics through information technology systems for pre-service teachers; and 4) to propose guidelines for developing a teacher professional code of ethics by using professional learning community processes through information technology systems for pre-service teachers in the early childhood education program at Chiang Mai Rajabhat University, the Office of the Private Education Commission. The instruments used in this research were an in-depth interview form, a meeting record form, and an evaluation form. Data were analyzed by content analysis, classifying them into issues, mean and standard deviation, and summarizing into categories. Results of the research found as follows: 1) Results of investigating the current conditions and problems related to a teacher's professional code of ethics consisted of five aspects. 2) Results of analyzing factors supporting the success in developing teacher professional ethics consisted of six aspects. 3) Results of developing professional learning community processes in developing teacher professional code of ethics through information technology systems of pre-service teachers in the early childhood education program at Chiang Mai Rajabhat University, the Office of the Private Education Commission consisted of nine components. The benefit and feasibility were at the highest level. 4) Results of proposing the guidelines for developing the professional code of ethics by using professional learning community through information technology systems of pre-service teachers in the early childhood education program at Chiang Mai Rajabhat University, the Office of the Private Education Commission consisted of nine items.

Keywords: Teacher professional code of ethics, Professional learning community, Information technology systems, Pre-service teachers, Early childhood education

Introduction

According to the royal speech of HRH Princess Maha Chakri Sirindhorn at the graduation ceremony for graduates from the Teachers College at the new building, Suan Amporn, on Wednesday, May 18, 1983

“.....The teacher’s profession is significantly important because teachers play an important role in developing the country to be prosperous and stable, and before developing the country to prosper, the people must be developed, including the youth of the nation, so that the young people will grow up to be adults with complete values in all aspects, so they can help build prosperity for the nation. can go on......” It is confirmed that the importance of teachers to the prosperity of individuals and nations is very great. The nation will prosper because the people of the nation receive a good education. and have quality teachers.

Royal Government Gazette (2013, p.73-74), the professional code of ethics referred to the standards of conduct that were set up as a pattern in one’s performance which educational professional practitioners must comply with to maintain and promote the honor reputation and status of educational profession to build trust and faith among service recipients and society, which will bring honor and dignity of the profession in terms of professional ethics, personal ethics, professional ethics, client-centered ethics, collegial ethics, and societal ethics. Similarly, Yamkasikorn et al. (2021, p.3) stated that teachers and educational personnel were persons who played roles as good role models for students and were important factors affecting the quality of student learning. In addition, teachers and educational personnel are "models" that society sees and praises for having higher ethical standards than the general public. As a result, the teaching profession is a profession that Thai society accepts and respects as being honored and a thought leader in the community. The teachers who stayed consequently must deal with longer hours, bigger classrooms, and occasionally new, mixed-age learning situations.

Metapanya (2019, p.70) studied the paradigm of a professional learning community for creating learning management to encourage students' capacity for analytical thought. The research revealed that three elements made up the professional learning community model in the development of learning management that supported analytical thinking ability: principles, methods, and evaluation. It was discovered that the quality of instructors’ learning management was higher after utilizing the model than it was before. Students’ analytical thinking abilities after studying were higher than before, and teachers’ comprehension of the process and teaching methods that encouraged it was improved in addicts. They also enjoyed learning.

A process is a series of choices and deeds used to complete tasks. Although the collaborative team might not be aware of them, processes exist in both work and leisure activities. The term "professional learning community," or PLC, refers to a group of educators who routinely work together, exchange knowledge, and convene in order to improve both their own teaching practices and the academic achievement of their students. The expression is widely used to characterize educational institutions or schools that foster professional development through close collaboration in small groups. The PLC's components include action orientation, continuous improvement, outcomes orientation, collaborative teams, group inquiry, and student learning and experiences.

In addition, currently, effective teacher development methods using the Professional Learning Community (PLC) as tools for development are a combination of the concepts of the professional and learning community together to develop professional competency and quality of learners through a collaborative learning process, lessons learned, and sharing learning continuously affecting the quality of the learners (Wongyai & Pattaphol, 2019, p.11–13).

Moreover, Kaeowiset (2023, p.206-207) studied the use of the KWL plus technique to integrate community-based technology transfer for the acceleration of sustainable community enterprises. The transfer of technology, wisdom, and innovation places an emphasis on the thinking process and links between old and new experiences. Using challenging questions along with actual experience, practicing the preparation of Krayasart desserts with knowledgeable speakers to impart knowledge and understanding, the transfer of technology and its use for self-development in learning as well as promoting knowledge. It also helps to build stronger communities by utilizing learning processes that support the sustainable transmission of this knowledge

Furthermore, Reungsri, et al. (2019, p.72) mentioned pre-service teachers and educational management in multicultural schools that were aware of the need to employ instructional approaches in order to accommodate a variety of learners and stay current with knowledge and events. The interest of students will be stimulated by this. The condition of the learning process in multicultural schools with regard to different learner abilities and cultures influences the learning outcome, an increasing rate of teacher burnout is one of the major issues facing early childhood education and it is crucial to develop curricula and teaching strategies that are capable of assisting students in learning as per their abilities and culture in order to achieve better study outcomes.

Accordingly, Early Childhood Education Teachers Union in Finland (2020, p.10) stated that early childhood education teachers focus on observing and considering children's development, allowing them to influence matters. They plan, evaluate, and plan work considering individual needs to ensure children practice social skills in a safe environment, with teachers supporting their inclusion in the group and community.

In terms of Office of Private Education Commission, was administrated t to encourage and support academic aid, quality control, research and development for private education quality control, and managing and supervising the formal school's faculty, staff, and students. All teachers must be developed in every sector; therefore, it is essential for teachers to be developed the quality because private schools are a higher expectation of parents to help take care of their children to study, develop to their full potential, and be able to pass the entrance exams to satisfaction educational institutions.

Furthermore, the third strategy of The National Scheme of Education B.E. 2560-2579 (2017–2026) (Office of the Education Council, 2017, p. j) stated that the training and hiring of teachers and other educational staff to meet international standards was necessary for the development of proficiency for individuals of all ages and the promotion of a lifelong learning society. The main indicators added a database that showed the requirement for teachers, a 10-year plan for the training and recruitment of educational staff (2017–2027) that was fallen apart by academic majors, school size, and educational service areas, an increase in the proportion of teachers who had been educated and hired through the closed application process, and the qualifications and requirements that permission the graduated students from other majors to compete for available teaching positions. Besides, teachers and educational personnel had received standard competency training, so the primary signal was that all educational-level lecturers, teachers, and education officials had completed the necessary training in accordance with professional standards and were qualified to carry out their duties in a way that supported the goals and objectives of the institutions. Increased teacher, lecturer, and education officer satisfaction with training and its advantages were also necessary.

However, there should be a seminar on the evaluation of the teacher production system in Thailand according to the master plan under the national strategy on the issue of learning development and the learning process reform subplot responding to changes in the 21st century, indicators have been set in terms of the proportion of teachers through individual competency tests based on a high-level according to international standards. Moreover, the education reform plan has set the issue of reforming the mechanism and production system, screening and developing professional teachers and instructors, and obtaining quality teachers that met the needs of the country and have the spirit of being teachers. Therefore, teacher education institutions that have courses that focus on the competencies of the teaching profession, had faith in the profession, and have true competence are consistent with the national education plan 2017–2036 that determined strategies for developing the potential of people of all ages and creating a learning society.

The current situations that are mostly ethical problems are the lack of technological equality, the unequal teaching opportunities through technology, and the inability to provide classroom management. Ethical dilemmas are mostly due to the difficulty of teachers in adapting to education and the inability to communicate with students, and mostly the inefficiency of preschool education. Moreover, there is a shortage of qualified and experienced teachers. Retention of quality teachers is a major concern in education systems. As a faculty lecturer at the early childhood education program at Chiang Mai Rajabhat University, I realize the importance of producing the teachers' essential competencies for teachers and developing teacher professional ethics for pre-service teachers by using a professional learning community through information technology systems as guidelines for relevant agencies.

Research Objectives

1. To investigate the current conditions and problems related to a teacher's professional code of ethics by using a professional learning community through information technology systems of teachers at the early childhood education level under the Office of Private Education Commission. An instrument used was an in-depth interview form. Data were analyzed by content analysis and summarizing empirical data.

2. To analyze the factors supporting success in developing a teacher professional code of ethics by using a professional learning community through information technology systems of teachers in the early childhood education level under the Office of Private Education Commission. The instrument used in this research was. The data were analyzed through content analysis.

3. To develop the professional learning community processes for teacher professional code of ethics through information technology systems for pre-service teachers in the early childhood education program at Chiang Mai Rajabhat University, the Office of the Private Education Commission is divided into two steps as follows:

3.1 To construct a model for developing teacher professional ethics for pre-service teachers. The instrument used was a draft model. Data were analyzed by classifying them into issues.

3.2 To evaluate the benefit and feasibility of a model for developing teacher professional code of ethics for pre-service teachers. The instrument used was an evaluation form. Data were analyzed by mean and standard deviation.

4. To propose the guidelines for developing teacher professional ethics by using a professional learning community through information technology systems for pre-service teachers in the early childhood education program at Chiang Mai Rajabhat University, the Office of the Private Education Commission. The instrument used was a meeting record form during brainstorming. Data were analyzed by summarizing into categories.

Methodology

This research was divided into four phases as follows:

Phase 1: The investigation of the current conditions and problems related to a teacher's professional code of ethics by using the professional learning community through information technology systems of teachers at the early childhood education level under the Office of Private Education Commission. Key informants selected by purposive sampling consisted of administrators in schools that provided the early childhood education level under the Office of Chiang Mai Private Education Commission, for a total of eleven informants. The instrument used for data collection was an in-depth interview using face-to-face interviews at the interviewee's school and interviews via the Zoom meeting program or Google Meetings. The data were analyzed using content analysis and summarizing empirical data.

Phase 2: The analysis of factors supporting success in developing teacher professional code of ethics by using the professional learning community through information technology systems of teachers in the early childhood education level under the Office of Private Education Commission. Key informants selected by purposive sampling consisted of teachers teaching at the early childhood education level under the Office of Chiang Mai Private Education Commission, for a total of eleven informants. The instrument used for data collection was a meeting recording and conducting a workshop via the Zoom meeting program. The data were analyzed through content analysis.

Phase 3: The development of professional learning community processes in developing teacher professional code of ethics through information technology systems for pre-service teachers in the early childhood education program at Chiang Mai Rajabhat University, the Office of the Private Education Commission. This phase is divided into two steps as follows:

Step 3.1 To construct professional learning community processes in developing teacher professional code of ethics through information technology systems for pre-service teachers in the early childhood education program. Key informants consisted of buddy teachers, mentors, external experts or senior educators or faculty supervisors, school administrators/deputy school administrators, and senior teachers or a head of academic affairs or a head of the class level, for a total of seven participants. The instrument used was a draft model. Data were analyzed by classifying them into issues.

Step 3.2 The evaluation of the benefit and feasibility of five components for developing professional learning community processes in developing teacher professional code of ethics. Key informants selected by purposive sampling consisted of school administrators who provided the early childhood education level, teachers teaching at the early childhood education level, and supervisors in charge with the early childhood education level, for a total of eleven informants. The instrument used was an evaluation form. The data were analyzed using mean and standard deviation.

Phase 4: The guidelines were proposed for developing professional learning community processes in developing teacher professional code of ethics through information technology systems for pre-service teachers in the early childhood education program at Chiang Mai Rajabhat University, the Office of the Private Education Commission. Key informants selected by purposive sampling consisted of school administrators provided at the early childhood education level, teachers teaching at the early childhood education level, and supervisors in charge at the early childhood education level, for a total of thirteen informants. The instrument used for data collection was a meeting recording form that was conducted during brainstorming via the Zoom meeting program. The data were analyzed by summarizing into categories.

The research framework was shown in Figure 1.

Research framework

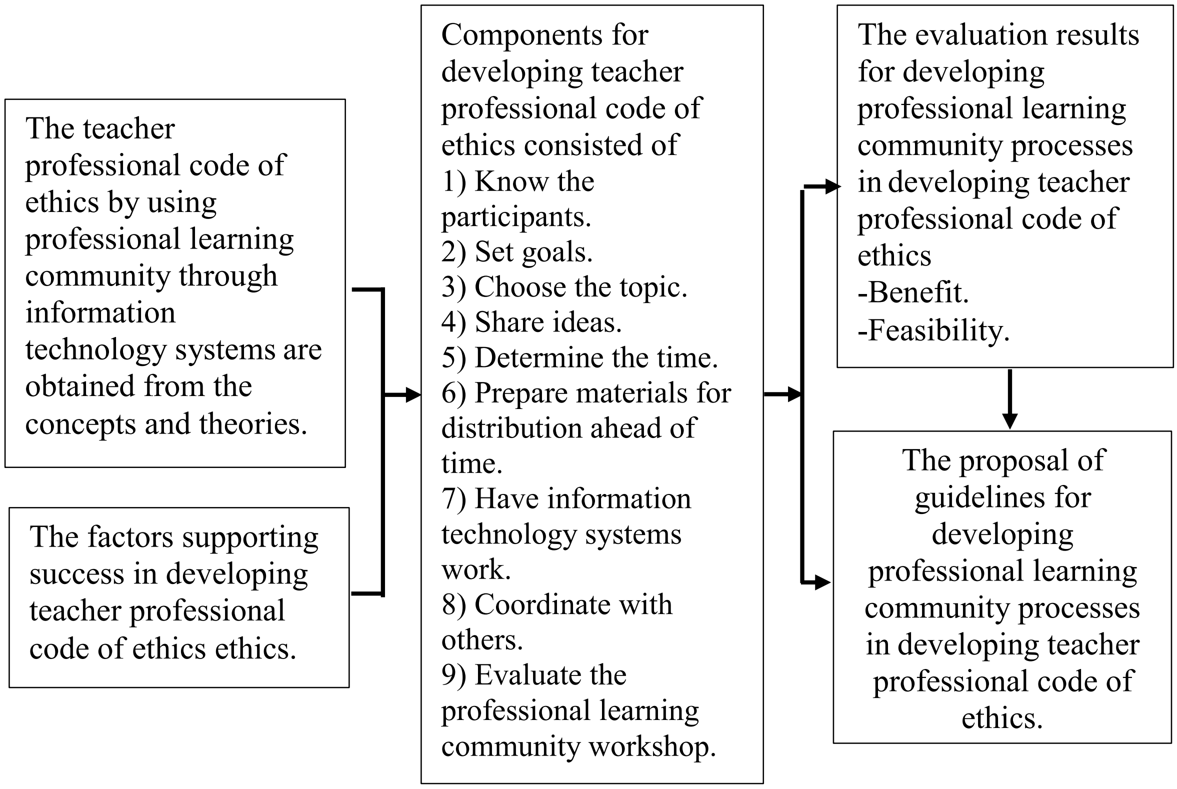


Figure 1 Research framework

Results

Results of investigating the current conditions and problems related to a teacher's professional code of ethics by using a professional learning community through information technology systems of teachers in the early childhood education level under the Office of Private Education Commission from an in-depth interview comprised of five aspects as follows: 1. Professional ethics: Teachers do not study for knowledge, do not plan for self-improvement or teaching development, and do not regularly collect personal portfolios. 2. Professional ethics: Teachers are not responsible for their assignments and for being good teachers. 3. Client-centered ethics: Teachers do not encourage learners to learn and practice skills in various areas, and all teachers do not perform to their full potential equally. 4. Collegial ethics: Teachers do not try to get students to work together to achieve unity among faculties. And 5. Societal ethics: Teachers do not adhere to support and promote the regime of the democratic system with the King as Head of State.

Results of analyzing factors supporting the success in developing teacher professional code of ethics by using professional learning community through information technology systems of teachers in the early childhood education level under the Office of Private Education Commission comprised of six aspects: 1) teachers must be well prepared in teaching and having a strong commitment to teaching; 2) students and parents must collaborate attending to online and onsite learning; 3) learning management activities must be suitable for the early childhood education level; 4) evaluation criteria covers the authentic evaluation; 5) learning media are adapted with the real situation; and 6) exercises and worksheets must be different depending on the individual ability.

Results of developing professional learning community processes in developing teacher professional code of ethics through information technology systems for pre-service teachers in the early childhood education program at Chiang Mai Rajabhat University, the Office of the Private Education Commission, the details were as follows:

Results of constructing professional learning community processes in developing teacher professional code of ethics through information technology systems for pre-service teachers in the early childhood education program consisting of nine processes consisted of knowing the participants, setting goals, choosing the topic, sharing ideas, determining the time, preparing materials, classroom management techniques, lesson plans, learning media productions, and crip videos; having information technology systems for the Microsoft team, coordinate with others, and evaluating the professional learning community workshop.

The evaluation results of developing professional learning community processes in developing teacher professional code of ethics from eleven informants as shown in Table 1.

Table 1 The evaluation results of developing professional learning community processes in developing teacher professional code of ethics in terms of benefit and feasibility.

Components of a model for developing professional learning community processes.	**Benefit**			**Feasibility**		
	$\bar{x}$	**S.D.**	**Interpret**	$\bar{x}$	**S.D.**	Interpret
1. Know the participants.	4.59	0.42	Highest	4.57	0.43	Highest
2. Set goals.	4.57	0.23	Highest	4.63	0.32	Highest
3. Choose the topic.	4.63	0.61	Highest	4.78	0.51	Highest
4. Share ideas	4.78	0.51	Highest	4.53	0.43	Highest
5. Determine the time.	4.53	0.46	Highest	4.59	0.23	Highest
6. Prepare materials, classroom management techniques, lesson plans, learning media productions, and crip videos.	4.59	0.53	Highest	4.63	0.53	Highest
7. Have information technology systems for the Microsoft team	4.63	0.47	Highest	4.51	0.53	Highest
8. Coordinate with others.	4.51	0.47	Highest	4.59	0.42	Highest
9. Evaluate the professional learning community workshop.	4.59	0.42	Highest	4.51	0.53	Highest
Average	**4.60**	**0.46**	**Highest**	**4.59**	**0.44**	**~~Highest~~**

The evaluation results of developing professional learning community processes in developing teacher professional code of ethics in terms of both benefit and feasibility were at the highest level.

Results of proposing guidelines for developing a teacher professional code of ethics by using a professional learning community through information technology systems for pre-service teachers in the early childhood education program at Chiang Mai Rajabhat University, the Office of the Private Education Commission consisted of

1. The Teachers Council of Thailand and relevant agencies related to the professional code of ethics should organize the development through training in a variety of channels, including both onsite and online lessons, for administrators, teachers, and pre-service teachers by setting up an appropriate time and duration of the training conducive to them having the opportunity to be trained for enhancing knowledge, reviewing, revising, understanding, and raising awareness of teacher professional ethics.

2. The faculty of education of all Rajabhat Universities should have the same policy in promoting the development of a professional code of ethics for pre-service teachers in the early childhood education program in terms of knowledge and practical proposals to cope with changing situations.

3. The office of the Private Education Commission should have the same policy in developing a professional code of ethics for pre-service teachers in the early childhood education program to be able to provide quality teaching and learning according to early childhood education standards.

4. The professional learning community processes should be provided in the workshops to enhance the professional code of ethics by conducting guidelines for pre-service teachers in the early childhood education program consisting of 1) building a team, 2) studying and developing together leading to raising awareness, 3) reflection to develop the professional code of ethics for pre-service teachers in the early childhood education program, 4) collaborative evaluation, and 5) building a development network according to the royal initiatives of His Majesty King Bhumibol Adulyadej, such as geosocial, explosion from inside, participation, common interest, holistic, hierarchical, non-textbook, and economical and simple get the most.

4. A platform through information technology systems of professional code of ethics where the pre-service teachers in the early childhood education program should be ready and easy to access both self-improvements online and provide dashboard discussion with specialists and experts actively.

5. The collaboration among mentors, external experts, senior educators, faculty supervisors, school administrators, deputy school administrators, senior teachers, a head of academic affairs, or a head of the class level should play appropriate roles to promote and enhance the professional code of ethics for pre-service teachers in the early childhood education program.

Discussions

Results of investigating the current conditions and problems related to a teacher's professional code of ethics by using a professional learning community through information technology systems of teachers in the early childhood education level under the Office of Private Education Commission from an in-depth interview comprised of five aspects as follows: 1. Professional ethics, 2. Professional ethics, 3. Client-centered ethics, 4. Collegial ethics, and 5. Societal ethics. Similarly, Royal Government Gazette (2013, p.73-74), the professional code of ethics in terms of professional ethics, personal ethics by having self-discipline and self-improvement against professional personality and vision; professional ethics by taking responsibility for a professional organization; client-centered ethics by loving kindness, caring, helping, encouraging, and encouraging students; collegial ethics by helping one another creatively; and societal ethics in behaving as a good leader.

Results of analyzing factors supporting the success in developing teacher professional code of ethics by using professional learning community through information technology systems of teachers in the early childhood education level under the Office of Private Education

Commission comprised of six aspects: 1) teachers must be well prepared in teaching and having a strong commitment to teaching; 2) students and parents must collaborate attending to online and onsite learning; 3) learning management activities must be suitable for the early childhood education level; 4) evaluation criteria covers the authentic evaluation; 5) learning media are adapted with the real situation; and 6) exercises and worksheets must be different depending on the individual ability. It was consistent with Sanguanngarm (2020, p.2), who studied variables that contribute to Thai education's failure to adequately prepare Thai students with twenty-first-century skills, the results showed that the key skills stated in the core curriculum for primary Thai education were efficient and met requirements for education in the twenty-first century. The belief among principals and teachers that students were dependent learners and the idea that innovative teaching methods were closely linked to the desired learners' key competencies were all unsupported by evidence. Neither did the lack of understanding among teachers and principals regarding the expectations and goals of the curriculum, as well as innovative teaching methods and 21st-century education in general. It was intriguing because the findings showed a connection between the cultures and beliefs of the teachers and how they affected the way they taught.

Results of developing professional learning community processes in developing teacher professional code of ethics through information technology systems for pre-service teachers in the early childhood education program at Chiang Mai Rajabhat University, the Office of the Private Education Commission, the details were as follows:

Results of constructing professional learning community processes in developing teacher professional code of ethics through information technology systems for pre-service teachers in the early childhood education program consisting of nine processes consisted of knowing the participants, setting goals, choosing the topic, sharing ideas, determining the time, preparing materials, classroom management techniques, lesson plans, learning media productions, and crip videos; having information technology systems for the Microsoft team, coordinate with others, and evaluating the professional learning community workshop. Correspondingly, Wongyai & Pattaphol (2019, p.11–13) explained that effective teacher development methods using the Professional Learning Community (PLC) as tools for development were a combination of the concepts of the professional and learning community together to develop professional competency and quality of learners through a collaborative learning process, lessons learned, and sharing learning continuously affecting the learner quality.

The evaluation results of developing professional learning community processes in developing teacher professional code of ethics from eleven informants in terms of both benefit and feasibility were at the highest level.

As a result, Serviss (2022) explained the benefits of PLCs, which allowed teachers opportunities to develop instruction directly, strengthened the relationships among team teachers, assisted teachers in staying up with current research and classroom technology resources, and helped teachers consider their ideas.

Results of proposing guidelines for developing a teacher professional code of ethics by using a professional learning community through information technology systems for pre-service teachers in the early childhood education program at Chiang Mai Rajabhat University, the Office of the Private Education Commission consisted of the Teachers Council of Thailand and related agencies should organize training for administrators, teachers, and pre-service teachers to enhance knowledge, review, revise, and raise awareness of teacher professional ethics. Rajabhat University faculty should promote the development of a professional code of ethics for pre-service teachers in early childhood education programs, while the Private Education Commission should develop a code to provide quality teaching and learning. Professional learning community processes should be provided in workshops, focusing on building a team, studying, and developing together, reflecting, collaborative evaluation, and building a development network. A platform through information technology systems should be available for pre-service teachers to access self-improvement online and engage in discussions with specialists and experts. Collaboration among mentors, external experts, senior educators, faculty supervisors, school administrators, and class heads should play appropriate roles in promoting and enhancing the professional code of ethics for pre-service teachers in early childhood education programs.

Accordingly, Satjapiboon (2019, p.118) studied the evaluation of the professional learning community in teacher professional ethics developing through the information technology systems (e-plc) and reported that the proposed policies were the creation of policies to help teacher candidates grow through a structured, ongoing professional learning community; to encourage the stakeholders to engage in community participation by fostering awareness and inspiration; to develop the essential framework for knowledge promotion; to assist in the development of a network of professional learning communities built on confidence, trust, and teamwork; to promote and train teachers to use the professional learning community in learner development, a structure, and network must be established; to create an organizational culture that supports educational institutions and fosters long-term collaboration in the growth of learners; and to promote the construction of a professional learning community by fostering the development of information technology systems.

In addition, the third **s**trategy of The National Scheme of Education B.E. 2560-2579 (2017-2036) (Office of the Education Council, 2017, p. j) stated the proficiency development for people of all ages and the promotion of lifelong learning society that the training and recruitment of teachers and educational personnel must meet international standards. The teachers and educational personnel had received standard competency training determined the primary signal was that all educational level lecturers, teachers, and education officials had completed the necessary training in accordance with professional standards and were qualified to carry out their duties in a way that supported the goals and objectives of the institutions. Increased teacher, lecturer, and education officer satisfaction with training and its advantages were also necessary.

Furthermore, Sithsungnoen et al. (2020, p.15) indicated that the strengthening of an ethical professional learning community in terms of e-PLC in pre-service teachers that e-PLC had six steps that included communicating, objective setting, small group meetings, planning, and designing, lesson studying and reflecting.

Conclusion and suggestions

In summary, the professional learning community (PLC) is an ongoing, continuous process that impacts a school's structure, culture, and professional assumptions. It requires a schoolwide or districtwide effort, with regular meetings with peers functioning as a PLC. The National Scheme of Education B.E. 2560-2579 states that training and hiring teachers and other educational staff to meet international standards is necessary for developing proficiency and promoting a lifelong learning society. Key indicators include a database of teacher requirements, a 10-year plan for staff training, increased teacher education and hiring through closed applications, and standard competency training for all educational-level lecturers, teachers, and education officials. Increased satisfaction with training and its advantages is also necessary.

New knowledge and the effects on society and communities

The professional code of ethics is a set of standards for educational professionals to maintain and promote the honor and dignity of the profession. Teachers and educational personnel are important role models for students and contribute to the quality of learning. In Thailand, the teaching profession is respected as an honor and thought leader. Professional learning communities in Rajabhat Universities involve collaboration, shared ideals, student learning, thoughtful conversation, and action inquiry. These communities align with the pedagogical strategy and review at Rajabhat Universities, supporting the transition from individual to collective professionalism. The approach is system-wide, involving schools, local and national policymakers in promoting and sustaining system transformation.

Acknowledgments

We would like to express thanks to the Faculty of Education, Chiang Mai Rajabhat University, and all relevant informants for assisting this research.

References

Early Childhood Education Teachers Union in Finland. (2020). *The Early Childhood Education Teacher's Professional Ethics Guidelines.* Retrieved from https://www.vol.fi/uploads/2020/10/f1d0a62f-the-early-childhood-education-teachers-professional-ethics-guidelines.pdf (In Thai)

Kaeowiset, T. (2023). The Integration of Community-Based Technology Transfer using the KWL Plus Technique for the Acceleration of Sustainable Community Enterprises in Phetchabun Province. *Rajabhat Chiang Mai Research Journal, 24*(1), 198–212. https://doi.org/10.57260/rcmrj.2023.263168 (In Thai)

Metapanya, B. (2019). The Professional Learning Community Model for Developing Learning Management to Promote the Analytical Thinking Ability of Students at Wat Chiang Yuen Municipal School. *Rajabhat Chiang Mai Research Journal, 20*(2), 69–82. https://doi.org/10.14456/rcmrj.2019.193180 (In Thai)

Office of Private Education Commission. (2023). *Autonomy and Accountability.* Retrieved from https://sites.google.com/a/opec.go.th/eng/ (In Thai)

Reungsri, S., Sukprasert, N., Phanphet, S., Boonyaprapa, P., & Dhedchawanagon, K. (2019). Pre-Service Teachers and Educational Management in Multicultural Schools. *Rajabhat Chiang Mai Research Journal, 20*(1), 71–80. https://doi.org/10.14456/rcmrj.2019.158578 (In Thai)

Royal Government Gazette. (2013). *Regulation of the Teacher Council of Thailand on the Professional Code of Ethics 2013.* Retrieved from https://www.ksp.or.th/ksp2018/wp-content/uploads/2020/06.pdf (In Thai)

Sanguanngarm, N. (2020). Factors Affecting the Failure of Thai Education to Equip Thai Students with 21st-Century Skills. *Rajabhat Chiang Mai Research Journal, 21*(2), 1–19. https://doi.org/10.14456/rcmrj.2020.225593 (In Thai)

Satjapiboon, S. (2019). The Evaluation of Professional Learning Community in Teacher Professional Ethics Developing Through the Information Technology Systems (e-plc). *Journal of Educational Research, Faculty of Education Srinakharinwirot University, 14*(2), 118-137. https://ejournals.swu.ac.th/index.php/jre/article/view/12295/10231 (In Thai)

Serviss, J. (2022). *4 Benefits of an Active Professional Learning Community.* Retrieved from https://www.iste.org/explore/professional-development/4-benefits-action-professional-learning-community

Sithsungnoen, C., Po Ngern, W., & Vanichvattanavorachai, S. (2020). Strengthening of Ethic Professional Learning Community: e-PLC in Pre-service Teacher. *ASEAN Journal of Education, 6(*2), 15-24. https://aje.dusit.ac.th/upload/file/Flie_journal_pdf_29-10-2021_111043.pdf

The Office of the Education Council (2017) The National Scheme of Education B.E. 2560-2579 (2017-2036). Retrieved from http://backoffice.onec.go.th/uploads/Book/1540-file.pdf (In Thai)

Wongyai, W., & Pattapho, M. (2019). *Developing the Quality of Learning Management Based on the Concept of a Professional Learning Community (PLC).* Retrieved from https://oer.learn.in.th/search_detail/result/160252 (In Thai)

Yamkasikorn, M., Werathummo, A., & Phothong, W. (2021). Principles and operating system for improving Teachers' Professional Ethics through Information Technology Systems. *Silpakorn University Journal, 41*(2), 1-12. https://doi.org/10.14456/sujthai.2021.9 (In Thai)

Rajabhat Chiang Mai Research Journal : RCMRJ
Vol. 24 No.3 September–December 2023 : TCI 1, ACI

Hotila: A Natural Consumption Alternative to MSG

Rakkhun Panyawuthakrai
Maehongson College, Chiang Mai Rajabhat University, Thailand
E-mail: rakkhun_pan@g.cmru.ac.th

(Received: 16 December 2022, Revised: 23 July 2023, Accepted: 13 August 2023)
https://doi.org/10.57260/rcmrj.2023.262712

Abstract

This article is a mixed-method integration of survey and Participatory Action Research (PAR) conducted with local communities regarding a fern type commonly known as "Hotila" in Sgaw Karen or "Phaktue" in Tai Yai. Hotila is a palatable and nutrient-dense meal and is used as a healthy condiment to flavour various local cuisines with a sweet and mellow taste. Previously, research on and knowledge about it were sparse. The objectives of this study were thus to gather fundamental information about Hotila through in-depth surveys and interviews, to promote the conservation, rehabilitation, and breeding of a native species of Hotila through observation, interviews, and simple experiments, and to compare the satisfaction levels of Hotila consumption with that of Monosodium glutamate (MSG) in 17 communities in Mueang and Khunyuam Districts of Maehongson Province using Hedonic Scale of nine-satisfaction level questionnaires on 12 issues—pigment, smell, taste, texture, pricing, and packaging of Hotila and those of MSG with 319 randomly selected native samples. Results revealed: 1) 13 facts about Hotila, 2) Hotila is not typically grown in communities for at least two factors: unfavourable conditions in the soil, water, humidity, and temperature; and that communities lack the necessary knowledge on how and when to effectively collect and to successfully reproduce the Hotila species, and 3) MSG was inferior to Hotila in all 12 aspects. The findings are valuable to the research communities because they provide firsthand information about Hotila, a food substitute for MSG to encourage good health, especially for people who are health-conscious and allergic to MSG.

Keywords: Hotila, Maehongson, Sgaw karen plant, Food substitute, MSG

Introduction

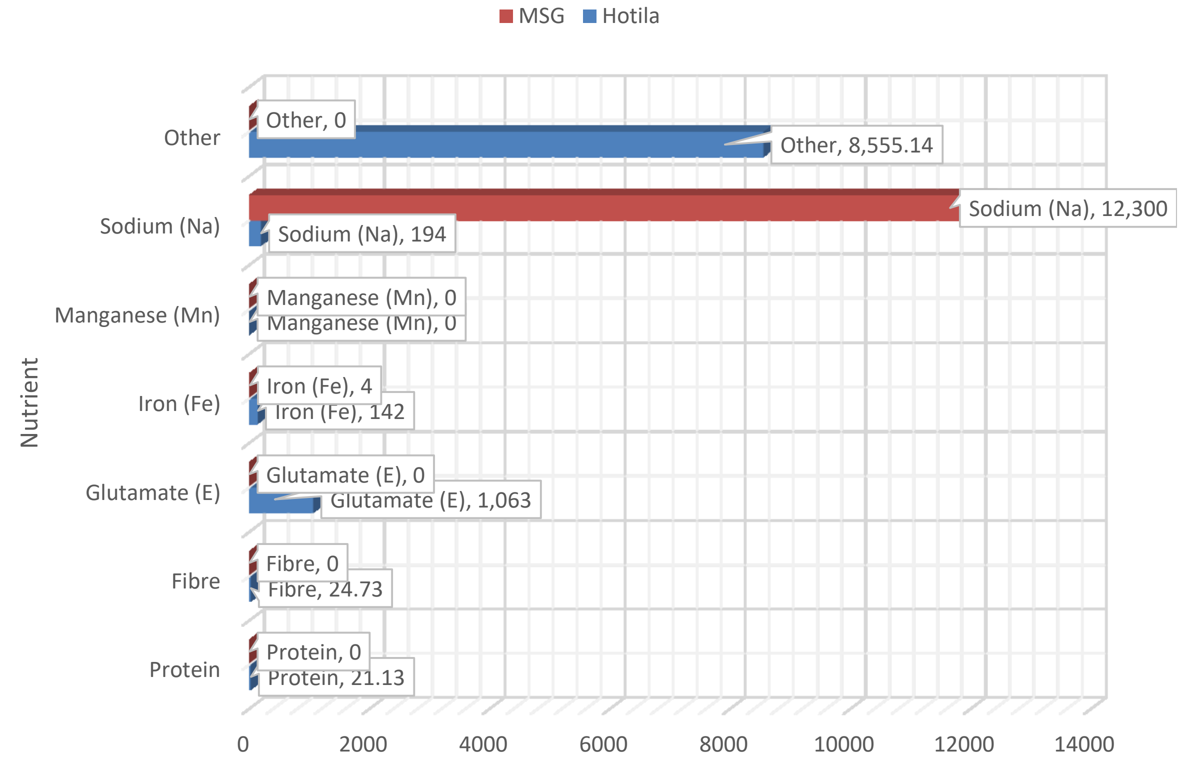
Monosodium glutamate (MSG) has been a prominent component of people's dietary habits in Maehongson (MHS) for many years due to its easy availability and affordability. It has become a stable that people find difficult to do without. However, there is a lack of awareness among individuals regarding the limited benefits of MSG, as it merely enhances the taste of food and stimulates appetite without providing any significant nutritional advantages. The primary constituents of MSG are sodium (Na) and glutamic acid (E), which is commonly known as MSG sweetener. Na is essentially salt, while E is an amino acid found in protein. Despite the United States Food and Drug Administration classifying MSG as a harmless substance, numerous medical journals have reported direct adverse effects on the body over the past five decades. These effects include numbness in the arms, neck, and back, muscle weakness, palpitations, chest tightness, flushing, and fainting among individuals, particularly those who experience Chinese Restaurant Syndrome or MSG symptom complex (Wachiramon, 2012). Moreover, the consumption of MSG has also been linked to increased asthma attacks and migraines (Stevenson, 2000).

MSG poses a twofold danger: the hazards associated with Na salt from caustic soda and the inherent risks of MSG itself. The adverse effects of Na from caustic soda on the body include a weakened immune system, increased risk for kidney disease, high blood pressure, and heart disease, as well as the possibility of blood clots in children's brains leading to developmental issues or sudden convulsions. On the other hand, the specific dangers of MSG to the body encompass allergic reactions characterized by numbness, mouth and facial heat, chest tightness, and breathing difficulties. Furthermore, MSG can damage the nervous system of the eye, resulting in vision loss or blindness, impair the brain region controlling growth and reproductive functions, affect bone health and the production of red blood cells leading to anaemia, reduce essential vitamins (particularly vitamin B6), promote cancer development, damage the central nervous system, and induce chromosomal abnormalities such as cleft lip, cleft ears, cleft nose, and limb deformities (Wachiramon, 2012; Thai health promotion foundation, 2019).

In the region of Maehongson (MHS), there are 18 species of ferns i.e., Maetaiwan Fern, Doisuthepkut, Hangdaeng Fern, Kandambaiyao Fern, Blue german Fern, Si MHS Fern, Indiadaeng Fern, Doibaimankut, Khaokwangbaitang Fern, Kanoknaribaitang Fern, Hangkaifoi Fern, Doibaichaekkut, Kan Dam Frizlut Fern, Ausmanda taiwan Fern, Nang Fern, Ratsamichot Fern, Doibrazil Fern, and Kandamyokdoikham Fern (Pangtong height service and development centre under the royal initiatives, 2021). These fern plants are typically used for decorative purposes. Unlike, the "Hotila" fern plant which does not have an official Thai name and is not included in the list mentioned earlier has primarily been used by Sgaw Karen (SK) people in MHS to add sweetness to local food for generations, serving as a substitute for MSG (Ministry of natural resources and environment, 2016). Hotila also contributes a pleasant aroma and a mild taste to enhance the appeal of food. It can be consumed fresh or in various other forms such as powder, bouillon, and sauce, with fresh leaves and powder being the most common options. Importantly, Hotila offers health benefits without any reported adverse effects from excessive consumption.

The botanical name for Hotila suspiciously is Asplenium obscurum (Ministry of natural resources and environment, 2016; Thaifern, 2022) or non-officially Asplenium unilaterale lamk (Kut-hin: Srilai, 2021). Hotila belongs to the terrestrial and lithophytic branches of the Aspleniaceae genus which is commonly found near small creeks, rock cliffs, and chilly hills within the forests of MHS. It possesses a robust root system that enables strong adhesion. The term Hotila comprises three SK morphemes: “ho” (leaf), “ti” (water), and “la” (sweet taste). It refers to a plant with sweetened water properties, growing in moist soil and on cool rocks, not just in water. The Tai Yai ethnic group calls it “Phaktue,” while other SK communities refer to it as “Hoti” or “Hotiloe.” It’s also known as “Doi MSG” (mountainous MSG) due to its glutamate (E) content, providing a sweet flavour like MSG. Hotila contains protein, iron (Fe), and manganese (Mn) (Office of the Health Promotion Fund, 2019), benefiting general consumers and those allergic to MSG, including individuals with asthma, infants, and pregnant women (Chaiprateep, 2015).

As mentioned earlier, Hotila offers a notable advantage by adding a sweet, soft, and mellow taste and aroma to food as a substitute for MSG. Its nutritional properties include 21.13% total protein and 24.73% fibre, supporting excretory health, weight loss, and balance without reducing food intake. Hotila is rich in Fe with over 1,417 mg/kg, crucial for the blood system and red blood cell production in women and children. It also contains about 1,938 mg/kg of Na, which serves as a cofactor for bodily reactions, promoting enzyme activation, muscle and nerve function, and cell structure. Gas Chromatography-Flame Lionization Detector Technique analysis showed Hotila contains 10,628 mg/kg of E, a flavour-enhancing substance like MSG (North Public News Agency, 2018; Srilai, 2009, 2010, 2021). Furthermore, Hotila has been subjected to acute toxicity testing, confirming its safety (Churueangsuk, 2012). Chemical analysis revealed that Hotila is a nutrient-rich plant, containing approximately 1% total protein and 0.6% E, along with significant amounts of Fe and Mn. It does not exhibit strong antioxidant activity, inhibits melanin production and pathogenic microorganisms, and has low phenol content. Acute oral toxicity tests using aqueous and methanol extracts at a maximum dose of 5,000 mg/kg, recommended by the Organization for Economic Co-operation and Development (OECD), demonstrated that Hotila is non-toxic to health (ibid.).



	Protein	Fibre	Glutamate (E)	Iron (Fe)	Manganese (Mn)	Sodium (Na)	Other
MSG	0	0	0	4	0	12,300	0
Hotila	21.13	24.73	1,063	142	0	194	8,555.14

Nutrition Fact on MSG vs. Hotila (mg/100 g)

Figure 1 Nutritional information on MSG (Ajinomoto North America, Inc, 2023) vs. Hotila (Source: Panyawuthakrai, 2023)

Limited research has been conducted on Hotila. The KY District's Office for Agriculture (Somjai, 2021) noted the lack of information except for a community enterprise selling Hotila chilli paste in Tambon Mae Ukho [MUK]. However, two studies focused on Hotila processing: 1) Mae La Noi Darunsik School project transforming Hotila powder into soup cubes and powder, enhancing protein content and assessing consumer satisfaction (National science and technology development agency: NSTDA Library, 2011) and 2) a study comparing Hotila with MSG in instant seasoned fermented fish sauce, where consumers prefer the Hotila product due to its pigment and packaging (Suda & Duangwongsa, 2020).

Hotila, a rare native sweetened plant, has seen increasing demand in local markets during the December to May cold and hot season. The retail price for an approximately 18-gram bag of Hotila powder ranges from 55 baht within the community to higher prices outside, depending on economic demands and supply. However, there are two concerns with Hotila powder from community production: the significantly higher price compared to MSG per gram and the higher dosage required compared to MSG per serving. Consequently, MSG remains more accessible than Hotila.

During field surveys and initial inquiries, three primary issues were identified: 1) limited knowledge about Hotila among the communities, 2) inadequate methods for Hotila propagation within the communities, and 3) the absence of a previous comparison between Hotila and MSG consumption preferences in MHS. The objective of this study was then to establish accurate foundations regarding the significance, advantages, and methods for promoting the breeding of Hotila and encouraging its consumption instead of MSG, particularly within the 17 SK/TY ethnic communities of Bandoisaeng [DS], Banhuaipukaeng [HPK], Banhuaimakhueasom [HMS], Banhuaikhan [HK], Bannaisoi [NS], Banhuaisueathao [HST], Bannamphiangdin [NPD], Banhuasanambin [HSB], and Banmai [BM] in Mueang MHS, as well as those in Ban Na Hua Laem [NHL], Banhua-ngao [HNG], Banhuaina [HN], Bansuanoi [SO], Banpratumueang [PM], Ban Huai Ton Noon [HTN], Banluang [BL], and Bantophae [TP] of Khun Yuam [KY], MHS.

Objectives

The aims of this study were as follows: 1) to investigate, survey, and gather information about the indigenous Hotila plant in eight communities located in Tambon Mae Ngao [TMNG] of KY, MHS; 2) to enhance the preservation, restoration, and cultivation of Hotila in twelve communities; and 3) to assess the level of satisfaction associated with consuming Hotila compared to consuming conventional MSG.

Research questions

This research aimed to address the following questions: 1) What is the level of knowledge among local individuals regarding the use of Hotila? 2) Can Hotila be successfully cultivated within the communities, similar to other ferns? and 3) Is Hotila preferred over MSG as a choice for consumption?

Framework

The theoretical framework of this study was based on Participatory Action Research (PAR) and community-based development principles. PAR involves a collaborative process that integrates scientific principles and problem-solving approaches to address community issues. It emphasizes experiential learning and recognizes that the researcher is not the sole source of knowledge. The conceptual framework revolves around raising awareness of problems, fostering a sense of responsibility, and promoting solidarity within the community. The goal is to empower individuals and encourage active participation in community development.

Methodology

This study was conducted using the following research methodologies: 1) The location of the study, 2) Population and sample, 3) Tools and data collection, 4) Data analysis, 5) Procedures for research conducting, and 6) Hypothesis.

1) The location of the study. This PAR was conducted in 17 communities of Mueang and KY Districts of MHS which are DS, HPK, HMS, HK, NS, HST, NPD, HSB and BM of M, MHS, NHL, HNG, HN, SO, PM, HTN, BL, and TP of KY, MHS. The reasons why these communities were chosen for this study are firstly,

2) Population and sample. To obtain information on the Hotila plant, a sample of 20 communities' knowledgeable elders, claimed to possess a lot of knowledge about the native Hotila plant, as recommended by the village chiefs from NHL, HNG, HN, SO, PM, BL, TP. To enhance the plant preservation, restoration, and cultivation, three individuals simply experimented with planting Hotila within their residential complexes in NHL, HN, and TP as advised by the village heads. And, to assess the level of satisfaction associated with consuming Hotila to that of typical MSG consumption, the study randomly selected 319 participants from 17 communities who claimed to be accustomed to both the tastes of Hotila and MSG additives.

3) Tools and data collection. To gather information about the Hotila plant, small focus group techniques of the communities' knowledgeable elders were implemented through question and answer discussions. Examples of questions included—How does Hotila appear? Where is it to be found? Why is it your preferred culinary ingredient? With some assistance from SK to Thai translators, the responses were publicly documented in notetaking formats, examined, and double-checked. And throughout the rechecking procedures, two third (2/3) or more of the focus group's 20 communities' wise elders had to concur with each item of knowledge regarding the Hotila plant; the minor percentage, however, was intended to be clarifying their disagreement

To enhance the cultivation of Hotila, three simple experiments were conducted on planting Hotila within home complexes in NHL, HN, and TP were done and public relations efforts were undertaken in nine communities in MMHS. Additionally, until the Hotila plant lasted steadily for a long time or died itself, basic queries into their planting processes were performed every day or two to gather data for the studies.

To compare the favour of Hotila with that of MSG, a set of questionnaires with 12 items concerning pigment, smell, taste, texture, pricing, and packaging plus an additional part for personal recommendations were developed and distributed, excluding sensory testing. The Hedonic scale of satisfaction was applied to rate the responses, with 1 representing "immensely dislike," 2 "very much dislike," 3 "moderately dislike," 4 "slightly dislike," 5 "neither like nor dislike," 6 "slightly like," 7 "moderately like," 8 "very much like," and 9 being "exceptionally like". There could only be 5% or less inaccuracy in the data collection, which meant that only 16 or fewer incomplete questionnaires may be approved.

In an attempt to conduct Hotila breeding experiments within the community, other research methods, including personal observation, literature reviews, and unstructured interviews were additionally deployed.

4) Data analysis. Due to the appropriate instruments and data-collecting procedures, the information on the Hotila plant and its planting experiments was deemed accurate, thus it was qualitatively broken down into aspects. Unlike the data from the satisfaction comparison surveys, all data would primarily be evaluated into statistical findings as arithmetic means and percentages. The data from other sources, i.e. personal observation, literature reviews, and unstructured interviews would subjectively be characterized.

5) Procedures for research conducting. This study commenced with identifying an issue which was relevant to the communities through private discussions and meetings. Next, a research team, which consisted of both researcher and the community members, was formed to collaborate in planning and carrying out the study processes. Then, the study plan, including the objectives, research questions, and methods to be used was collaboratively designed with respect for the communities' perspectives. After that, a range of research methods which involved document analysis, focus group discussions, interviews, surveys, and community participation was employed to collect data. Later, the collected data was collaboratively analyzed using quantitative and qualitative methods in the search for patterns, themes, or trends in the data as well as interpreting their significance within the existing contexts. Furthermore, to gain a deeper understanding of the issue and to identify potential solutions, the analyzed data and findings were reflected by the research team. Finally, the study findings and outcomes were shared with the relevant communities and wider audiences through various means e.g. reports, presentations, and articles in the hope that the knowledge could contribute to broader discussions and actions.

6) Hypothesis. The following presumptions formed the basis of this study: Hotila is toxic to health in some or all circumstances, is bitter and smells like ordinary decorative ferns, making it unsuitable for some particular groups of people, and is only found in deep forests. Finally, Hotila is simple to breed like other fern varieties. Interviews, field surveys, and direct

observation were conducted to verify the presumption about its location. Interviews, a local hospital's medical records, and other papers were all examined to bolster the presumption of the toxicity of the plant. Interviews and self-tests were conducted to confirm the presumption against its taste and smell. Also, interviews and simple experiments took place in different areas to attest to the final presumption.

Results

Research findings mainly emerged from unstructured in-depth interviews, surveys, questionnaires, relevant papers and the researcher's observation and are based on the research objectives: (1) to investigate, survey, and gather information about the indigenous Hotila plant in eight communities located in Tambon Mae Ngao [TMNG] of KY, MHS; (2) to enhance the preservation, restoration, and cultivation of Hotila in twelve communities; and (3) to assess the level of satisfaction associated with consuming Hotila compared to consuming conventional MSG. The following are the outcomes.

(1) As per research objective 1, there are 13 items of information on the Hotila plant:

1.1) Etymology: Hotila is called in SK. The term Hotila is composed of three different single words— "ho" /hɔʔ/ means a leaf, "ti" /tiː/ means water, and "la" /laː/ means sweet taste. So Hotila means (a) sweetened water leaf (leaves). Hotila can sometimes be called "Hoti" for short. Besides, in Shan or TY, Hotila is commonly known as "Phaktue." Hotila is not only popular among SKs, but TYs who give its name Phaktue. Hotila is a fern type, which is officially known as *Asplenium unilaterale lamk* which belongs to the *Terrestrial* (earth) and *Lithophytic* (rock) Branch of the *Aspleniaceae genus*.

1.2) Physical look: Hotila leaves are shaped like a green bird's wings whose upper edges are scalloped, curved a little, flat and thin—aka personally calling Bird's-wing fern [เฟิร์นปีกนก]. Its stalks and roots are glossy-black. Hotila always grows in a clump deep in the forests. Many inexperienced Hotila collectors may, however, collect other fern types natively called "Hotikha" in mistake for Hotila by its almost similar look except for greener stalks and green matt leaves (see Figure 2 for reference).

1.3) Discovery: Only in the dense forests nearby four villages—HTN, HN, HNG and NHL of MNG in KY—can Hotila be discovered. The features that follow the locations where Hotila may be found include high altitude, rapid onset of cold and humidity, abnormally huge surrounding trees, and the presence of natural streams, wet rocks, and wet soil.

Table 1 An approximation of distances to discover Hotila by sources and communities

Source	Villages nearby	Distance*(km)	Direction
1	Huai-ngao	10.5	NW**
2		13.5	
3		15.5	
4		6.5	
5		5.0	
6	Huaitonnun	0.3	
7		4.0	
8	Huaina	6.0	W/SW***
9		7.5	W/NW****

Note *Approximately from the entrance to the village by using distance and area measurement tools in 2D mode with Google Earth (earth.google.com). **Northwest; ***West/Southwest, and ****West/Northwest.

There are more sources of Hotila in HN than in HTN and HN while the distance to it ranges from four to seven and a half kilometres. In HTN, Hotila flourishes at elevations of 466 m (http://google.earth.com, 2022), and around 550 m in the mountains close to the community's farms to the northwest. Hotila is also found west-southwest of HN Village. Hotila is more prevalent in the deep forests farther away from the communities to the west, north, or south, at elevations of 450 m up to 950 m or higher, along the Thai-Myanmar border.

Hotila, however, is not typically seen inside communities or in nearby settlements in the research areas. Interestingly, the only place inside HTN that Hotila can grow is at Mochi and Chiche's place[1] where all seems to facilitate its growth—temperature, moisture, soil, and weather. However, Hotila's size is not as large as the one in the forests.

1.4) Taste and scent: Hotila naturally tastes sweet, soft, and mellow, but smells like soft dried fish, so often it is chosen to add in savoury foods instead of sugar and MSG. It does not smell like fragrant flowers for certain. One more thing, it seems like fresh Hotila tastes and smells stronger than dried Hotila or Hotila powder—the more Hotila be added, the stronger taste and smell the food has. However, an inexperienced one may not know Hotika's taste mistake for Hotila's until he takes a bite. Soon, he will discover that Hotika tastes bitter (see Endnote for reference).

1.5) Size: The size of Hotila stalks and leaves depends on its age and the fertility of the forests it grows in—the older, the bigger and the more the forests are fertile, the larger Hotila becomes. Nonetheless, it is possible to classify Hotila into four sizes, namely "super small sized," about 2.5 inches in length, not popularly taken; "small-sized," with a length of about 3-4 inches (half a palm); "medium-sized" approximately 7 inches long (a palm); and "large-sized" approximately 10-11 inches long (one palm and a half).

1.6) Harvesting season: People can collect Hotila from the forests all year round. Especially, Hotila becomes abundant about October to December at the end of the rainy season and the beginning of the cold season when the weather is getting cool and humid. It is better and safer to trek into the forests than to do so during the rainy season. Also, it is the right time when Hotila leaves are fully mature in dark green pigment, and the taste is more sweet, mellow, and all the best. From January until September every year, people sense that it is time to conserve this plant so that it has an opportunity to continue propagating and balancing nature. In addition, the weather begins to become dry and hotter. The forests begin to lack moisture and get drier to start wildfires. There are simple Hotila collecting tools such as boots to prevent blood-sucking slugs and a cloth bag to carry Hotila. A sharp knife is not a necessary tool because Hotila can be easily picked by bare hands. One day of a round-walk trip is possible within 10 km from starting point, but it can hardly be possible for the one-day walk round trip. So, a plan for an overnight stay or more in the forest may also be necessary. The only reason for doing so is to go hunting wild animals or find some rare wild herbs. For a one-day plan, bringing lunch would be ideal, and for a more-than-one-day plan, a pack of some cooking ingredients would be an advantage. Going for Hotila in the forests requires only walking off-road, along creeks, streams, and flowing waters of the mountains.

1.7) Life cycle: Hotila life cycle depends on three common seasons in Thailand: the four-month hot season, which begins around mid-February/March and ends around mid-June/July; the four-month rainy season, which starts around mid-June/July and ends around mid-October/November and; the four-month cold season, which starts around mid-October/November and ends around mid-February/March. However, Hotila may last approximately nine months, from around mid-May (the first rain pour) to mid-February

[1] Location: 18°45'18" N, 97°49'36" E at an elevation of 466 m from https://earth.google.com/

through six stages. Stage 1 is "preparing for shedding leaves" (prothallia) which lasts about two months. Stage Two is "putting out sprouts and young leaves" which takes about three months. Stage Three is the "true stalks and leaves" stage which starts in about the fourth month. Stage Four is "growing up" which occurs in the fifth month. Stage Five is "adulthood" around the sixth or the seventh month. Stage Six "drooping" happens in the eighth or the ninth month, when the cold season ends to begin the hot and dry season. The study also found that the best stage for collecting Hotila should be in stages Four (fully mature) to Six (ageing) when Hotial spores turn to be brown and darker—ready for species propagation. Despite this, in some places outside the research areas, Hotila can be found in all seasons due to their higher altitudes and forest fertility prolonging the Hotila life cycle.

1.8) Nutritional benefits: Hotila fresh stalks and leaves or dried Hotila powder, to the extent necessary, are good to flavour a variety of local dishes such as Ta Pho Pho [ต่าพอเผาะ] (Khao Boe [ข้าวเบือะ] in TY or Karen spicy boiled rice, Musato [มูส่าโต่] (Nam Phrik [น้ำพริก]) or chilli paste, melon curry with fish, banana blossom curry with crabs, Ta Chue Ti [ต่าจึที] or cold curry, green pumpkin curry with pork and all kinds of water menus except for stir-fried, fried, steamed and spicy mix dishes. TY ethnic group likes to use them to flavour food on various menus as well, such as Kaengpli [แกงปลี] or banana blossom curry, cucumber curry, Nam Phrik (chilli paste) Nok [น้ำพริกน๊อก], Namphrikong [น้ำพริกอ่อง], Iluen [อีหลืน] chilli paste, cooked potato, olive salad, tamarind salad, bamboo shoot curry, kahan sprout [หน่อคาหาน] curry and Wettamarind [มะขามเปียก], etc. Recently, there have never been any reports that Hotila is a cause of diseases or shows negative effects on the health of humans and even raised animals—cattle and buffalo that graze in the forests are also fond of eating Hotila, amazingly.

1.9) Medicinal properties: Hotila leaf is rich in dietary fibre to help pass solid or liquid waste matter from the body, strengthen joints and bones, and reduce inflammation. Also, the SK, rather than Shan or TY locals, intuitively find that Hotila better keeps them fit. Additionally, Hotila is not toxic to health in any case for two main reasons: 1) there have been no scientific findings, reports, or records of the hazards associated with the use of Hotila in either fresh leaves, dried powder, or other forms; and 2) the results of toxicity testing from the Research and Development Institute for Highland Areas (HRDI: Public Organization [สถาบันวิจัยและพัฒนาพื้นที่สูง: องค์การมหาชน]) (Srilai, 2021) confirmed that it was not toxic even when used in more significant than usual amounts.

1.10) Preservation: Hotila naturally can stay fresh and green for a couple of hours after being plucked from a clump and begin to wilt only within one day and become crisply dried completely within two or three days, depending on temperature, heat, and sunlight. However, in the moist soiled clump, it can stay fresh longer. If not hurriedly stored in a dry plastic bag and put in a moist and cool place like the refrigerator or at one corner of the bathroom, Hotila will wither indefinitely but be taken for cooking without losing its mellow taste and greenish pigment. Unlike its odour, fresh Hotila gives a stronger smell than the dry one. The completely dried Hotila is substantially preservative, especially in-ground or powder form, and it lasts as long as a year if stored in the proper place. The locals simply keep it dry and cool in a glass or plastic bottle under their house or in a kitchen. Usually, the ground Hotila is used every day, so it rarely stays for months or a year until the harvesting season comes again. However, ground Hotila can become spoiled, mouldy, and smelly if kept in a hot, humid, and stuffy area. The water that directly sprays on fresh Hotila can damage it like vegetables in common.

1.11) Propagation: Natural Hotila propagates well in suitable, brown-conditioned soil or on rocky terrain. Hotila cannot grow well in black soil. The optimum climate for Hotial must be cool and humid. Hot and dry weather is not suitable for Hotila. Within the community, there have been attempts to breed Hotila. Over 20 people report to have been doing so, but only one achieved it: Mr Mo Chi and Chi Che Ngaopruksa of Huaitonnun Village. There are main problems with growing Hotila in the community: first, the locals hardly know that the spots on Hotila back leaves are sporangium for natural reproduction; second, they never know how to plant Hotila deliberately, and third, they rarely find a proper place for it to grow.

1.12) Processing Hotila powder: The following are simple processes of making traditional ground Hotila; first, wash stalks and leaves thoroughly in water twice to remove dirt, sand, and leaf debris; second, expose them to direct sunlight for two or three days (aka Daet colloquially); third, pound them with a pestle in a mortar thoroughly to a fine powder; fourth, sieve the powder to eliminate twigs and unwanted compounds; fifth, pack the powder into dry and clean bags for family consumption and commerce.

1.13) Marketing: The target Hotila consumers are TY and SK, who are commonly used to Hotila and outnumber other ethnic groups in MHS. To the locals, prices are high, varying from 55 baht (2022) to 190 baht per 230 ml bag, depending on intimacy, proximity, and package. A report said that last year's local price was lower at 40 baht a bag, and the non-local price was as twice much as 80-100 bath a bag. It is likely to say that the price is negotiable though being fixed by the community on their own. There are no reports about Hotila on online or international markets.

(2) According to the research objective 2: 2.1) the simple experiments to breed the Hotila plant in the housing complexes were unsuccessful because it only lived for 10 days or less—the plant shrank and withered easily, especially when exposed to direct sunlight, warmth, and breeze, and eventually let its leaves fall to the ground before dying out; 2.2) natural Hotila is very rare in the city of MHS except in Phakholo [พะโข่โหล่: PKL] Village's forest. Abundant natural Hotila, however, is found in MNG, KY District, despite being more likely to be at risk and deteriorate. The community therefore proposed guidelines for the conservation, rehabilitation, and breeding of Hotila as follows: 1) impart the community that the dark buttons on the back of Hotila leaf are spores aka breeding powder and how to properly collect Hotila in the forest with guidelines for choosing only medium-large Hotila and avoiding uprooting small and young Hotila; 2) there should be some Hotila propagation experiments in the community and; 3) conduct a campaign to promote the consumption of Hotila instead of MSG in the community.

(3) For research objective 3, by using a questionnaire with 12 questioning items: pigment, smell, taste, texture, pricing, and packaging of both Hotila and generic MSG, without the need for sensory testing, with 319 respondents, results showed that Hotila was more enjoyable to consume than generic MSG.

Six age groups of 160 males and 159 females were created from the total respondents: 11.9% of the respondents aged 18-25 (Ag1), 21.0% aged 26-35 (Ag2), 20.7% aged 36-45 (Ag3), 17.9% aged 46-55 (Ag4), 15.7% aged 56-65 (Ag5), and 12.5% aged 66 and over (Ag6). Only 0.3% of them were non-applicable. These results are illustrated in Figure 2.

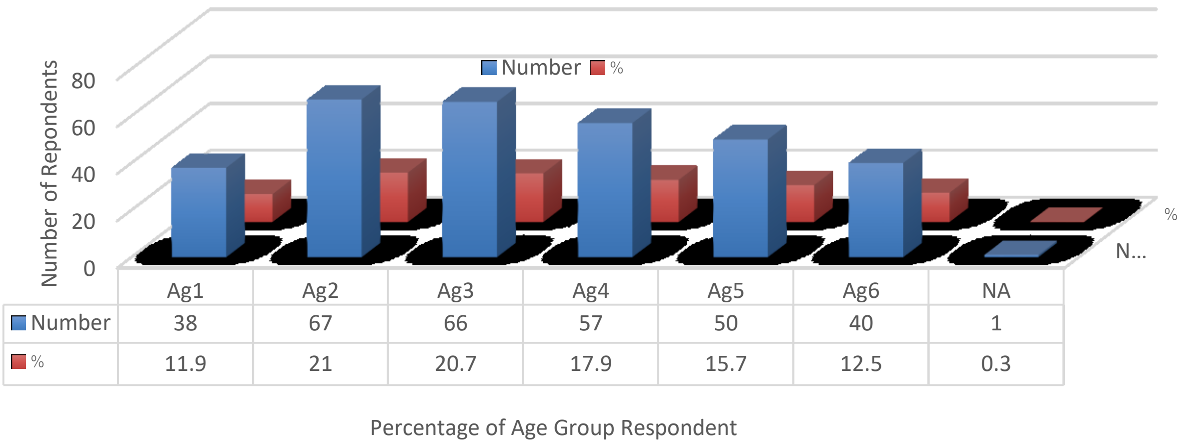
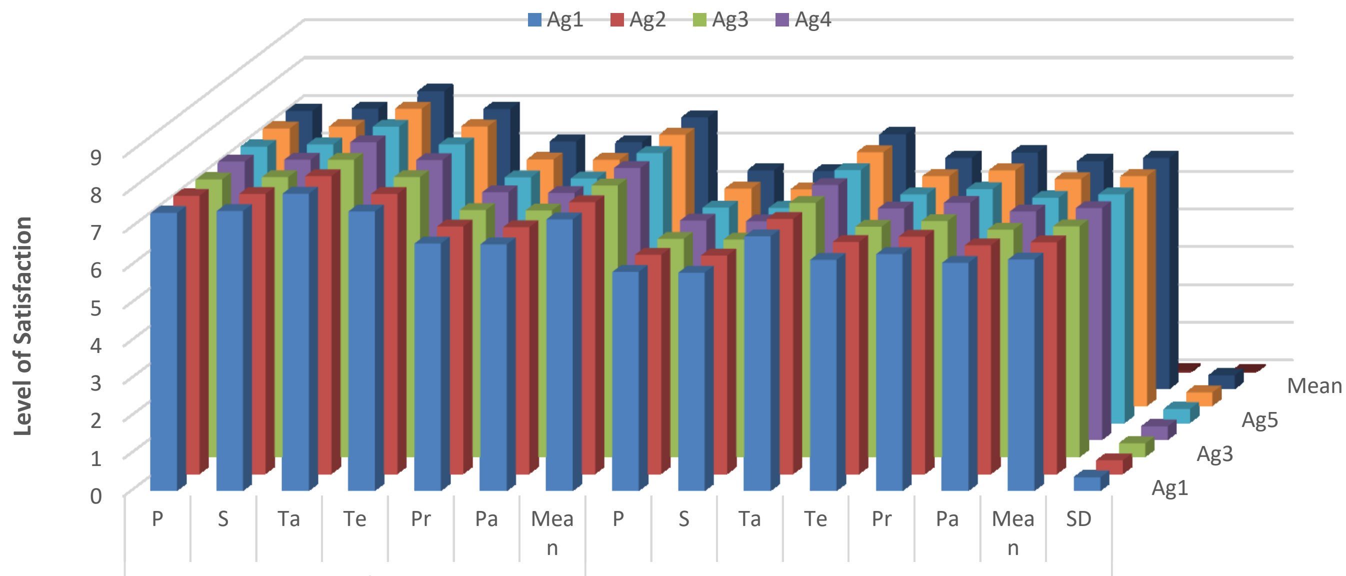


Figure 2 Number and percentage **of** age group respondent
(Source: Panyawuthakrai, 2023)

Note. "Age group" abbreviated to Ag.

According to Hedonic's nine scales of satisfaction, each age group (Ag1 to Ag6) in Figure 3 below displays a different average degree of favour for each of the following features of Hotila and MSG: pigment, smell, taste, texture, pricing, and packaging, as follows: 7.21, and 6.15, 7.21 and 6.15, 7.20 and 6.12, 7.21 and 6.15, 7.15 and 6.06, and 7.18 and 6.09, respectively. All age groups that were satisfied with the use of Hotila at a level of 7.19 (moderately like), which was higher than MSG at a level of 6.12 (slightly like) dignified that Hotila was favoured by all age groups over MSG.

Concerning the relationship between sex and satisfaction with using Hotila and MSG, Figure 4 reveals that males' average satisfaction with Hotila and MSG was 7.21 and 6.15, respectively. While females' mean satisfaction with Hotila and MSG was 7.12 and 6.00, respectively. That is, the preference for Hotila and MSG did not significantly differ based on gender.

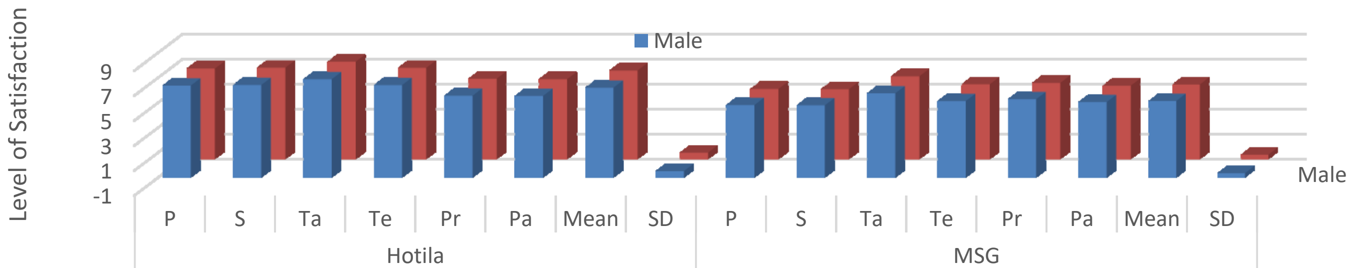


	Hotila							MSG							
	P	S	Ta	Te	Pr	Pa	Mean	P	S	Ta	Te	Pr	Pa	Mean	SD
Ag1	7.38	7.43	7.89	7.42	6.57	6.55	7.21	5.82	5.8	6.76	6.14	6.29	6.06	6.15	0.36
Ag2	7.38	7.43	7.9	7.43	6.57	6.55	7.21	5.82	5.8	6.77	6.16	6.3	6.07	6.15	0.36
Ag3	7.36	7.42	7.88	7.42	6.55	6.54	7.2	5.79	5.77	6.74	6.11	6.26	6.03	6.12	0.36
Ag4	7.38	7.43	7.89	7.42	6.57	6.55	7.21	5.82	5.8	6.76	6.14	6.29	6.06	6.15	0.36
Ag5	7.32	7.38	7.85	7.38	6.51	6.48	7.15	5.71	5.7	6.7	6.06	6.2	5.97	6.06	0.37
Ag6	7.35	7.4	7.87	7.4	6.53	6.52	7.18	5.76	5.74	6.72	6.09	6.24	6.01	6.09	0.36
Mean	7.36	7.42	7.88	7.41	6.55	6.53	7.19	5.79	5.77	6.74	6.12	6.26	6.03	6.12	0.36
SD	0.02	0.02	0.02	0.02	0.03	0.03	0.02	0.04	0.04	0.03	0.04	0.04	0.04	0.04	0.01

Hotila vs. MSG by Attribute

Figure 3 Statistics on how various age groups favour the attributes of Hotila vs. MSG
(Source: Panyawuthakrai, 2023)

Note. "Pigment" is abbreviated to P, "Smell" to S, "Taste" to Ta, "Texture" to Te, "Pricing" to Pr, "Packaging" to Pa, and "Standard Deviation" to SD.



	Hotila								MSG							
	P	S	Ta	Te	Pr	Pa	Mean	SD	P	S	Ta	Te	Pr	Pa	Mean	SD
Male	7.38	7.43	7.89	7.42	6.57	6.55	7.21	0.53	5.82	5.8	6.76	6.14	6.29	6.06	6.15	0.36
Female	7.28	7.35	7.83	7.34	6.47	6.43	7.12	0.55	5.65	5.63	6.66	6.02	6.13	5.91	6	0.38

Hotila vs. MSG by Sex

Figure 4 Statistics on how male and female respondents favour the attributes of Hotila vs. MSG
(Source: Panyawuthakrai, 2023)

Discussions

The findings of the research can be discussed in several points as follows:

1) Given its scarcity even inside the communities, Hotila may be used considerably less frequently by young adults and adults who typically commute and work outside of the villages. Consequently, seniors have more knowledge about Hotila. Additionally, it is rare to witness the new integration or invention of the plant with foods other than their ethnic cuisines. More people from diverse backgrounds participating in the study, though, could lead to future discoveries about the plant.

2) Although there have been initiatives for the conservation and rehabilitation of Hotila within communities for many years, Hotila cannot properly grow or be cultivated. Besides, because they lacked the knowledge and techniques for cultivating and propagating this plant, most of them failed in their endeavours. Additionally, the elevation and moisture content of the rock and soil including their pigment and ambient temperature are all vital to Hotila growth. These all make Hotila not as easy to breed as other types of edible ferns or general ornamental ferns. The crucial factors which may affect Hotila's growth and survival are soil, water, air, humidity, altitude above sea level, and atmospheric pressure.

Apart from Hotila, three additional native fern species which are edible in the same way as other local plants are Kikudo/Popledo, Lekhido (aka Phak Kut (Diplazium esculentum) or bow-headed type and Phak Kut King in Thai, respectively), and Hotikha. In SK cuisine, Kikudo/Popledo is frequently found in stir-fries, curries, and spicy salads. This fern type is reported to be effective in reducing cholesterol and fever, nourishing blood cells, stopping bleeding, healing rashes, and treating haemorrhoids and diuretics (Charoenchit 2022). Lekhido is not as well known for cooking as the former fern type due to its inner mucilage, flavour and odour. And Hotikha is rarely used for cooking due to its bitter unpleasant taste—even the buffalos and oxen grazing in the forests are anxious to avoid it. They can have diarrhoea from having taken it for their meals. In terms of the research on these ferns, it appears that Kikudo/Popledo is the most frequent; Hotila is a little less common, Lekhido might be even less frequent, and Hotikha might not even exist. Figure 5 shows the different types of local edible ferns.

Hotila **Kikudo/Popledo** **Lekhido** **Hotikha**

Figure 5 Different types of local edible ferns
(Source: Panyawuthakrai, 2023)

3) The preference of Hotila over MSG among the participants is evident. However, in terms of cost per weight per quantity, marketing, and packaging, MSG is often more widely accessible and used in typical cooking than Hotila. Nonetheless, it is plausible to assume that MSG may have harmed community members' health for decades, even though this study did not focus on the MSG impacts on their health. Some participants argued that "whereas our great-grandparents of yesteryear could cross mountains without feeling tired or experiencing

discomfort in their knee, back, or shoulder bones, they could no longer even climb mountains without a knapsack. MSG, which was first used fifty or sixty years ago, might be to blame for this while Hotila on the other hand has been well known for over a century."

Although not providing an extensive scientific explanation of the nutrition or nutrient availability of the Hotila plant and several people are uninformed of Hotila's nutritional information, this study would adequately convince non-specialist readers that Hotia is safer and healthier than MSG. The fact that locals prefer Hotila to MSG in all dimensions may benefit a health campaign against MSG, particularly in health-conscious groups and those with a medical record of MSG allergies.

Conclusion and suggestions

The following are some recommendations from the author: firstly, new facts about Hotila should be added to the local education system in the form of a school curriculum or a local curriculum at both primary and secondary levels; secondly, this study may in some way oppose the use of MSG in encouraging people to live healthier lives and; thirdly, this new knowledge about Hotila should raise awareness of marketing Hotila a local product.

This research may contribute to propose to adding information on the new type of ferns to many relevant agencies, such as the Service Center and Development at the Height of Pang Tong under the Royal Initiative MHS, as there has been no information about Hotila from there before.

Further research on Hotila should concentrate on its nutrition chemicals, the chemicals that compose the rock and soil from which it naturally develops, and whether and how it adversely impacts humans.

New knowledge and the effects on society and communities

Based on the objectives and previous enquiries into the extent of local knowledge on the application of Hotila, if the plant can be effectively grown in the communities like other ferns, and whether it is preferred over MSG as a choice for consumption, the research results conclude that:

1) The communities' elders are more knowledgeable about Hotila than young people or even adults, therefore the 13 bodies of knowledge about Hotila have been produced and are beneficial to anyone interested in learning about the use and preservation of this native plant as an alternative to MSG consumption;

2) Due to improper moisture, soil, sunlight, wind, and improper acts of collecting natural Hotila, it cannot typically be grown well within housing complexes, so some guidelines for conservation, rehabilitation and propagation of Hotila species have been proposed: educating people about the benefits of Hotila, increasing awareness of Hotila harvest, and promoting Hotila propagation in the community where suitable, and;

3) Although people are unaware of Hotila's nutritional information, it is preferred over MSG in all aspects, i.e. pigment, smell, taste, texture, pricing, and packaging.

Acknowledgments

This research was part of Ethno-Semantics in Food Terms among Karen Minorities in Maehongson Province which was funded for the year 2022 by the Royal Plant Genetic Conservation Project under Her Royal Highness Princess Maha Chakri Sirindhorn (Public Organization).

Endnotes

1. Two methods of propagation of Hotila adapted from “Black stem fern” as introduced in Thai Kasetsart (2012) are clump division and sporulation.

The method of dividing the clumps is more popular than the sporulation method, whether that type of fern is a clump or a bundle. Simply but effectively, this method works through the following processes: divide and hurriedly store the clumps in a high level of humidity because as pulled apart from the forest the clump will soon evaporate, dry up and die within one or two days.

The sporulation method involves how to breed Red-brown/dark brown spores through following processes: a) Cut and leave spore-bearing leaves in a dry paper bag; b) Close the bag tightly; c) Hang the bag for two or three hours until most spores fall from the leaves; d) Flick the bag with fingers occasionally to accelerate the spores’ fall; e) Prepare composted potting soil mixed with loam, burnt brick dirt, some decaying tree leaves and fine sand at 1:1:1:1 ratio, and with ½ manure and ¼ lime; f) Bring a shallow-bottomed burnt brick pot; g) Fill the pot with the potting soil and heat it to remove mold and sterilize other plant seeds, or roast the pot; h) Spray water all over the soil; i) Sow the spores from the paper bag in the pot and never spray water again; j) Cover the pot tightly with clear plastic; k) Leave it under shades and in a damp and cool place or on a watering plate to keep the soil moist all the time; l) Leave it for about two or three months until very young Hotila germinate and grow to Stage 2; m) Plant the young Hotila in a nursery box with a soil mix like a potting soil; n) When the leaves grow stronger for about four to five months, plant it separately in three-inch pots.

The necessary and supportive atmosphere for Hotila spores to grow must be as follows: 1) shady— do not expose the spores or seedlings to direct sunlight. Doing so for only three minutes, the seedlings will die quickly; 2) highly humid; 3) calm from winds— winds will make Hotila evaporate too quickly; 4) damp or do not allow waterlog to cause the roots to absorb much water or Hotila will rot and die, and; 5) Soil is highly fertilized.

2. An opposite of Hotila that poorly experienced may mistake for is called “Hotikha [เฮาะทีข่า]” in SK. This fern plant has a bitter taste, greenish stalks, and short dark green leaves. Even wild-raising buffalos and oxen avoid grazing this plant because it always makes them sick. So, it is abundant around and in forests. Furthermore, Hotikha is a more familiar plant easily found along the foot of mountains.

APPENDICES

1. Abbreviations

m	= meters	km	= kilometers
M	= Mueang	BL	= Banluang/Luang Village
BM	= Banmai/Mai Village	DS	= Bandoisaeng/Doisaeng Village
HK	= Banhuaikhan/Huaikhan Village	HN	= Banhuaina/Huaina Village
KY	= Khunyuam	NS	= Bannaisoi/Naisoi Village
PK	= Banpuku/Puku Village	PM	= Banpratumueang/Pratu mueang Village
SO	= Bansuanoi/Suanoi Village	TP	= Bantophae/Tophae Village
HMS	= Banhuaimakhueasom/Huai makhueasom Village	HNG	= Banhua-ngao/Hua-ngao Village
HPK	= Banhuaipukaeng/Huaipukaeng Village	HSB	= Banhuasanambin/Hua sanambin Village
HST	= Banhuaisueathao/Huaisueathao Village	HTN	=Banhuaitonnun/Huaitonnun Village
MHS	= Maehongson/Maehongson Province	MSG	= Monosodium glutamate

NHL = Bannahuailaem/Nahuailaem Village
PAR = Participatory action research
MMHS = Mueang Maehongson
NSTDA = National science and technology development agency
NPD = Bannamphiangdin/Nam phiangdin Village
PKL = Banphakholo/Phakholo Village
OECD = The organization for economic co-operation and development
HRDI = The highland research and development institute

2. English–Thai Transcription/Translation

Ausmanda taiwan = ออสมันดาไต้หวัน
Blue german = น้ำเงินเยอรมัน
Doibaimankut = ผักกูดดอยใบมัน
Doi MSG = ผงชูรสดอย
Hangdaeng = หางแดง
Hoti = เฮาะที
Hotila = เฮาะทีหล่า
Iluen = อีหลืน
Kaengpli = แกงปลี
Kandambaiyao = ก้านดำใบยาว
Kandamyokdoikham = ก้านดำหยกดอยคำ
Khaokwangbaitang = เขากวางใบตั้ง
Maetaiwan = แม่ไต้หวัน
Namphrikong = น้ำพริกอ่อง
Bird's-wing fern= เฟิร์นปีกนก
Doibaichaekkut = ผักกูดดอยใบแฉก
Doibrazil = ดอยบราซิล
Doisuthepkut= ผักกูดดอยสุเทพ
Hangkaifoi = หางไก่ฝอย
Hotikha = เฮาะทีข่า
Hotiloe = เฮาะทีเล่อ
Indiadaeng = อินเดียแดง
Kahan sprout = หน่อคาหาน
Kandamflizlut= ก้านดำฟริซลุท
Kanoknaribaitang = กนกนารีใบตั้ง
Kuthin = กูดหิน
Namphriknok = น้ำพริกน๊อก
Nang = นาง
Office for the health promotion fund = สำนักงานกองทุนสนับสนุนการสร้างเสริมสุขภาพ (สสส)
Pangtong height service and development centre under the royal initiatives = ศูนย์บริการและพัฒนาที่สูงปางตองตามพระราชดำริ
Phaktue = ผักตื่อ
Sgaw Karen = กะเหรี่ยงสกอ
Tai Yai = คนไทใหญ่
Ratsamichot = รัศมีโชติ
Simaehongson = ศรีแม่ฮ่องสอน
Wettamarind = มะขามเปียก

References

Ajinomoto North America. (2023). *Eat Well, Live Well: Ajinomoto Monosodium Glutamate (MSG) Nutritional Information*. Retrieved from https://ingredi.com

Chaiprateep, E. (2015). MSG and Neurodegenerative Diseases. *KKU Journal for Public Health Research, 8*(3), 1-3 https://he01.tci-thaijo.org/index.php/kkujphr/article/view/120980 (In Thai)

Charoenchit, P. (2022). *Phak Kut: A traditional tasty menu*. *Folk Technology*. Retrieved from https://www.technologychaoban.com/agricultural-technology/article_ 146330 (In Thai)

Churueangsuk, N. (2012). *A Comment on a Flavoring Plant...Really?*. Retrieved from https://www.gotoknow.org/posts/481189 (In Thai)

Ministry of Natural Resources and Environment. (2016). Folk Botany Project of Ethnic Groups in the Upper North, Omkoi District, Chiang Mai. BGO Plant Databases, the Botanical Garden Organization: Medicinal Plants Database. Retrieved from http://www.qsbg.org/Database/plantdb/mdp/medicinal-specimen.asp?id= 843

National science and technology development agency: NSTDA Library. (2011). *Science projects data base*. Retrieved from http://elib.ipst.ac.th/elib/cgibin (In Thai)

North Public News Agency. (2018). From Hotila to Local Wisdom of a Flavoring Plant for Happy and Healthy Consumption. Retrieved from https://www.northpublicnews.com (In Thai)

Pangtong height service and development centre under the royal initiatives. (2021). *18 fern species in Maehongson*. Thailand: Maehongson.

Royal Project Foundation. (2012). Retrieved from https://www.royalprojectthailand.com/node/1588 (In Thai)

Somjai, S. (2021). *Personal conversation*. Maehongson: Khunyuam District’s Office for Agriculture.

Srilai, K. (2009). *Participatory research to improve the quality of seasonings from Hoatee in the community*. Research Information Repository: Highland Research and Development Institute (HRDI).

Srilai, K. (2010). *The Study on Active Chemical Composition, Nutrition Fact and Pharmaceutical Benefit of High Land Plants*. Research Information Repository: Highland Research and Development Institute (HRDI).

Srilai, K. (2021). *“Hoti”: A flavouring plant*. *Highland Research and Development Institute (HRDI).* Retrieved from https://www.hrdi.or.th/Articles/Detail/1457 (In Thai)

Stevenson, D. (2000). *Monosodium* glutamate and Asthma. Retrieved from https://academic.oup.com/jn/article/130/4/1067S/4686674?login=true

Suda, C., & Duangwongsa, J. (2020). Use of Asplenium unilaterale lam. Leaves instead of MSG in the production of fermented fish seasoning to create a product with good physical characteristics and taste supporting the demand of consumers. *RajabhatMahaSarakham University Journal, 14*(3), 67-76. https://so05.tci-thaijo.org/index.php/rmuj/issue/view/16836 (In Thai)

Thaifern. (2022). *Asplenium*. Retrieved from http://www.thaifern.com/Aspleniaceae/obscurum.htm (In Thai)

Thai Health Promotion Foundation. (2019). *Warning: Eating too much MSG increases risk illness*. Retrieved from https://www.thaihealth.or.th/?p=292009 (In Thai)

Thai Kasetsart. (2012). *Fern: Breeding and planting*. Retrieved from https://www.thaikasetsart.com/ (In Thai)

Wachiramon, W. (2012). *Eating too much MSG causes hair fall, doesn’t it?* Retrieved from https://www.rama.mahidol.ac.th/atrama/issue004/believe-it-or-not (In Thai)

Financial Planning for Royal Thai Naval Cadets to Prepare for Financial Stability

Thawatchai Thianboonsong
Department Of Management Science, Education Branch,
Royal Thai Naval Academy, Thailand
Thawanporn Marin*
Naval Intelligence Department, Royal Thai Navy Academy, Thailand
E-mail: thianboonsong.t@gmail.com and airthawanporn@gmail.com*
*Corresponding author
(Received: 30 April 2023, Revised: 5 July 2023, Accepted: 7 July 2023)
https://doi.org/10.57260/rcmrj.2023.265042

Abstract

In today's world, financial planning is very important due to the volatile economic conditions, higher cost of living and the increase of Bank of Thailand's monetary policy rate. The uncertainty and volatility mentioned above make financial planning even more important, therefore, knowledge in financial planning is extremely important because it helps individuals understand their own financial behavior and attitude towards saving money to achieve their financial goals.

In summary, this research used a questionnaire to examine personal factors and factors related to personal financial planning among Royal Thai naval cadets. It also proposed guidelines for teaching financial planning to cadets at the Royal Thai Naval Academy. The findings emphasized the importance of financial knowledge in understanding financial planning and discipline, particularly to prevent overspending among new naval officers. Key findings include the majority of cadets receiving monthly income from parents in the range of 2,001 – 6,000 baht, active income and expense tracking by most cadets, and good or average levels of financial planning knowledge among them. The study revealed significant correlations between academic year level and factors such as financial support from parents, accounting for income and expenses, and financial knowledge scores. Senior naval students showed higher levels of financial knowledge and better financial management skills compared to junior students.

Keywords: Royal thai naval cadets, Financial planning, Royal thai naval academy, Financial planning, Financial discipline

Introduction

From the situation of the COVID-19 pandemic that occurred in Thailand since March 1st, 2020 (Ministry of Public Health), the aforementioned disease was declared a dangerous disease by Thai Government. Following the outbreak of the disease, the household debt to gross domestic product ratio in Thailand has been on the rise (National Statistical Office Ministry of Digital Economy and Society, 2022). As shown in Figure 1, the ratio increased from 80.3% in the first quarter of 2020 to 83.9% in the second quarter of 2020, and continued to increase steadily until it reached 90.8% in the first quarter of 2021 and remained stable until the fourth quarter of 2021 at 90.1%. It then slightly decreased to 89.2% in the first quarter of 2022 and 88.2% in the second quarter of 2022.

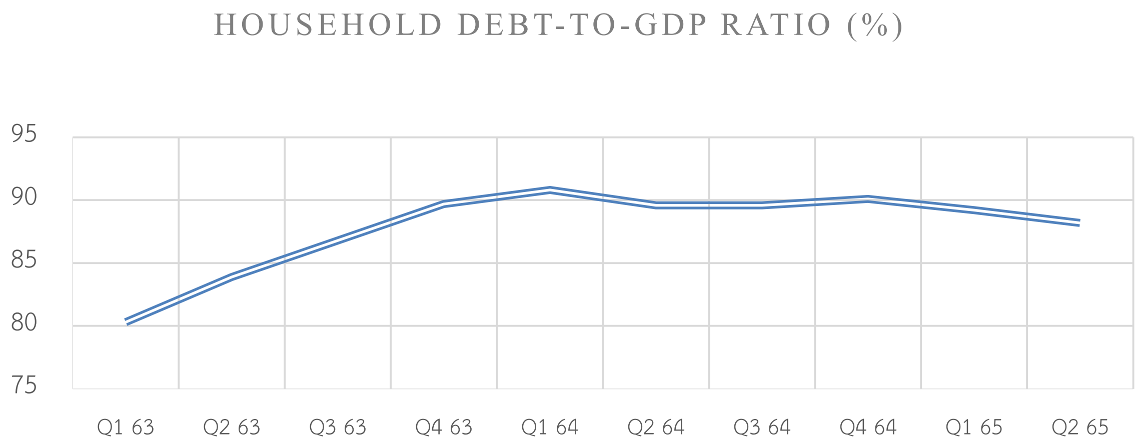


Figure 1 Household Debt-to-GDP Ratio (Percentage)
(Source: National Statistical Office, Ministry of Information and Communication Technology, 2022)

On the other hand, the ratio of Non-Performing Loans (NPL) to Total Loans according to Figure 2 in Q1 2020 was 3.23%, which decreased to 3.12% in Q2 2020 and further decreased to 2.91% in Q3 2020. There was a steady trend until Q3 2021, where the ratio decreased to 2.89%. Then, in Q2 2022, the ratio of non-interest income to total loans decreased even further to only 2.69%.

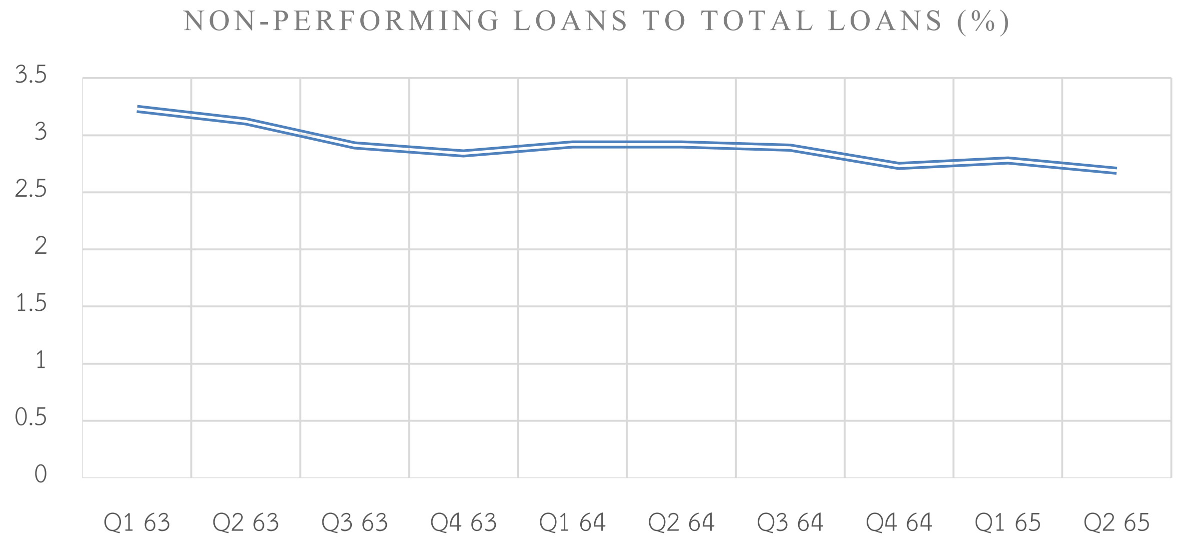


Figure 2 Non-Performing Loans (NPL) to Total Loans (%)
(Source: National Statistical Office, Ministry of Information and Communication Technology, 2022)

It was found that the increase in household debt was accompanied by a decrease in non-performing loan to total loans, resulting from the "Asset Warehousing" project issued by the Bank of Thailand to assist those affected by the COVID-19 outbreak. On March 23, 2021, the Bank of Thailand announced the "Asset Warehousing" project, which allows individuals, companies registered in Thailand and conducting business in Thailand, to apply for the right to participate. Business owners can use their assets as collateral to apply for a loan from a bank and must repay it within 3-5 years after receiving the loan. From this phenomenon, it is accelerating debt from both individuals and corporations to enhance financial liquidity to support their businesses and families, enabling them to continue operating and offering low-interest rates, thanks to the government's assistance. Therefore, when this project ends, these groups may have to find money to repay their debts in order to withdraw their collateral. It is possible that some groups of people may not be able to find collateral to withdraw their collateral or may cause additional debt or refinance for new credit to withdraw their old collateral. In addition, there are other factors that can increase household debt, such as 1.Higher cost of living (Office of Trade Policy and Strategy, Ministry of Commerce, 2023) has led to an increase in general prices. It has been found that the inflation rate, as shown in Figure 3, has been trending upward. During the year 2021, the average general inflation rate was 1.23%. Then, as we entered the year 2022, the general inflation rate showed an increase, with the rate in January 2022 reaching 3.23%. In May 2022, the general inflation rate increased to 7.10%, which was largely due to the impact of the war between Russia and Ukraine on energy prices. It was found that during August 2022, the inflation rate increased further to 7.86%, and then gradually decreased to 5.55% in November 2022. Another factor that contributed to the increase in inflation rate beyond the rise in energy prices was the increase in fresh food prices, especially during August 2022. It was found that the inflation rate for fresh food increased by as much as 10.32%. The impact of COVID-19 on Thai's economy can be seen in various sectors. The pandemic has led to a decline in both domestic and international demand, as well as a decrease in tourism and exports. This has resulted in job losses and reduced incomes for many people.

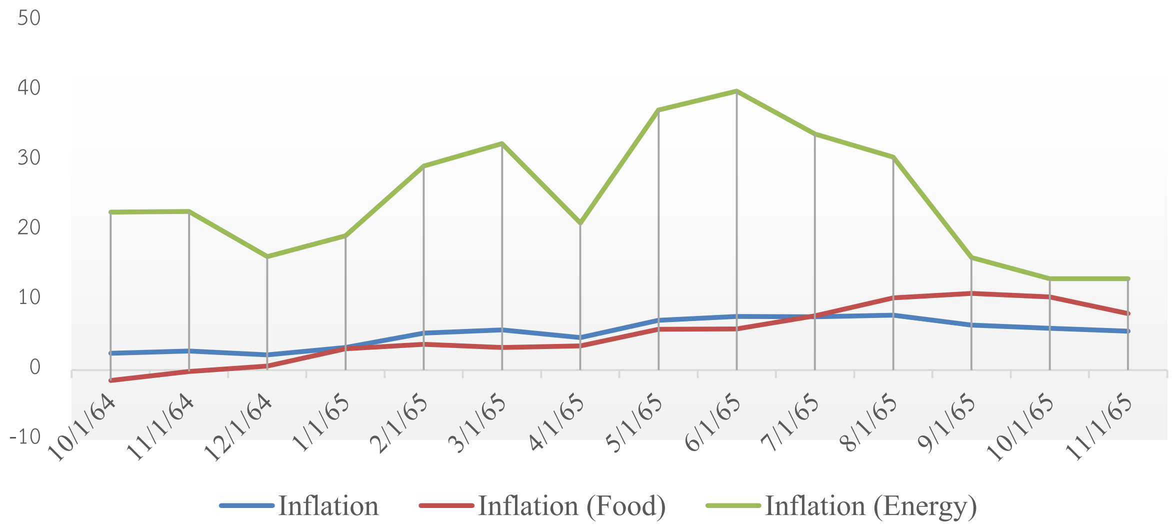


Figure 3 Inflation Rate (%)
(Source: Office of Trade Policy and Strategy, Ministry of Commerce, 2023)

The Bank of Thailand's monetary policy rate increase, as shown in Figure 4, affects the interest rates on all types of deposits and loans. In January 2020, the policy rate was at 1.25% (Bank of Thailand, 2023), then gradually decreased to 0.5% in May 2020, and remained at that rate until the end of July 2021. It then increased to 0.75% in August 2021 and continued to increase to 1.25% in November 2021. The reason for the increase in interest rates is due to the Bank of Thailand's belief that the economy has somewhat recovered and there is a need to reduce the overheating of the economy, as well as to address the rapid increase in inflation. Therefore, when interest rates start to rise, borrowers who have already borrowed money and have necessary repayment installments may be affected by the higher loan interest rates, which may cause them to have to pay additional installment payments. However, if the financial status of the borrowers is still weak, they may not be able to repay their debts, resulting in bad debts and loss of income in the future.

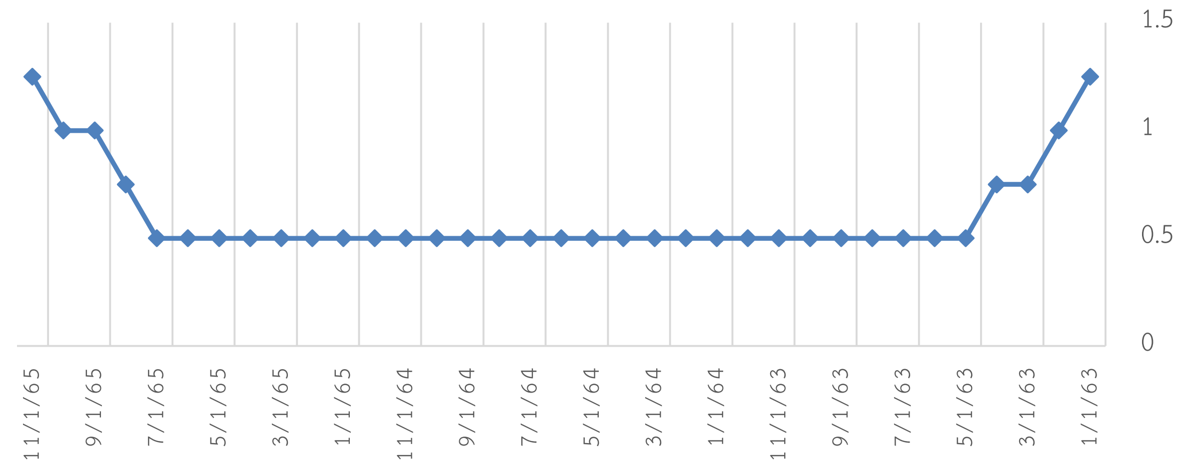


Figure 4 Thailand Monetary Policy Rate (%)
(Source: Bank of Thailand, 2023)

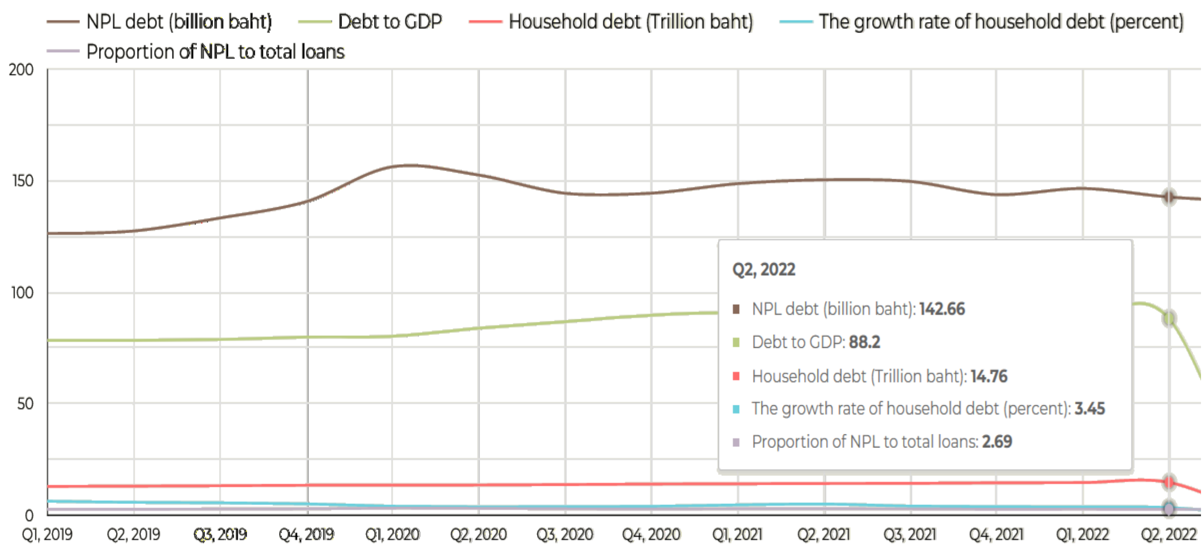


Figure 5 Social Situation and Outlook
(Source: Office of the National Economic and Social Development, 2023)

For the reasons why individuals often neglect financial planning, there are two main causes which can be applied to our research. (Capital Market Development Knowledge Center , 2010)

1) Status and financial position: from a survey, it was found that newly graduated naval officers often think that they do not have enough income to start financial planning, understanding that financial planning is a matter for those with high income or substantial assets. This understanding is incorrect as financial planning is not created for a specific group of individuals but is designed to meet the goals and financial objectives of everyone. Each person can set their own financial goals that can realistically be achieved based on their economic situation and capabilities. and,

2) Misconceptions and beliefs: from the survey, it was found that newly graduated naval officers believe that they already have sufficient benefits and understand that the government's pension system is adequate, and there is no need to save money. This understanding is not entirely correct as financial planning is directly related to situations that are uncertain or risks that cannot be predicted in the future, such as economic conditions, inflation, illness, death, disability, etc."

When a person neglects financial planning, the resulting losses from neglecting financial planning can include: (Capital Market Development Knowledge Center, 2010)

1. Inability to achieve financial goals as desired, which can become a burden for themselves and others in the future. Good goals should be related to good planning. Therefore, setting goals that are too difficult or unrealistic will make it impossible to achieve them. For example, a newly graduated naval officer may want to save ten million baht within three years but finds that his spending behavior is equal to the income he earns. Therefore, the result is that it is possible that he will not be able to achieve the goal of having ten million baht in savings. and,

2. It can cause financial losses, including losing opportunities to earn money for daily living expenses for themselves and their dependents when unexpected events occur in the future, such as illness, serious illness, accidents that result in disability, and even premature death. Neglecting financial planning to cope with unexpected events effectively can impact our loved ones and, furthermore, require individuals to sacrifice time for earning income to take

care of their loved ones who are sick and cannot care for themselves, leading to lost income for their families as well.

The factors that make financial planning increasingly important nowadays include:

1. The expansion of the business scope of larger financial institutions.

2. The complexity of various financial instruments such as debt securities, equities, derivatives, etc.

3. The changing demographic structure of the population, as Thailand enters a complete aging society where people aged 60 years and over make up more than 20% of the total population, and it is expected that by 2031, Thailand will enter the "Super-aged society" level where people aged 65 years and over make up more than 20% of the total population (Department of Mental Health, 2021).

4. Economic crises and uncertainties, such as the ongoing conflict between Russia and Ukraine that affects energy prices and the tensions between China and the United States that lead to shortages in supply chains and inflation, causing central banks to raise interest rates to reduce inflationary pressure, leading to higher interest rates in the money market for both deposit and loan products.

5. The possibility of cancelling full protection of depositors' money by the government in the future. Although currently, the government guarantees deposit up to 1 million baht, this may change in the future.

The Stock Exchange of Thailand and the Thai Financial Planners Association (TFPA) have defined financial planning as the process of achieving an individual's life goals through the proper management and planning of their finances, which are designed to be suitable for each individual. The main reason for financial planning is to create stability and coverage in all aspects of an individual's life, as well as to meet the needs and goals of each individual through a simple financial planning process, which consists of the following steps:

1. Self-assessment,
2. Goal setting,
3. Financial planning,
4. Disciplined execution of the plan, and
5. Regular review and revision of the plan.

Therefore, the lack of knowledge in financial planning can lead to various problems, including excessive debt. The best solution to these problems is to provide financial education, which can be used to plan finances properly and achieve financial goals, ultimately creating financial stability or freedom.

Objectives of the research:

1. To study the personal financial planning components and factors related to personal financial planning of naval cadets.
2. To suggest guidelines for teaching financial planning to naval cadets.

Related theories:

Financial knowledge and understanding

The meaning of financial knowledge: To have a clear understanding of financial planning, it is important to consider the meaning of financial knowledge. The Organization for Economic Cooperation and Development (OECD) in 2005 (Center for Financial Institutions Development, Bank of Thailand, 2013) defined financial literacy as "a combination of awareness, knowledge, skill, attitude and behavior necessary to make sound financial decisions and ultimately achieve individual financial well-being."

Financial planning

The meaning of financial planning: According to Chansawang & Musikapodok (2019), financial planning is a process that sets a direction for the use of personal finances in order to achieve financial goals that are appropriate to personal income, and to create wealth for the future.

Saraphat et al. (2021) summarized that financial planning is a process of Wealth Creation, Wealth Protection, Wealth Accumulation, and Wealth Distribution

Financial Planning Factors

Factors on Financial Planning

Limsuwanroj (2019) states that the most influential factor is income from employment. Individuals who have income from work tend to engage in financial planning more than those who don't. Additionally, attitude towards financial goal setting plays a significant role. Individuals with a positive attitude towards setting financial goals are more likely to exhibit proactive financial planning behavior.

Financial Planning Process

In financial planning, there are four steps that can be divided. (Laokha, 2020) explains the financial planning process as follows:

Step :1 is setting financial goals and life goals. Having life goals will help to determine the direction of each stage of life. Goals must have a specific timeframe and be achievable. If there are multiple goals, they should be prioritized and focus on the most important ones.

Step 2: is studying information related to financial planning. This includes studying personal financial data, spending behavior, age, and responsibilities. The studies include the followings steps:

Step 2.1 Study of Life cycle which refers to the fact that those who are young and working will save up for durable assets, such as a house or car, which have a long-term repayment plan of 5-30 years. This makes it difficult to save or invest in activities that generate additional income.

Step 2.2 Study of Managing Expense, which is a form of making a household budget. This helps to differentiate types of expenses, including past expenses, savings expenses, and asset accumulation expenses. This helps to identify which expenses can be cut to save money for financial planning.

Step 3 is putting the financial plan into writing. A good financial plan should be flexible, changeable, have assets that can be converted into cash quickly, and have a clear understanding of personal spending behavior.

Step 4 is implementing the financial plan. This means putting the financial plan into action, monitoring and adjusting the plan as needed to achieve the desired financial goals.

Research Related Work

Jansawang & Musikapop (2019) conducted a study on the factors influencing personal financial planning behavior of undergraduate students at Siam University. The aim of the study was to investigate the factors that affect the personal financial planning behavior of students. The study was quantitative research, and the hypothesis was tested by multiple regression analysis. The results showed that the factors that influence financial planning behavior include income, savings, investment, and spending, which were statistically significant at 0.05 level.

Suttipongphan (2020) studied the personal financial planning behavior of students at Royal Thai Army School. The study aimed to examine the behavior and propose guidelines for developing financial planning skills for students. The research method was a mixed-methods approach, with the first phase being quantitative and the second phase being qualitative. The results showed that financial planning behavior in four areas, including income, savings, investment, and spending, was significantly higher than that of Thai people. The final year students showed the highest financial behavior. The weaknesses that need improvement are the need to set financial goals for the future and to practice them. The recommended approach is to provide in-depth knowledge in mandatory subjects and organize extracurricular activities to enhance financial planning skills for students in all grades from the first year onwards.

Sarapat et al. (2021) conducted research on personal financial planning of working-age population in Chonburi province. The research aims to compare the differences in types of personal financial management by classifying them according to personal factors, such as age, education level, and average income. The research found that the type of personal financial management was divided into wealth creation by saving money, planning spending, and debt planning. Age, average monthly income, and different levels of education had an impact on the types of financial planning that differed in terms of wealth creation.

Laoka (2020) studied personal financial planning of high-level vocational certificate students at Bangkok Business Administration College, which aimed to plan personal financial management for students by classifying them according to personal factors and studying behavior and factors that influence personal financial planning of students. The sample group included 265 high-level vocational certificate students at Bangkok Business Administration College, who were surveyed using questionnaires. The study found that personal factors, such as gender, age, level of education, and monthly income source, did not affect personal financial planning of students. However, different study majors resulted in different financial planning, and behavior factors influenced personal financial planning of students.

Methodology

This research is quantitative research that collects data within the area of the Royal Thai Navy School. The population is all Navy students in every major and every academic year who are studying in the academic year of 2022, with a total of 430 students. The sample size is calculated using the Krejcie & Morgan sample size formula, with a 95% confidence level requiring at least 204 sample size. And in this research had 218 sample size .

The variables used in this study consist of two parts: the independent variables and the dependent variables. The independent variables include the academic year of the respondents and the amount of money received from their parents. The dependent variables are the income and expense accounting and the scores on financial planning knowledge.

The research tool

The research tool used to collect data is a questionnaire developed by the researchers. The questionnaire is divided into two parts. Part 1 includes personal information, the academic year of the respondent, and the amount of money received from their parents. Part 2 includes income and expense accounting and financial planning knowledge. Likert Scale is used to measure income and expense accounting, with five answer options available. In measuring financial planning knowledge, a true/false option is used. After developing the questionnaire, the researchers had experts examine the validity and quality of the questions. A pilot study was conducted to test the questionnaire on the target group, and the results were analyzed to find the reliability and validity of the questionnaire.

Statistics and Data Collection Methods

Data analysis can be divided into 2 parts:

1. Descriptive Analysis, where individual statistics such as frequency and percentage are used for analysis. For the second part of data analysis, the mean and standard deviation are used.

2. Inferential Analysis, which is used to find the relationship between groups of data using One-Way ANOVA and Pearson Correlation statistics.

In data collection, the researcher conducted a questionnaire survey to the target group, which is a population of naval cadet students. The survey was conducted during two time periods, namely during class hours and after class hours, and the data collection was done after explaining the questionnaire and answering any questions from the target group to ensure mutual understanding.

Results

From the study of individual data, it was found that the respondents belonged to the following classes: 52 first-year students, 29 second-year students, 92 third-year students, and 45 fifth-year students, totaling 217 students.

Table 1 Monthly income from their parents

Monthly income from parents (Baht)	Percentage
None	12.60
0-2,000	19.50
2,001 – 4,000	22.80
4,001 – 6,000	22.30
6,001- 8,000	9.80
8,001 – 10,000	4.20
More than 10,000	8.80

From the table 1 it was found that most naval cadets received a monthly income from their parents of 2,001 – 6,000 baht, totaling 45.1%. The second majority income received from parents per month is 0 – 2,000 baht, at 19.5%.

Table 2 The percentage breakdown of accounting income and expenses of Royal Thai naval cadets

Income and Expense Accounting	Percentage
Everyday	13.90
Mostly	7.40
Sometimes	36.10
Used to do in the past	21.80
Never	20.80

From the table 2, it was found that most Royal Thai naval cadets keep track of their own income and expenses, with 36.1% doing so, while the next level down is those who used to keep track but no longer do, accounting for 21.8%.

Table 3 Univariate Analysis Comparing Average Financial Planning Knowledge Scores Among Academic Years

ANOVA					
	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Between Groups	21.371	3	7.124	8.820	0.000
Within Groups	171.221	212	0.808		
Total	192.593	215			

From the table 3, the results of hypothesis testing show that the differing academic year levels of naval cadets have a statistically significant impact on their financial planning knowledge scores, with a significance level of 0.01.

Table 4 Post Hoc Comparison of Pairwise Differences in Financial Planning Knowledge Scores among Academic Years

Post Hoc test

Academic year		**Subset for alpha = 0.05**	
		1	2
Tukey HSD[a,b]	1	3.44	
	3	3.54	
	2	3.62	
	5		4.29
	Sig.	0.777	1.000

From the table 4, it was found that first-year, second year, and third-year naval cadets have similar average scores within the same subgroup. Additionally, fifth-year cadets were grouped separately, as indicated in Table 1.4. Therefore, it can be concluded that there are significant differences in financial planning knowledge between the two groups of cadets.

Table 5 Analysis and report of the financial planning knowledge scores classified by the academic year of the naval cadets

Personal factors	**Academic year level**	
	Pearson Correlation	**significance**
Monthly income from their parents	.161	.018*
Income and Expense Accounting.	.165	.015*
Financial planning knowledge level	.290	.000**

From the table 5, the following relationships were analyzed and reported: the academic year of the Royal Thai naval cadets and personal factors of the Royal Thai naval cadets, specifically the factor of income received from parents, have a Significance value of 0.018, which is less than 0.05, indicating a statistically significant correlation between academic year and income received from parents, with a Pearson Correlation of 0.161.

Academic year level of Royal Thai naval cadets and personal factors of Royal Thai naval cadets are related to accounting for income and expenses, with a Significance value of 0.015, which is less than 0.05. This means that the year level factor has a statistically significant relationship with accounting for income and expenses, with a Pearson Correlation coefficient of 0.16.

Academic year level of Royal Thai naval cadets and personal factors of Royal Thai naval cadets are also related to financial knowledge scores, with a Significance value of 0.000, which is less than 0.01. This means that the Academic year level factor has a statistically significant relationship with financial knowledge scores, with a Pearson Correlation coefficient of 0.290.

Discussions

The study of personal financial planning factors and their relationship to personal financial planning of Royal Thai naval cadets found that the academic year level has a correlation with the amount of money received from parents. As the academic year level increases, the tendency to receive more financial support from parents also increases. This is because being a naval student in a higher grade level allows for more personal time and more opportunities to return home to visit family and relatives, which is different from lower-academic year level naval students who must undergo Navy training during holidays and participate in more rigorous training activities than those outlined in the school curriculum in 2020, therefore, when naval students have the opportunity to advance to the next academic year level, they begin to have more personal time and chances to create social networks or relationships with their preferred groups of people, leading to higher expenses. This aligns with research on factors influencing the expenses of Bangkok residents (Kitchainukul, 2014), which found that transportation and communication expenses are the highest expenses for Bangkok residents. Personal income factors have a significant statistical impact on expenses across all categories. Additionally, a study by Ratanaphaijit (2021) states that living in society and interacting with various people, especially students who must encounter a diverse group of people, leads to learning and personal development. From the aforementioned factors, it was found that as naval students' study at higher academic year levels, they have an increased need for socializing and therefore require more financial support from their parents or guardians.

Factors related to grade levels are associated with the accounting of income and expenses. It is found that when students have opportunity to meet with society outside of school, they often incur expenses. Awareness of controlling expenses to plan their own finances is therefore important. Research by Ruengrat (2018) stated that the purpose of accounting for income and expenses in households of working people in the Bangkapi area of Bangkok is to control income and expenses in the household, which benefits the accounting of income and expenses in the household. This enables the knowledge of income, expenses, and various debts that arise to be known. In the current economic situation, it is important to pay attention to the accounting of income and expenses in households by accounting for income and expenses in households, which leads to increased savings. Therefore, once Royal Thai naval cadets acquire financial knowledge through their studies, they gain a heightened understanding of the significance of financial management and become better equipped for achieving financial stability.

Factor of academic year level is related to the financial knowledge score of Royal Thai naval cadets. The curriculum of the Royal Thai Navy School 2020 from education department consists of teaching finance and banking by starting from academic year 2 to academic year 5, therefore, senior Naval students have more financial knowledge than younger students. Research by Kraisongkram & Kao-iean (2022) found that financial experiences of students have significant statistical effects on financial literacy. Additionally, the financial literacy of teachers directly affects the learning management process of financial literacy. If teachers have good financial knowledge, they will have the ability and confidence to teach financial literacy to students appropriately and efficiently (Deng et al., 2013; Eberle, 2016). Furthermore, Pongchai et al. (2022) mentioned that comparing the financial literacy of students before and after studying economics through online coaching activities during the COVID-19 crisis on saving and investment promoted the financial literacy of grade 10 students significantly, according to statistics. Sakonwat (2019, p.130) proposed in a research paper on the development of a learning activity set in economics using the concept of visual learning to enhance financial literacy of lower secondary school students. The results showed that the students had higher academic performance or financial literacy after participating in the program. Additionally, the students had the opportunity to work in groups with their peers, which led to collaborative learning and knowledge and opinion exchange among them. The research conducted by Thongphuak (2018, p.124) on the effect of teaching economics using simulation games on high school students' financial literacy found that the financial literacy of the students improved significantly after the program with a statistical significance level of .05.

Conclusion and suggestions

The study titled "Financial Planning for Royal Thai Naval Cadets to Prepare for Financial Stability " utilized a questionnaire to investigate personal factors and factors related to personal financial planning of Royal Thai naval cadets, with the aim of identifying components and suggesting guidelines for teaching financial planning. The study revealed that personal factors and factors related to personal financial planning, including academic year level, have a correlation with the amount of financial support received from parents. As academic year level increases, so does the likelihood of receiving financial support from parents. Additionally, factors related to academic year level are linked to the management of income and expenses, with higher academic years exhibiting better financial management skills. The study also found a correlation between academic year level and the financial knowledge score of naval cadets, with senior naval students displaying greater financial knowledge than their junior counterparts.

Suggestions

Based on the findings of the research, the following suggestions can be made to improve financial planning and financial discipline among Royal Thai naval cadets:

• Incorporate Financial Education: Implement a structured financial education program within the curriculum of the Royal Thai Naval Academy. This program should cover topics such as budgeting, saving, investment, debt management, and financial goal setting. Providing cadets with essential financial knowledge and skills will better equip them for managing their finances effectively.

• Promote Active Income and Expense Tracking: Encourage all naval cadets to actively track their income and expenses. This can be done through the introduction of digital tools or budgeting apps that facilitate easy tracking and analysis of personal finances. Regularly monitoring their financial transactions will help cadets develop a better understanding of their spending habits and make necessary adjustments.

• Foster Parental Involvement: Encourage open communication between naval cadets and their parents regarding financial matters. Encourage parents to support their children in developing financial independence and responsibility. This can include discussions about financial support, setting realistic financial expectations, and promoting healthy financial habits.

• Progressively Enhance Financial Knowledge: Provide continuous financial education and workshops throughout the academic years, focusing on building upon the foundational financial knowledge provided to junior cadets. This will enable them to deepen their understanding of financial concepts and apply them in practical scenarios.

• Integrate Practical Exercises: Include practical exercises and simulations in the financial education program. This can involve creating sample budgets, investment portfolios, or financial plans. Such exercises will allow naval cadets to apply their financial knowledge in a practical and realistic setting, preparing them for real-life financial decision-making.

• Provide Mentorship and Counseling: Establish mentorship programs or offer individual counseling sessions to support naval cadets in their financial planning journey. Experienced financial advisors or mentors can provide guidance, answer questions, and address any concerns related to personal finance.

For our upcoming research project, we plan to include fourth-year students in our study group. We will gather information about the fourth-year students to ensure that we have the most comprehensive and complete data for our research.

New knowledge and the effects on society and communities

Financial knowledge and planning can help individuals make informed decisions about their finances and achieve their financial goals, such as saving for retirement, buying a home, or starting a business. By developing good financial habits, individuals can avoid debt, build wealth, and contribute to the economy through spending and investment.

This study can help promote financial literacy and education, which is essential for long-term financial stability and security. By teaching individuals how to manage their finances effectively, we can reduce financial stress, improve economic well-being, and reduce income inequality.

Better personal financial planning can have a ripple effect on society by improving financial stability within families and communities. When individuals are financially secure, they are better able to support their families, contribute to their communities, and take on roles as responsible citizens.

Overall, the new knowledge of personal financial planning has the potential to promote financial well-being and create a more financially stable and prosperous society.

References

Bank of Thailand. (2013). *Center for Financial Institution Protection*. Retrieved from https://www.1213.or.th/th/flsurveyreport/2013ThaiFLsurvey.pdf (In Thai)

Capital Market Development Knowledge Center. (2010). *Resulting of losses from neglecting financial planning*. Stock Exchange of Thailand. Capital Market Development Knowledge Center Stock Exchange of Thailand. (In Thai)

Capital Market Development Knowledge Center. (2010*). Why individuals often neglect financial planning. Stock Exchange of Thailand*. Capital Market Development Knowledge Center Stock Exchange of Thailand. (In Thai)

Chansawang, T., & Musikapodok, P. (2019). Factors Influencing Personal financial planning behavior of undergraduate Students Siam University, *11th national academic conference of 2019 (Professional management in a disruptive world), 19*(1), 154-161. http://e-research.siam.edu/wp-content/uploads/2019/04/MBA-2018-IS-Factors-Influencing-Personal-financial-planning-behavior-of-undergraduate-Students-Siam-University.pdf (In Thai)

Deng, H.-T., Chi, L.-C., Teng, N.-Y., Tang, T.-C., & Chen, C.-L. (2013). Influence of Financial Literacy of Teachers on Financial Education Teaching in Elementary Schools. *International Journal of e-Education, e-Business, e-Management and e-Learning, 13*(3), 68-73. http://www.ijeeee.org/Papers/195-K10068.pdf (In Thai)

Department of Mental Health of Thailand. (2021). *Super-aged society*. Retrieved from https://dmh.go.th/news-dmh/view.asp?id=30453. (In Thai)

Eberle, D. H. a. F. (2016). *Teacher's Financial Literacy From a Swiss Perspective*. International Handbook of Financial Literacy. Singapore: Springer.

Kitchainukul, P., & Siripanit, P. (2014).The Factors Influence to Expense of Residents in Bangkok. *Chandrakasem Rajabhat University Journal, 20*(38), 97-105. https://li01.tci-thaijo.org/index.php/crujournal/article/view/28792/24771 (In Thai)

Kraisongkram, P., & Kao-iean, S. (2022). Factors Affecting Financial Literacy of Grade 10-12 Students: Multilevel Structural Equation Model Analysis. *Neu academic and research journal, 22*(4), 28-40. https://so04.tci-thaijo.org/index.php/neuarj/article/view/259249/176701 (In Thai)

Limsuwanroj, T. (2019) *FinancialPlanning of High School student in Bangkok*. Thesis Applied Statistics National Institute of Development and Administration. (In Thai)

Laokha, R. (2020). *Personal Financial Planning of Higher Vocational Certificate Bangkok Technical of Business Administration Vocational College*. (Master Degree of Business Administration, Ramkhamhaeng University). Retrived from https://mmm.ru.ac.th/MMM/IS/twin92/6214154730.pdf. (In Thai)

Jansawang, T., & Musikapop, P. (2019) *Factors Influencing Personal financial planning behavior of undergraduate Students Siam University*., Retrived from https://shorturl.at/fvS07

National Statistical Office of Thailand. (2022). *Survey Report*. Retrieved from https://www.1213.or.th/th/flsurveyreport/2013ThaiFLsurvey.pdf (In Thai)

National Statistical Office, Ministry of Information and Communication Technology of Thailand. (2022). *Non-Performing Loans (NPL) to Total Loans*. Retrieved from http://statbbi.nso.go.th/staticreport/page/sector/th/18.aspx. (In Thai)

National Statistical Office, Ministry of Information and Communication Technology of Thailand. (2023). *Household Debt-to-GDP Ratio*. Retrieved from https://catalog.nso.go.th/dataset/os_08_00011. (In Thai)

Office of the National Economic and Social Development. (2023). *Social Situation and Outlook*. Retrieved from https://datastudio.google.com/u/0/reporting/9d046562-d859-4b72-85b1-64f814edad 34/page/p_1x26moa1wc (In Thai)

Office of Trade Policy and Strategy, Ministry of Commerce of Thailand. (2023). *Inflation Rate*. Retrieved from http://www.indexpr.moc.go.th/price_present/cpi/stat/others/report_core1.asp?tb=cpig_index_country&code=93&c_index=a.change_year (In Thai)

Pongchai, Y., Jantakoon, J., & Onthanee, A. (2003). The Development of Economics Learning Activities by Using Online Coaching Process During COVID-19 Crisis to Enhance Financial Literacy for Eight Grade Student. *Journal of Roi Kaensarn Academic, 23*(8), 43-60. https://so02.tci-thaijo.org/index.php/JRKSA/article/download/258851/175266/1006882 (In Thai)

Ratanaphaijit, N., Keiwrod, R., & Nuang-Uthai, T. (2021). Factors Affecting their Health Tourism Behavior in Nakhon Si Thammarat Province. *Ph.D. in Social Sciences Journal, 9*(3), 692-704. https://so05.tci-thaijo.org/index.php/sikkha/article/view/242847 (In Thai)

Ruangrat, E. (2018). *Factors Affecting Workers Behavior in Recording of Household Income and Expense Accounts and Guidelines*. A Case Study in Bangkapi Bangkok Metropolitan. (Master of Accountancy Program, University of the Thai Chamber of Commerce). https://searchlib.utcc.ac.th/library/onlinethesis/305271.pdf (In Thai).

Sakondhawat, K. (2020). The Development of the Economic Learning Activity Package Using Scenario-based Learning to Promote the Financial Literacy of Lower Secondary School Students. *Silpakorn Educational Research Journal, 20*(2), 34-52. https://so05.tci-thaijo.org/index.php/suedureasearchjournal/article/download/241497/168786 (In Thai)

Saraphat, S., Inlakorn, S., & Chinnachot, C. (2021). Personal Financial Planning for Working Age Population in Chonburi. *Journal of Roi Kaensarn Academ, 7*(3), 218-234. https://so02.tci-thaijo.org/index.php/JRKSA/article/view/252661 (In Thai)

Suttipongphan, A. (2020). Personal Financial Planning Behaviour of Cadets in Chulachomklao Royal Military Academy. *Journal of Yala Rajabhat University, 21*(3), 357-366. https://so04.tci-thaijo.org/index.php/yru_human/article/view/244555 (In Thai)

The Bank of Thailand. (2023). *The Bank of Thailand's monetary policy rate*. Retrieved from https://www.bot.or.th/thai/statistics/_layouts/application/interest_rate/in_rate.aspx (In Thai)

The Organization for Economic Cooperation and Development (OECD). (2005). *Financial literacy definition.* Retrieved from https://www.oecd.org/finance/financial-education/49319977.pdf (In Thai)

Thongphuak, P. (2018). *Effects of Economics Instruction by Using Simulation Games on Financial Literacy of Upper Secondary School Students*. (Degree of Master of Education in Curriculum and Instruction, Chulalongkorn University). Retrived from http://cuir.car.chula.ac.th/handle/123456789/61393. (In Thai)

Reviewers

Professor Dr. Andreas Zins	Modul University, Vienna, Austria
Asst. Prof. Dr. Wantanee SantiKul	Hong Kong Polytechnic University
Assoc. Prof. Dr. Lamphoune Xayvongsa	University of Laos
Prof. Dr. Kittichai Wattananikorn	Chiang Mai University
Prof. Dr. Aree Wiboonpong	Chiang Mai University
Prof. Dr. Saisamorn Lamyong	Chiang Mai University
Prof. Amnuay Khanunthai	Chiang Mai University
Assoc. Prof. Dr. Aworn Opaspatanakit	Chiang Mai University
Assoc. Prof. Dr. Wiboon Rattanapanon	Chiang Mai University
Assoc. Prof. Dr. Sompong Wittayasakphan	Chiang Mai University
Assoc. Prof. Dr. Thanet Sriwichailamphun	Chiang Mai University
Assoc. Prof. Dr. Somsak Phuwiphadawat	Chiang Mai University
Assoc. Prof. Dr. Tawatchai Ratchalet	Chiang Mai University
Assoc. Prof. Dr. Patcharin Raweyan	Chiang Mai University
Assoc. Prof. Teeraphat Wannarumon	Chiang Mai University
Assoc. Prof. Dr. Rawee Longkanee	Chiang Mai University
Assoc. Prof. Dr. Yuwadee Peerapornpisan	Chiang Mai University
Assoc. Prof. Dr. Pisit Singjai	Chiang Mai University
Assoc. Prof. Dr. Patchara Tantiprapha	Chiang Mai University
Assoc. Prof. Dr. Ekarat Boonchiang	Chiang Mai University
Assoc. Prof. Dr. Prut Boonsritan	Chiang Mai University
Assoc. Prof. Dr. Nisit Pantamit	Chiang Mai University
Assoc. Prof. Dr. Roengchai Tansuchat	Chiang Mai University
Assoc. Prof. Dr. Karun Panyo	Chiang Mai University
Assoc. Prof. Dr. Chetthapoom Wannapaisan	Chiang Mai University
Assoc. Prof. Petai Pongpiechan	Chiang Mai University
Assoc. Prof. Thanakorn Changnoi	Chiang Mai University
Assoc. Prof. Pairat Trakarnsirinon	Chiang Mai University
Assoc. Prof. Siripong Ladawan Na Ayutthaya	Chiang Mai University
Assoc. Prof. Orachon Maneesang	Chiang Mai University
Assoc. Prof. Somchai Prichasilpakul	Chiang Mai University
Assoc. Prof. Suwanna Laohavisut	Chiang Mai University
Assoc. Prof. Uthen Panyo	Chiang Mai University
Asst. Prof. Dr. Chitchon Phalarak	Chiang Mai University
Asst. Prof. Dr. Nongluck Kienngam	Chiang Mai University
Asst. Prof. Dr. Preecha Jengcharoen	Chiang Mai University
Asst. Prof. Dr. Wasan Jomphakdee	Chiang Mai University
Asst. Prof. Dr. Watcharapong Thatchayapong	Chiang Mai University
Asst. Prof. Dr. Adisak Teeranupattana	Chiang Mai University
Asst. Prof. Dr. Decha Tapanya	Chiang Mai University
Asst. Prof. Dr. Angkana Inta	Chiang Mai University
Asst. Prof. Dr. Kanokporn Saenphet	Chiang Mai University
Asst. Prof. Dr. Wirot Inthanon	Chiang Mai University
Asst. Prof. Dr. Pailin Phucheenaphan	Chiang Mai University
Asst. Prof. Dr. Boonrod Chotivachira	Chiang Mai University
Asst. Prof. Dr. Soonthornpoj Damrongpanich	Chiang Mai University
Asst. Prof. Dr. Somkiat Inthasing	Chiang Mai University
Asst. Prof. Dr. Kanithep Pituphumnak	Chiang Mai University
Asst. Prof. Dr. Nannaphat Saenghong	Chiang Mai University
Asst. Prof. Dr. Than Thongong	Chiang Mai University
Asst. Prof. Dr. Supat Chupradit	Chiang Mai University
Asst. Prof. Dr. Uraiwan Hanwong	Chiang Mai University
Asst. Prof. Dr. Pitchayaluck Pitchayakul	Chiang Mai University
Asst. Prof. Traci Morachnick	Chiang Mai University
Assoc. Prof. Dr. Niwut Wangchai	Maejo University
Assoc. Prof. Chakrabhop Wongkrang	Maejo University
Assoc. Prof. Chakrapong Phuangngamchuen	Maejo University
Asst. Prof. Dr. Phahon Sakkatat	Maejo University
Asst. Prof. Dr. Nikran Homduang	Maejo University
Asst. Prof. Dr. Nuenghathai Chaiaporn	Maejo University
Asst. Prof. Dr. Yupayao Kophimai	Maejo University
Asst. Prof. Dr. Rojaphan Niransilp	Maejo University
Asst. Prof. Dr. Thadpong Avirothananon	Maejo University
Asst. Prof. Dr. Teeraphon Senphan	Maejo University
Assoc. Prof. Dr. Montree Yamkasikorn	Burapha University
Asst. Prof. Dr. Chantana Kochaprasert	Burapha University
Assoc. Prof. Dr Montri Wongsaphan	Mahasarakham University
Asst. Prof. Dr. Kanokporn Ratanasutirakul	Mahasarakham University
Asst. Prof. Dr. Prasong Saihong	Mahasarakham University
Assoc. Prof. Dr. Yothin Sawangdee	Mahidol University
Assoc. Prof. Dr. Kian Wantaneetrakul	Mahamakut Wittayalai University Lanna Campus
Assoc. Prof. Dr. Kosum Saijai	Suan Dusit Rajabhat University
Asst. Prof. Dr. Atchariya Suriyawong	Chulalongkorn University
Assoc. Prof. Dr. Suchart Saengthong	Nakhon Sawan Rajabhat University
Asst. Prof. Dr. Bulrat Sitthiphong	Sirimangkhalanusorn School

Assoc. Prof. Pilai Lertpongpirun	Chiang Mai Rajabhat University
Asst. Prof. Dr. Sittichai Saiam	Chiang Mai Rajabhat University
Asst. Prof. Dr. Suthinan Chuenchuen	Chiang Mai Rajabhat University
Asst. Prof. Dr. Pitchinee Chomphamkham	Chiang Mai Rajabhat University
Asst. Prof. Dr. Samnuo Muencham	Chiang Mai Rajabhat University
Asst. Prof. Dr. Kamolthip Khamjai	Chiang Mai Rajabhat University
Asst. Prof. Dr. Chakpruon Wichaakarawit	Chiang Mai Rajabhat University
Asst. Prof. Dr. Saifon Saenjaiprom	Chiang Mai Rajabhat University
Asst. Prof. Dr. Niraporn Chaiwang	Chiang Mai Rajabhat University
Asst. Prof. Dr. Puangpayom Chitthong	Chiang Mai Rajabhat University
Asst. Prof. Dr. Kamalanut Phonwan	Chiang Mai Rajabhat University
Asst. Prof. Dr. Pathamarat Naknitthanon	Chiang Mai Rajabhat University
Asst. Prof. Dr. Nakarin Pribwai	Chiang Mai Rajabhat University
Asst. Prof. Dr. Suparerk Taraphithakwong	Chiang Mai Rajabhat University
Asst. Prof. Manop Choom-Um	Chiang Mai Rajabhat University
Asst.Prof. Att Achariyamontri	Chiang Mai Rajabhat University
Asst.Prof. Suphanit Jansong	Chiang Mai Rajabhat University
Dr. Saran Chinacharoen	Chiang Mai Rajabhat University
Assoc. Prof. Dr Physics Sean Buakanok	Lampang Rajabhat University
Asst. Prof. Dr. Panatanon Thienpraphakul	Lampang Rajabhat University
Asst. Prof. Dr. Pongwat Fongkanta	Lampang Rajabhat University
Asst. Prof. Dr. Budsarakam Intasuk	Lampang Rajabhat University
Asst. Prof. Dr. Yaowathiwa Namkhun	Lampang Rajabhat University
Asst. Prof. Dr. Chatsuda Maya	Lampang Rajabhat University
Asst. Prof. Nattapong Kantaros	Lampang Rajabhat University
Asst. Prof. Dr. Piyaporn Tanneekul	Nakhon Pathom Rajabhat University
Assoc. Prof. Udomsak Saributr	King Mongkut's Institute of Technology Army Officer Ladkrabang
Asst. Prof. Dr. Kritchao Nantasudsawaeng	King Mongkut's University of Technology North Bangkok
Asst. Prof. Dr. Juthasinee Thanyapraneetakul	Thammasat University
Assoc. Prof. Dr. Suchitra Rodsombun	Pensioner
Assoc. Prof. Dr. Jaturong Hemra	National Sports University Lampang Campus
Asst. Prof. Dr. Pattana Bunyaprapha	Nation University
Asst. Prof. Dr. Gayoon Wongkom	Suan Dusit University
Asst. Prof .Dr. Jesada Mingchai	Uttaradit Rajabhat University
Assoc. Prof. Dr. Thanet Phongteerat	Rangsit University
Assoc. Prof. Dr. Suthiporn Boonmark	Thaksin University
Asst. Prof. Dr. Watcharawit Wiyaporn	Rajamangala University of Technology Krungthep

Rajabhat Chiang Mai Research Journal is a Journal to support academic work for society

Aim and scope to publish articles that are beneficial to society or locality in Social Sciences & Humanities, with 5 sub-subject. 1) General Social Sciences 2) Development 3) Education 4) Political Science and International Relations 5) General Business, Management and Accounting, which can be shown that it is able to solve problems or improve society, community and locality. Moreover, it clearly brings benefits, or changing in awareness and perception of problems and solutions of community and locality, with research elements that indicate the spatial change condition of community and society. It is the participatory research and accepted by society. It is the research that uses knowledge or proficiency, which transforming in the better way, or it can be anticipated. Evaluate changing results and propose guidelines for social development, community and local to be sustainable.

Journal format

1. Issued 3 editions per year:
   1st Issued January – April,
   2nd Issued May - August
   3rd Issued September – December
2. Published articles must be considered by 3 experts per subject, who are outsiders from various institutions. Whereas, the experts do not know the names of the authors, and the authors do not know the names of the experts (Double-blind Peer Review)
3. Chiang Mai Rajabhat Research Journal has created 2 forms:
   - Electronic format (Online) published since 2018 (Year 19, 1st Issue), ISSN 2651-2068 (Online)
   - Publication format (Print) published the first issue year 2000 to 2019 ISSN 1513-8410 (Print)

Journal template / research articles

The editorial team has established regulations of manuscript submission for the authors to use as the guidelines of submitting manuscripts for publication. "Chiang Mai Rajabhat Research Journal". The editors can review the manuscript before publication for the quality of the journal, and can be used as references. By the way, Chiang Mai Rajabhat Research Journal is the support academic work for society by setting aim and scope. To publish articles that are beneficial to society or localities in Social Sciences & Humanities with 5 sub-subject. 1) General Social Sciences 2) Development 3) Education 4) Political Science and International Relations 5) General Business, Management and Accountin s, which can be shown that it is able to solve problems or improve society, community and locality. Moreover, it clearly brings benefits, or changing in awareness and perception of problems and solutions of community.

Preparation for the original article, the details are as follows

Title of the Paper (Times New Roman, 16 pt, **Bold**)

First name Last name* (Times New Roman, 14 pt, **Bold**)

Full Affiliation (Times New Roman, 12 pt, Italic)

(E-mail: e-mail) (Times New Roman, 12 pt, **Bold**)

(Received: xxx, Revised: xxx, Accepted: xxx) (Times New Roman, 10 pt, Italic)

Abstract Text (Times New Roman, 12 pt, Tab 0.8 cm)

It Is a summary of the main point, type of research, research objective, research methodology. Summarize the research results in a concise, clear and a new knowledge including things that will effect society and local community. Identify important statistics. Use concise language in complete sentences and prose, not divided into sections. The abstract in both Thai and English should not exceed 1/2 page of A4 size paper, and specify

Keywords: Keyword, Keyword, Keyword, Keyword, Keyword (Times New Roman, 12 pt; 5-7 keywords/phrases)

Introduction: Text (Times New Roman, 12 pt, Tab 0.8 cm)

Write the background and importance of the problem. Theoretical concepts used, objectives and advantages.

Methodology: Text (Times New Roman, 12 pt, Tab 0.8 cm)

Describe the instruments and equipment used in the experiment, and describe the experimental study methods. Population and sample, research method, research instruments, data collection and data analysis.

Results: Text (Times New Roman, 12 pt, Tab 0.8 cm)

Writing a study proposal should be concise and show research results clearly.

Discussion: Text (Times New Roman, 12 pt, Tab 0.8 cm)

Writing discussions of study results is to clarify the research results whether it corrects according to the objectives, research hypothesis. It is consistent or inconsistent with previous research of others, how and for what reason. Compare or interpret to emphasize the importance of the research and summarize as easy as possible.

Conclusion and suggestions: Text (Times New Roman, 12 pt, Tab 0.8 cm)

Write a summary of the main points of the research whether it corrects to the objective or not, by focusing on the problems or argument in the main points including useful suggestions.

New knowledge and the effects on society and communities: Text (Times New Roman, 12 pt, Tab 0.8 cm)

Write a summary of the new knowledge that happened, and the effects on the society, local and communities.

Acknowledgement: Text (Times New Roman, 12 pt, Tab 0.8 cm)

May or may not be there. It was an expressing gratitude to those who contributed to the research, but not the participants in the research.

References: Text (Times New Roman, 12 pt, Tab 0.8 cm)

There should be at least 15 items. (To cite an article from a journal, include a link to that article at the end.)

Reference writing example /References in content

American Psychological Association (APA) 6th edition writing format, by inserting a references to the content. Specify the surname of author, year of publication, and reference page number.

The case the author is Thai such as Paisan Worakham (2561, p.12) type as Worakham (2018, p.12).

The case the author is foreigner such as Barrows, H.S. & Tamblyn, R.M. (1980) type as Barrows & Tamblyn (1980).

The case any author such as Elmastas, M., lsildak, O., Turkekul, I., & Temur, N. (2007). type as Elmastas et al. (2007)

Format for writing bibliography / reference lists

1. Writing the references, sort all references that use for referencing in the first alphabetical order of the reference list by dictionary order.
2. There is a writing style, American Psychological Association (APA) 6th edition. Provide references in English for all types of references list. To prepare to enter Asean Citation Index (ACI). Thai references list must be translated into English and the suffix parenthesis (In Thai) (In the case of Thai references include the Thai reference at the end of the line, for the editors to review translation accuracy into English.

Details of writing a bibliography / references

1. Journal (References journal that up-to-date/most current)

(General Format)

Surname, /the first letters of the name. /(Year of publication). /Title of article, /Title of journal/Year of journal (issue), Page Number Starting - Page number ending.

The case the author is Thai author

Author. (Year). Title of article. *Title of Journal*, *Volume*(Issue), Page numbers. (In Thai)

Wattanalaungarun, W., Sa-ingthong, K., & Chaiwoot, A. (2019). Study for Uniqueness in Tourism Base on Sustainable Tourism Management, Mae Rim District Chiang Mai Province. *Rajabhat Chiang Mai Research Journal, 20*(2), 53-68. (In Thai) Url of web

The case the author is foreigner

Elmastas, M., lsildak, O., Turkekul, I., & Temur, N. (2007). Determination of antioxidant activity and antioxidant compounds inwild edible mashroom. *Food Composition and analysis*, *20*(1), 337-345. https://www.abc.ac.th/article12345

2. Book

Surname. (Year of publication). Title of book. (Edition). Place: Publisher

The case the author is Thai

Author. (Year). *Translated Title*. Place: Publisher. (In Thai)

Rangkhakunnuwat, P. (2013). *Time Series Analysis for Economics and Business*. (4thed.). Bangkok: Chulalongkorn University Printing House. (In Thai)

The case the author is foreigner

Courtney, T. K. (1965). *Physical Fitness and Dynamic Health*. New York: McGrew-Hill Inc.

3. Thesis (If the that subject has an article in journal use references from the journal)

Surname. (Year of publication). Title of dissertation / Independent research. (Degree, University).

The case the author is Thai

Author. (Year). *Translated Title of dissertation*. (Doctoral dissertation or Master's thesis, University). (In Thai)

Sunretphol, N. (2004). *A Development of Educational Indicators for Lifelong Learning*. (Ph.D., Srinakharinwirot University). (In Thai)

The case the author is foreigner

Magyar, C. E. (2014). *The discourse of tourism and national heritage: A contrastive study from a cultural perspective*. (Doctorial's thesis, University of Madrid).

4. **Electronic media** (Refer to only up-to-date information/ Up-to-date such as Population statistic etc.)
Surname. (Year of publication). Title. Retrieved from the title of website

The case the author is Thai

Author. (Year). *Translated Title*. Retrieved from URL (In Thai)

National Statistical Office. (2019). Survey of Working Situation of Population 2019. Retrieved from http://www.nso.go.th/sites/2014 (In Thai)

The case the author is foreigner

Rankin, E. (2013). Residential school survivor says he was starved CBC NEWS. Retrieved from https://www.cbc.ca/news/canada/british-columbia/b-c-residential-school-survivor-says-he-was-starved-1.1317712

Original submission

Submit the original printed according to the journal format specification https://www.tci-thaijo.org/index.php/cmruresearch/index

Original article assessment

Manuscripts must be reviewed by the experts (Peer Review) from outside the university in that field of study, 3 experts per subject, who are outsiders from various institutions. Whereas the experts do not know the names of the authors and the authors do not know the names of the experts (Double-blind Peer Review) The research and development institute will recruit the experts to receive an assessment if there is a correction. The Research and Development Institute will return the assessment reading results to the authors to add, edit or print the manuscript as the case may be.

Article operation fee policy

There will be a cost to perform the assessment and scrutinize articles amount **104 USD or 3,500 THB.** Collect the fee 1 time after the article has been preliminarily reviewed by the journal's editorial team before sending it to the expert for reviewing the article. In case of cancellation or assessment is not passed from reviewer, the fee will not be refunded. According to the announcement of the Research and Development Institute Fund of Chiang Mai Rajabhat University. In terms of fee for publishing articles in Chiang Mai Rajabhat Research Journal, by transferring money to the account name Chiang Mai Rajabhat University (Research and Development Institute Fund) Bangkok Bank, Chiang Mai Rajabhat University branch, account number 510-7-08700-8.

Account Name : Chiang Mai Rajabhat University (Research and Development Institute Fund
Account No. : 510-7-08700-8
Bank : Bangkok Bank
Branch : Chiang Mai Rajabhat University branch
Address : Institute of Research and Development, Chiang Mai Rajabhat University, Mae Rim Center 180 Moo 7, Chotana Road (Chiang Mai-Fang), Khi Lek Subdistrict, Mae Rim District, Chiang Mai Province 50180
SWIFT CODE : BKKBTHBK

Please send proof of money transfer to the system.

Note

1. The article which was published in "Chiang Mai Rajabhat Research Journal" It is owned by Chiang Mai Rajabhat Research Journal
2. Article that appeared in the journal is the responsibility of the author. This does not include errors cause by printing techniques.

Publication Ethics in the Rajabhat Chiang Mai Research Journal

Chiang Mai Rajabhat Research Journal is a journal to support the academic work for society or localities in Social Science & Humanities with 5 sub-subject. 1) General Social Sciences 2) Development 3) Education 4) Political Science and International Relations 5) General Business, Management and Accounting,. Therefore, established guidelines and publication ethics, publish articles for the operation of the journal are as follows:

Roles of the author of the article

1. The journal requests the author of the article to certify the submitted academic article, that was a new one by the author of the article. Did not copy other people's academic article. No copyright or intellectual property infringement, and has never been published anywhere before. If any of the above actions are detected, it is the responsibility of the author of the article for copyright infringement.
2. The submitted articles must not be in the process of submitting to other journals for considering of publication. If the above actions are detected, the editorial team may cancel the article
3. The journal requests you to write the correct research articles. Based on the format of the journal set out in the author's instructions.
4. The journal requests the author of the article to cite both the text and the end of the article when refer to the work of others. If copyright infringement is detected, it is the sole responsibility of the author of the article.
5. The author of the article whose name appears in the article. Everyone must be a real participant of doing research that subject.
6. If there are research funding sources, specify the source of funds as well.
7. If there is any conflict of interest. The journal requests the author of the article to describe the conflict of Interest as well.
8. Articles that related to human or animal research. Should be considered by the Ethics Committee (if any). The proof of certification must be attached with the article, which sent to the editor. If there is a complaint about an ethical infringement, and the editors had considered, that there is a real infringement. The author of the article must cancel the article.
9. The articles are published in "Chiang Mai Rajabhat Research Journal" is owned proprietary right of Chiang Mai Rajabhat University.

Role of the editorial team

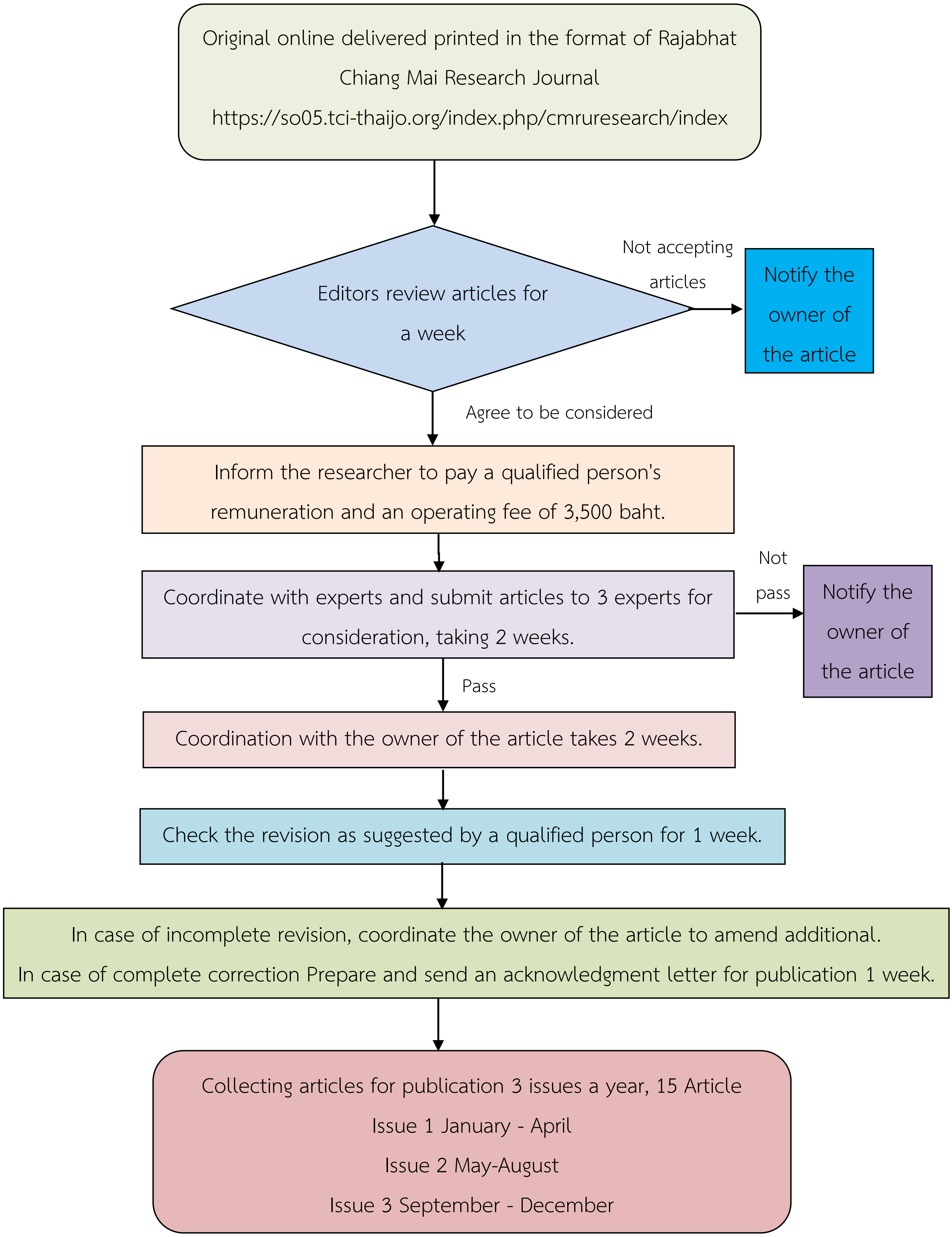
1. Journal consultants are responsible for the considering policy recommendations in operation for the Chiang Mai Rajabhat Research Journal.
2. Journal editor is the center and the main editor for considering and reviewing articles. Consider consistency of the article content with the aims and scopes of the journal. Including review and assessment quality of the articles before publication.
3. A journal editor is a group of people who act as a working group of editors. Responsible for considering and reviewing articles. Consider the consistency of the article content with the aims and scopes of the journal. Including review and assessment quality of the articles quality before publication.
4. Editorial's responsibilities to the authors of the articles and assessors
    4.1 Do not disclose the information of the authors of the article and reviewers to anyone else.
    4.2 Review and reject the publication of articles previously published elsewhere.
    4.3 Required using the principles of considering articles based on academic reasons, and there must not be bias to the authors of the articles and the articles that considered in any case.

4.4 There must not have interests with the authors or reviewers. Either for business advantages, or for their own academic articles or other advantages.
4.5 Check plagiarism of other people's academic work in the article. If plagiarism is detected, the article review process must be stopped, and contact the author of the article for clarification. To accept or reject the publication of the article.
4.6 Check the journal article assessment process as a secret. It is fair and without bias.
4.7 Published articles that passed the assessment process from the article reviewers only.
4.8 The article contents and evaluation results of the article reviewers must not be modified or changed.
4.9 The processes and procedures of the journal must be strictly followed.

Roles of the reviewers

1. The article reviewers must not have interests with the author of the article.
2. The article reviewers must maintain confidentiality, and do not disclosed the information of the article to unrelated persons during the assessment of the article
3. Must not seek the advantages from the articles they had reviewed.
4. They must realize that they are an expert, knowledgeable and understanding of the content of the article being evaluated.
5. If an article is found to be similar or duplicate, article copying other work. The reviewers must immediately notify the editor of the journal with clear evidence.
   The article reviewers must maintain an evaluation period. According to the assessment time frame set by the journal.

Process for submitting articles for publication in Rajabhat Chiang Mai Research Journal



RCMRJ

Rajabhat Chiang Mai Research Journal

Institute of Research and Development
Chiang Mai Rajabhat University, Mae Rim Center
180 Moo 7, Chotana Road (Chiang Mai - Fang),
Khi Lek Subdistrict, Mae Rim District,
Chiang Mai Province 50180
https://so05.tci-thaijo.org/index.php/cmruresearch

สถาบันวิจัยและพัฒนา
มหาวิทยาลัยราชภัฏเชียงใหม่ ศูนย์แม่ริม
180 หมู่ 7 ถนนโชตนา (เชียงใหม่-ฝาง)
ตำบลขี้เหล็ก, อำเภอแม่ริม, จังหวัดเชียงใหม่, 50180
https://so05.tci-thaijo.org/index.php/cmruresearch