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Karuna Wongphasukchote[1]

กรุณา วงศ์ผาสุกโชติ

Abstract

This study examined the effect of the modified One-Minute Paper (OMP), as a self-assessment tool, on language learners' self-regulation in learning as well as the extent to which it promoted their self-regulation. Moreover, the learners' opinions about the use of the modified OMP in their English course were also explored. Subjects in this study were 36 juniors and seniors with high and moderate levels of self-regulation who enrolled in an English course. Throughout the semester, they reflected on their learning by completing the modified OMP once a week. This study employed a mixed- method design. For quantitative data, the self-regulated trait questionnaires were administered twice. Descriptive statistics, namely mean, S.D., and the *t*-test were used to analyze the learners' improvement on self-regulation in learning. For qualitative data, in-depth interviews were conducted to elaborate the quantitative results and to investigate learner's opinions about the use of the modified OMP. The findings revealed that the modified OMP significantly developed self-regulation skills among students with a moderate level at the level of 0.05. Specifically, they became more behaviorally proactive in their learning processes, particularly in the sub-process of time management. For the opinions about the use of the modified OMP, most of the students were satisfied with the strategy since it enhanced their metacognitive skill, involving their ability to plan, monitor, evaluate, and re-plan, as well as their motivation in learning.

Keywords: one-minute paper, self-regulation, English learners, teaching methods, formative assessment

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บทคัดย่อ

การศึกษานี้มีจุดประสงค์เพื่อศึกษาว่าการใช้การเขียนข้อความสะท้อนคิด Modified One-Minute Paper (OMP) ซึ่งเป็นเครื่องมือหนึ่งในการประเมินตนเองมีผลต่อความสามารถในการกำกับตนเองของผู้เรียนหรือไม่ และหากมีผลต่อความสามารถในการกำกับตนเองของผู้เรียนจะสามารถช่วยได้มากน้อยเพียงใด นอกจากนี้ยังมีการสำรวจความคิดเห็นของผู้เรียนเกี่ยวกับการใช้การเขียนข้อความสะท้อนคิดร่วมกับการเรียนรายวิชาภาษาอังกฤษอีกด้วย ผู้เข้าร่วมงานวิจัยประกอบด้วยนักศึกษาชั้นปีที่ 3 และ 4 จำนวน 36 คน ที่ลงทะเบียนเรียนรายวิชาภาษาอังกฤษและมีความสามารถในการกำกับตนเองในระดับสูงและปานกลาง โดยนักศึกษาเหล่านี้ได้สะท้อนความคิดเกี่ยวกับการเรียนผ่านการตอบคำถามในการเขียนข้อความสะท้อนคิดสัปดาห์ละ 1 ครั้ง เป็นเวลาหนึ่งภาคการศึกษา การศึกษานี้ใช้วิธีการแบบผสมผสานซึ่งเก็บข้อมูลเชิงปริมาณโดยใช้แบบสอบถามเกี่ยวกับคุณลักษณะกำกับตนเอง 2 ครั้งแล้ววิเคราะห์ข้อมูลโดยใช้สถิติเชิงพรรณนา ได้แก่ ค่าเฉลี่ย ค่าเบี่ยงเบนมาตรฐาน และแบบทดสอบ t-test เพื่อวิเคราะห์พัฒนาการด้านการกำกับตนเองของผู้เรียน สำหรับข้อมูลเชิงคุณภาพ ผู้วิจัยได้จากการสัมภาษณ์เชิงลึกเพื่อนำมาอธิบายผลเชิงปริมาณและเพื่อศึกษาความคิดเห็นของผู้เรียนเกี่ยวกับการใช้การเขียนข้อความสะท้อนคิด ผลการศึกษาพบว่าการเขียนข้อความสะท้อนคิดช่วยให้ผู้เรียนที่มีความสามารถในการกำกับตนเองในระดับกลางมีพัฒนาการที่ดีขึ้นอย่างมีนัยสำคัญที่ระดับ 0.05 โดยผู้เรียนกลุ่มนี้มีการพัฒนากระบวนการเรียนรู้ในส่วนของพฤติกรรมโดยเฉพาะอย่างยิ่งด้านการจัดการเวลา สำหรับด้านความคิดเห็นเกี่ยวกับการเขียนข้อความสะท้อนคิดผู้เรียนส่วนใหญ่รู้สึกพึงพอใจเนื่องจากเป็นเครื่องมือที่ช่วยยกระดับทักษะด้านอภิปัญญาซึ่งรวมไปถึง ความสามารถในการวางแผน กำกับ ประเมิน ปรับปรุงแผน และการสร้างแรงจูงใจในการเรียน

คำสำคัญ: การเขียนข้อความสะท้อนคิด การกำกับตนเอง ผู้เรียนภาษาอังกฤษ วิธีการสอน การประเมินความก้าวหน้า

Introduction

Self-regulation is crucial for EFL learners as it allows them to take charge of their language learning process, enabling them to set clear goals, organize their learning activities, and monitor their own progress (Zimmerman, 1990). Additionally, Oxford (2011) defines a self-regulated language learner as someone who actively takes part in learning, setting and controlling their learning goals, including their actions and beliefs.

To examine this more closely, Zimmerman (1990) stated that self-regulated learners need to be behaviorally, metacognitively, and motivationally proactive in their learning process. In their behavioral processes, they select, structure, and create environments that optimize their learning. Moreover, they themselves seek or create learning materials, set up study conditions and places where they are most likely to learn with little or no supervision. Self-instruction and self-reinforcement are involved during these processes. In their metacognition processes, self-regulated learners plan, set goals, organize, self-monitor, and self-evaluate their learning. In terms of motivational processes, students persistently show their perseverance in learning. They also have a high level of self-efficacy, signifying their belief in their ability to succeed. Furthermore, they experience intrinsic motivation, which is a type of motivation that originates from within an individual and is driven by personal interest and enjoyment in the learning process.

However, not every student possesses sufficient self-regulation, and those who lack self-regulation may face numerous challenges and experience hindered progress in their

language learning journey, resulting in limited motivation and engagement (Bembenutty, 2011). In addition, the absence of self-regulation may prevent students from effectively selecting and utilizing appropriate learning strategies, further hindering their language acquisition process (Zimmerman, 1990).

To address the challenge of students lacking self-regulation, it becomes crucial to recognize that self-reflection, a process enabling students to evaluate themselves and reflect on their learning experiences, stands at the core of self-regulation. It is also essential for educators to create opportunities for students to engage in it, as it can significantly improve students' performance (McDonald & Boud, 2003).

Additionally, Nicol and MacFarlane (2006) suggested that self-reflection and formative assessments can serve as beneficial tools in assisting students with their self-regulation. The cultivation of self-regulation can be effectively facilitated through the implementation of formative assessment (Bose & Rengel, 2009). Unlike traditional assessments that primarily focus on assigning grades, formative assessment is a classroom evaluation approach that prioritizes enhancing student learning (Yorke, 2003). Consequently, formative assessments which encourage students to engage in self-regulation were utilized in the study.

Various classroom assessment strategies can be employed to cultivate students' self-assessment abilities. One effective technique is the "One-Minute Paper" (OMP) introduced by Angelo and Cross (1993), which focuses on evaluating "what students have learned" rather than "what did I tell them". It aims to assess students' prior knowledge, recall, and comprehension of course-related concepts and skills. This method involves dedicating the last few minutes of a class session for students to provide concise answers to two questions provided on a card: "What was the most significant point discussed in today's class?" and "What unanswered questions or uncertainties do you still have?".

The OMP has gained popularity as the culture of assessment has expanded, and it is now utilized in various subjects such as economics, computer science, chemistry, medicine, psychology, and English literature (Brookfield, 2017). Furthermore, the OMP continues to serve as a learner-centered assessment tool in a wide range of educational contexts, including universities, for over 30 years (Greville-Giddings, 2021). It has not only been employed in traditional face-to-face classes but also in online classes for remote teaching (Campbell et al., 2019; Karlsson-Brown et al., 2020), as it promotes student participation and engagement in various classroom environments.

Thus, the OMP was chosen in this study to enhance students' self-regulation, given its manageability and practicality for both instructors and students, making it a valuable assessment tool. Most importantly, the OMP fosters learner reflection, nurturing self-regulatory skills by prompting critical thinking during the evaluation and monitoring of their learning progress.

In this study, an additional question was incorporated into the OMP: "What is your plan for improving your study or solving your problems for the next class?" This modification aims to encourage learners to become more proactive, fostering critical thinking after identifying the key content and the unclear points in the lesson. Moreover, this question plays a vital role in completing the cycle of self-regulated learning, which involves a series of interconnected phases as it stimulates students to develop a clear and actionable plan for the upcoming class. A popular model in self-regulated learning, the three-phase model of SRL by Zimmerman (2002), as presented in Zumbrunn et al. (2001), is in Figure 1.
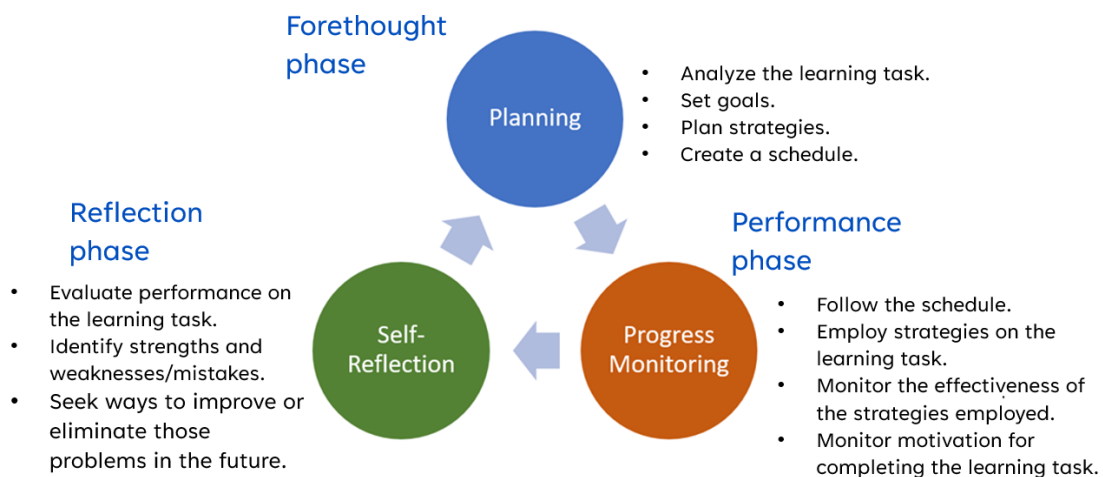
Figure 1 *The Cycle of Self-regulated Learning Model by Zimmerman, content supports by Zumbrunn et al. (2011)*

Figure 1 shows that in the forethought phase, students plan, set goals, and develop strategies. In the performance phase, they implement these strategies and monitor their effectiveness. The reflecting performance phase involves evaluating their performance on the learning task (Zimmerman, 2002; Zumbrunn et al., 2011). This cyclical process repeats as students engage in self-reflection, identifying strengths and weaknesses, and refining more appropriate strategies for future tasks (planning). They then follow their plan, adjusting to overcome any obstacles they encounter (progress monitoring).

Previous research has examined the use of the OMP in the classroom and the benefits it offers. For instance, the OMP has been widely utilized by instructors in higher education, providing valuable feedback and enhancing students' understanding of the lessons (Bryan et al., 1993; Harwood & Cohen 1999; Laici & Pentucci, 2021). Notably, the OMP presents advantages in terms of timesaving and facilitating students' retention of the taught content. It has been empirically demonstrated as an effective formative assessment tool that promotes self-regulation by enabling students to clarify their learning goals and receive timely feedback (Bose & Rengel, 2009). Additionally, the OMP has been successfully employed in many countries, with students perceiving it as learner-centered and helpful in bridging the gap between teaching and learning, connecting with students, and supporting their learning (Sahoo

& Taywade, 2021; Stevens, 2019), especially the EFL students who were unresponsive and hesitate to ask questions in class (Tsushima, 2015). This context resembles Thai classrooms. The one-minute paper is also a thinking-centered assessment tool, promoting greater reflection and deeper thinking in learning (Ashakiran & Deepthi, 2013). These studies underscore the significance of the OMP in fostering student engagement and self-assessment, which are closely related to self-regulated learning across diverse educational contexts.

Objectives

The specific objectives of this research were to study the effects of the modified OMP on language learners' self-regulation in learning and to explore the learners' opinions about the use of the modified OMP in their English course.

Research Questions

The research addressed two main research questions:
1. How does the modified OMP promote self-regulation in learning of the learners?
2. What are the learners' opinions about the use of the modified OMP in the English course?

Research Methodology

1. Context and Subjects of the Study

In this study, the subjects consisted of an intact group comprising 36 junior and senior students from various faculties at a Thai public university. These students were not majoring in English and had previously completed two Fundamental English courses. They were enrolled in an English elective course, which ranged from level B1 to B1+, and this course was taught by the researcher, who also took the role of the teacher. The study took place for approximately four months.

2. Research Instruments

2.1 The modified OMP form consisted of three questions. The first two questions were taken from Angelo and Cross (1993) to check whether the students could evaluate what they had learned and monitor themselves on how much they understood the lessons and which parts they still had difficulties with. The third question was added to investigate

how the students planned their future learning and how they coped with their difficulties. The questions are shown below:

1) What was the main point made in class this week?
2) What unanswered questions/unclear points do you
   still have?
3) What is your plan for improving your study or solving your problems in the next class?

The modified OMP was translated into Thai, which is the subjects' first language.

2.2 The pre- and post-questionnaires on self-regulation
traits translated into Thai were administered at the beginning and at the end of the semester to assess the changes in students' self-regulation traits before and after using the modified OMP in the English course.

In this study, the researcher adapted O'Neil and Herl's (1998) self-regulation trait (SRT) questionnaire based on Zimmerman's (1990) self-regulation model to measure learners' self-regulation traits. Originally addressing two self-regulation processes, it was expanded to encompass three: metacognition, motivation, and behavior.

The adapted questionnaire consists of 30 questions with six scales ranging from 1 (strongly disagree), to 2 (disagree), 3 (disagree somewhat), 4 (agree somewhat), 5 (agree), and 6 (strongly agree). The scale assesses three self-regulation processes: metacognition (including planning and self-monitoring), motivation (encompassing effort and self-efficacy), and behavior (involving study aids and time management). It was piloted with 40 students with similar backgrounds to the subjects in this study. This was done to evaluate its validity and comprehensibility for the target subjects.

Below are some sample questionnaire items for reference:

Table 1 *Sample Questionnaire Items*

Processes	Sub-processes	Sample questionnaire items
Metacognitive	Planning	I clearly plan my course of action before doing a task as well as intend to stick to my plan.
	Self-Checking	While doing a task, I ask myself, how well I am doing.
Motivational	Effort	I don't give up even if the task is not my favorite.
	Self-efficacy	I am confident that I can understand the basic concepts taught in this course.
Behavioral	Study aids	I know how to select learning materials that optimize my learning.
	Time management	I do not procrastinate on my study timetable. I always stick to it.

2.3 A set of semi-structured questions was used in the interview session to find out participants' opinions towards using the modified OMP. The interview questions consisted of three main parts. The first part was about learners' opinions on the modified OMP form. The second part was about their opinions on the advantages and disadvantages of using the modified OMP in the English course. The last part elicited other comments and suggestions about the use of the modified OMP.

Here are sample questions used in the interview:

1. What are advantages and disadvantages to you as a student of using the modified one-minute paper?
2. Do you like or dislike completing the modified OMP form? Why?
3. Please add any comments about the modified OMP that you would like to share.

The instruments mentioned in this study—namely, the modified OMP, the pre- and post-questionnaire, and a set of semi-structured questions for the interview—were assessed using the Index of Item Objective Congruence (IOC). The content and construct validity of these instruments were evaluated by three university lecturers, each with at least 15 years of experience in teaching English.

3. Research Procedure and Data Collection

The research procedure and data collection of this study proceeded as follows:

3.1 At the beginning of the semester, a pre-questionnaire was administered to measure the subjects' self-regulation traits prior to the modified OMP incorporated English course. The time allotted for completing the pre-questionnaire in the classroom was about 10-15 minutes.

3.2 The subjects were divided into groups according to their pre-questionnaire scores. The first group were students with the highest scores, 131-180. The second group were those with scores of 81-130. It should be noted that none of the students belonged to the last group which was for those whose scores were 30-80. The details are shown in Table 2.

Table 2 *Students' Scores on Self-regulation Traits*

Group	Students' pre-questionnaire scores	Number of students
High	131–180	21
Moderate	81–130	15
Low	30–80	0

3.3 The students were assigned to complete the modified OMP form in Thai weekly at the end of the class a total of 10 times over the 15-week semester, from the 2nd to the 6th week and the 9th to the 13th week.

3.4 In the 15th week, the students took a post-questionnaire on learner's self-regulation trait which was identical to the pre-questionnaire at the end of the class. Then the scores of the pre- and post-questionnaires were compared to check whether there was an improvement of their self-regulation skills.

3.5 Four students from each group, a total of eight students were purposively selected for an in-depth interview to examine the effect of the modified OMP on learners' self-regulation in learning as well as the changes in their learning behaviors. They were interviewed individually for about 15 minutes by the researcher. The interviews were recorded.

3.6 Another 10 students from each group, totaling 20, were randomly selected and individually interviewed by the researcher at the end of the course. These interviews occurred after the students completed the post-questionnaire, which gathered their opinions, suggestions, and additional comments about the modified OMP. The interviews were recorded.

4. Data Analysis

Data from the students were analyzed quantitatively and qualitatively as follows:

To answer the first research question which investigates how the modified OMP promotes students' self-regulation, descriptive statistics such as mean, S.D. and the t-test were employed to analyze the quantitative data. The average scores ($\bar{x}$) of pre- and post-questionnaires on the students' self-regulation traits were compared to check whether there was an improvement in self-regulation in learning after completing the modified OMP. The average scores of each sub-process: planning, self-checking, effort, self-efficacy, study aids, and time management from pre- and post-questionnaires were compared to check the extent that the modified OMP promotes self-regulation in learning.

To gain additional understanding and insight, in-depth interviews were performed to collect qualitative data. After that, a content analysis was conducted. The recorded information gathered from the interviews was transcribed. Then the transcripts were deductively analyzed. Therefore, the students' answers were codified and matched with the categories of the specific processes involved in the self-regulation development. The results gathered from both quantitative and qualitative analysis were compared to understand what happened behind the statistical data as well as verify or disconfirm the statistical results.

To answer the second research question investigating the learners' opinions about the use of the modified OMP, 20 students were randomly selected and individually interviewed by the researcher at the end of the course—after they completed the post-questionnaire. A set of pre-determined questions were asked in this session.

Findings

The following sections report the effects of the modified OMP on language learners' self-regulation in learning and learners' opinions about the use of the modified OMP in the English course.

1. The Effects of the Modified OMP on Language Learners' Self-Regulation in Learning

After the subjects completed the modified OMP once a week, a total of 10 times during the semester, on the 15th week, they took the post-questionnaire on learners' self-regulation traits. The scores on the pre- and post-questionnaires of the high and moderate groups were compared to see the differences and to check the improvement of their self-regulation skills. In addition, the scores of each group were analyzed to see their improvement in the three processes as well as the sub-processes of self-regulation traits.

Quantitative and qualitative data analysis were used in this study. The quantitative data analysis involved the comparisons of the students' self-regulated scores.

Table 3 compares the high and moderate groups' scores on their self-regulation traits as measured by the pre- and post-questionnaires.

Table 3 *Comparison of Students' Scores on Self-Regulation Traits*

Group	Questionnaire	N	$\bar{X}$	SD	t	Sig.
High	Pre	21	4.70	.24	.310	.760
	Post		4.68	.43		
Moderate	Pre	15	3.87	.33	-2.691	.018*
	Post		4.00	.36		

The results presented in Table 3 indicate that there were insignificant slight differences between the high group's scores on self-regulation skills before and after using the modified OMP. However, the pre- and post- questionnaire scores of the moderate group were significantly different at the statistical level of 0.05. As a result, the score on self-regulation traits of the moderate group was further analyzed to shed more light on the results of this study.

The scores of the moderate group on metacognitive, motivational, and behavioral processes were compared to assess the impact of the modified OMP on self-regulation. The results are presented in Table 4

Table 4 *Moderate Group's Scores on Three Processes of Self-Regulation*

Processes	Questionnaire	x̄	S.D.	t	Sig.
Metacognitive processes	Pre	4.06	.44	-3.71	.716
	Post	4.10	.36		
Motivational processes	Pre	4.13	.48	.276	.787
	Post	4.09	.56		
Behavioral processes	Pre	3.57	.40	-3.944	.001*
	Post	3.77	.41		

Table 4 shows that before and after using the modified OMP, the moderate group's self-regulation scores on metacognitive processes and motivational processes were not significantly different, but those on behavioral processes were significantly different at the statistical level of 0.05. The subjects in this group gained higher scores on behavioral processes; their scores increased from 3.57 to 3.77 at the end of the study.

Since it was in the behavioral processes of self-regulation in learning that the moderate group had shown their improvement after the use of the modified OMP, Table 5 describes the comparison of the moderate group's scores on sub-processes of self-regulation in their learning before and after the use of the modified OMP to further find out the exact area of differences in their behavioral processes. In sum, their scores on all sub-processes of self-regulation in learning are presented.

Table 5 *Moderate Group's Scores on Sub-Processes of Self-Regulation*

Processes	Sub-processes	Questionnaire	x̄	S.D.	t	Sig.
Metacognitive processes	Planning	Pre	4.20	.39	-.430	.674
		Post	4.25	.34		
	Self-checking	Pre	3.92	.53	.206	.840
		Post	3.95	.55		
Motivational processes	Effort	Pre	4.13	.48	.276	.787
		Post	4.09	.59		
	Self-efficacy	Pre	4.13	.48	.276	.787
		Post	4.09	.59		
Behavioral processes	Study-aids	Pre	3.57	.52	-1.361	.195
		Post	3.72	.57		
	Time management	Pre	3.56	.52	-2.149	.050*
		Post	3.81	.50		

Table 5 shows that even though the pre- and post-questionnaire scores on self-regulated traits of the moderate group were significantly different, only one sub-process of the behavioral processes, namely time management yielded a significant difference. The moderate group's scores on time management in the pre- and post-questionnaires were significantly different at the statistical level of 0.05; their scores increased from 3.56 to 3.81.

Thus, in terms of quantitative analysis, it could be interpreted that the modified OMP helped promote self-regulation skills, especially the ability of time management, which is a

sub-process of behavioral processes, in students whose initial self-regulation scores were at the moderate level.

In addition, to qualitatively investigate the effects of the modified OMP on language learners' self-regulation in learning, eight students, four from the high group and four from the moderate group were interviewed individually by the researcher.

From the interview, the high group's reflection on the modified OMP revealed positive outcomes in their learning self-regulation. They improved their planning by setting goals based on weekly reflections, checked their understanding regularly, and put in extra effort to address areas of difficulty. This resulted in increased self-efficacy and motivation. They effectively utilized study aids and managed their time well, leading to better exam preparation and a balanced approach to learning as Student A said,

> *"When I didn't understand the main point of the lessons, I didn't wait for long to figure out my problems. I continuously checked my learning progress every week. So, I didn't have to cram for the exam, and I did well on my big days."*

Moreover, a student revealed that she concentrated more both in class and outside class, as mentioned by Student C regarding the change in motivation for learning. She stated,

> *"I paid more attention in class because if I hadn't, I might not have known what to write down on the modified OMP form.*

Similarly, the reflection of the moderate group on the modified OMP yielded positive outcomes in their self-regulated learning. For instance, Student E and Student F showed improved metacognitive processes by consistently planning and setting goals. As Student E explained,

> *"I didn't have enough vocabulary to comprehend the readings, so my goal was learning 10 unknown words every day from reading any kinds of materials".*

Students in the moderate group reported increased concentration in class and utilized additional learning sources. Completing the modified OMP helped boost their self-confidence and aided in exam preparation. They utilized study aids and managed their time more effectively, leading to improved self-discipline as Student G said,

> *"I've changed my learning behavior. I felt I could develop my self-discipline because I could stick to my revision schedule. I was so proud of myself when I accomplished my goal".*

Based on the above results, it can be concluded that although the statistical data indicated that the modified OMP could significantly promote students in the moderate group's time management skill, which is the sub-process of behavioral processes, the data gathered from the in-depth interviews from both groups indicated that the modified OMP may have positively impacted various aspects of their self-regulation, although not in a statistically significant manner."

2. Learners' Opinions About the Use of the Modified OMP in the English Course

The findings from the research on learners' opinions about the use of the modified OMP in the English course can be discussed as follows:

    a.   Opinions on the Modified OMP Form: Content, Frequency of Use, and Pattern of

        Use

All students found the questions in the modified OMP form to be appropriate for reflecting on their learning. However, a couple of students suggested adding a question related to tracking their progress in following their plans. Ninety-five percent of them agreed that completing the form once a week was appropriate, while five percent suggested doing so every two weeks.

    b. Advantages, Disadvantages, and Satisfaction of Using the Modified OMP

Ninety percent of students expressed satisfaction with the modified OMP, highlighting its benefits. It helped them evaluate their understanding, changed their learning behaviors, and increased their responsibility towards their own learning. The modified OMP also motivated them to seek additional resources and improved their recall and organization of information. Students appreciated the opportunity to communicate with teachers regarding unclear points.

However, ten percent of students felt that the modified OMP did not significantly assist them in becoming more self-regulated learners as they did not derive maximum benefits from its usage.

    c. Other Comments and Suggestions

Students recommended implementing the modified OMP prior to their final academic year for more effective time management. Additionally, they recommended applying the modified OMP to other subjects, especially those with complex content, to enhance their learning.

In conclusion, the findings revealed that most students had positive opinions about the modified OMP in the English course. They acknowledged its advantages, including improved metacognition, motivation, responsibility, and organization of information. However, ten percent of them faced challenges and preferred assistance from teachers and peers. The study also highlighted the importance of introducing the modified OMP early and considering individual circumstances to optimize its effectiveness. Furthermore, the students' suggestions emphasized the potential for broader application of the modified OMP across various subjects.

Discussion

    Based on the findings of this study, the modified OMP could serve as a versatile self-assessment and formative assessment. It not only facilitates student engagement and self-evaluation but also supports the cultivation of deeper thinking during the learning process, as previous studies have demonstrated.

Although there were no significant differences in the self-regulated trait scores of the high group, as revealed by the quantitative data, it is likely that these qualities were present at high levels since the beginning of the study. Students who were in the moderate group, on the other hand, significantly improved their scores, showing some improvement in the domain of behavioral processes. This may be because students in this group had more room for development than those in the high group. Simply put, there was a gap that needed to be filled up for students with initial moderate scores on self-regulation qualities, indicating that they still have potential to progress.

However, upon conducting content analysis from information gathered from in-depth interviews, the results indicated that the students from both groups were at least slightly more proactive in their learning, though the statistically significant difference could not be established.

The following sections will provide a detailed discussion of these results.

Firstly, in terms of motivational processes, the data gathered from in-depth interviews of both groups showed that their motivation in learning English at the end of the semester seemed higher.

In addition, the fact that students learned to create their plans with a purposeful goal was a good sign of self-regulation development. This was advantageous for them because most of them were able to create and follow their own learning plans that optimized their learning. This sense of goal achievement boosted their self-efficacy, which is a part of motivational processes. As a result, their motivation in learning gradually increased throughout the semester. This was beneficial, as indicated by Pintrich and De Groot (1990) and Turan and Demirel (2010), who stated that positive motivation supports a higher level of self-regulated learning.

The information presented above demonstrates how the modified OMP explicitly encouraged students to engage in ongoing self-reflection throughout the semester. As noted by Katz and Sugden (2013), providing students with opportunities to engage in academic activities is crucial for fostering students' motivation and self-efficacy in learning. Additionally, Bose and Rengel (2009) asserted that self-reflection is the core of self-regulation. Therefore, the modified OMP represented a radical approach to help students enhance their self-regulation skill, particularly in the motivational processes.

Secondly, in terms of metacognitive processes which involve the learners' ability to plan, set goals, self-monitor, and evaluate their learning (Zimmerman, 1990), the data from both groups showed some evidence proving that the modified OMP could promote their self-regulation in this process. The students from both groups monitored and evaluated their learning while they were attending classes. Finally, they ended up with meaningful learning plans and goals.

From an analytical standpoint, the modified OMP probably facilitates the gradual development of their self-regulated learning, especially in the metacognitive processes. This is because each question in the modified OMP employed in this study was designed to

systematically enhance students' development of self-regulated skills. Noticeably, the first two questions in the modified OMP effectively prompted the students to engage in monitoring and reflecting on their learning progress, allowing them to assess their comprehension and identify any areas of uncertainty, explicitly promoted metacognitive processes of self-regulation.

Additionally, the last question in the modified OMP, asking about their study plan served as a catalyst for the students to complete the cycle of self-regulation development. It enabled them to formulate a plan of action aimed at solving problems and enhancing their study habits.

Finally, the information obtained from the interviews indicated that both groups of students had shown improvements in their behavioral processes although it was statistically significant only for the moderate group. This is because the key point is that students in high groups revealed that they spent their free time outside of class more productively and improved their self-discipline in learning, providing evidence of improved time management skills. This observation strongly supports their improvement in time management, as Macan (1994) defined time management behaviors to include goal setting, task prioritization, organization, and scheduling.

Based on the above discussion, it can be summarized that the modified OMP was well-received by the students. In addition, using the modified OMP as a weekly assessment tool facilitated self-reflection and improved self-regulated learning skills. Students exhibited proactive learning traits, characterized by effective forethought and performance phase processes. They created concise, practical study plans and goals based on self-analysis, in contrast to reactive learners who rely on vague methods (Zimmerman, 2013). With clear goals and plans, students focused on their learning and self-regulated their performance. They self-evaluated, identified weaknesses, and adjusted strategies, aligning with the cyclical model of SRL. These processes occurred consistently through the use of the modified OMP, designed to encompass all three phases of self-regulated learning.

It is also worth emphasizing that the modified OMP helped students with an initial moderate level of self-regulation show significant improvements in their behavioral processes related to self-regulation in learning, the abilities to select, structure, and create an environment that optimizes their learning as well as engage in self-instruction during acquisition and self-reinforcement during performance enactments (Diaz & Neal, 1990; Zimmerman, 1990). Notably, they developed enhanced time management skills, a factor with the potential to positively influence self-efficacy and academic achievements (Karim & Mitra, 2011; Nasrullah & Khan, 2015). While this study primarily focused on enhancing students' self-regulation in learning and did not explicitly investigate the impact on academic achievements, it is reasonable to infer that such improvements could yield benefits in that domain as well.

Conclusion and Implications

The study suggested that the modified OMP was likely an effective assessment tool for promoting self-reflection, a vital aspect of self-regulation (Pintrich, 2000; Zimmerman, 2002). Regular use of the modified OMP enhanced students' self-regulation skills, with significant

impacts observed among those with moderate self-regulation levels, particularly in terms of increased behavioral proactivity, notably in time management. However, high-level self-regulation students did not experience substantial improvements, likely due to their already elevated baseline levels.

Regarding student feedback on the modified OMP, students from both groups expressed satisfaction and identified several benefits, including enhanced metacognitive skills, increased responsibility for learning, improved time management, heightened motivation, and improved memory retention. Additionally, it facilitated communication with teachers. However, the modified OMP may not be suitable for all students, especially those with limited English proficiency, who may prefer support from teachers and peers over self-regulation.

The limitations of the study include its focus on junior and senior students with existing self-regulation levels, limiting its generalizability to students with lower self-regulation levels. Further research should explore the effects of the modified OMP on diverse learner profiles.

Based on the results, the modified OMP could be beneficial in enhancing students' regulation in language learning, particularly for students with a moderate level of self-regulation. However, there are some points that teachers need to consider, and several pedagogical recommendations can be made.

Firstly, teachers should focus not only on teaching content but also on developing students' metacognitive skills, especially during the early stages of their university experience. By providing guidance on self-regulation and independent learning, teachers can help students accurately assess their weaknesses and select the most appropriate approaches for their learning tasks. This includes helping them understand their learning styles and preferences as well as guiding them in creating personalized learning plans.

Secondly, students' prior knowledge is crucial for developing independent learners who can regulate themselves and learn independently. Evidently, students lacking sufficient basic knowledge are likely to encounter difficulties when attempting to solve problems on their own. Certain students may struggle to connect with new content, viewing self-studying as a time-wasting activity. Although searching for assistance from peers or teachers is one of the self-regulated learning strategies (Zimmerman, 2008), students at a higher level of education tend to do more complex tasks, and inevitably need to deal with obstacles by themselves. Thus, it is essential for teachers to observe and help students to overcome this problem so that they can have an accurate and adequate background to study on their own. When they can connect their accurate and relevant prior knowledge with the new knowledge, they will be able to learn and retain more (Ambrose et al., 2010; Dong et al., 2020; National Research Council, 2000; Vygotsky, 1978).

Finally, according to Ambrose et al. (2010), students need to learn how to analyze the demands of assignments, assess their own knowledge and skills, plan their approach, check their progress, and change their strategies as necessary if they want to become self-directed learners. Accordingly, to help students adjust their learning strategies, teachers might add some activities providing chances for students to report what and how well they did after they had

set their goals and created their plans. It can be a chance to check whether they could reach their goals or not. If not, it would be a good opportunity for the teacher to investigate the causes of problems, find solutions and advise them on how to learn more effectively as well as scaffold their learning progress as needed.

References

Ambrose, S. A., Bridges, M. W., DiPietro, M., Lovett, M. C., & Norman, M. K. (2010). *How learning works*. John Wiley & Sons.

Angelo, T. A., & Cross, K. P. (1993). *Classroom assessment techniques: A handbook for college teachers (2nd ed.)*. Jossey-Bass.

Ashakiran, S., & Deepthi, R. (2013). One-minute paper: A thinking-centered assessment tool. *Internet Journal of Medical Update, 8*(2), 3-9.

Bembenutty, H. (2011). New directions for self-regulation of learning in postsecondary education. *New Directions for Teaching and Learning, 2011*(126), 117–124. https://doi.org/10.1002/tl.450

Bose, J., & Rengel, Z. (2009). A model formative assessment strategy to promote student-centered self-regulated learning in higher education. *US-China Education Review, 6*(12), 29-35.

Brookfield, S. D. (2017, January 18). *Becoming a critically reflective teacher.* John Wiley & Sons.

Bryan, E. L., Praeter, M. A., & Schleifer, L. L. (1993). *The one-minute essay: Toward better communication in an accounting class.* [Paper presentation]. The 1993 AAA Southeastern Regional Meeting, Atlanta, GA.

Campbell, M., Abel, E. M., & Lucio, R. (2019). The one-minute paper as a catalyst for change in online pedagogy. *Journal of Teaching in Social Work, 39*(4-5), 519–533. https: //doi.org/10.1080/08841233.2019.1642977

Diaz, R. M., Neal, C. J., & Amaya-Williams, M. (1990). The social origins of self-regulation. In L. Moll (Ed.), *Vygotsky and education* (pp. 127-154). Cambridge University Press.

Dong, A., Jong, M. S., & King, R. B. (2020). How does prior knowledge influence learning engagement? The mediating roles of cognitive load and help-seeking. *Frontiers in Psychology, 11*, 591203. https://doi.org/10.3389/fpsyg.2020.591203

Greville-Giddings, B. (2021, March 16). *The one-minute paper: A tool for formative assessment.* https://researchschool.org.uk/derby/news/the-one-minute-paper-a-tool-for-formative-assessment

Harwood, E. M., & Cohen, J. R. (1999). Classroom assessment: Educational and research opportunities. *Issues in Accounting Education, 14*(4), 691–724. https://doi.org/10.2308/iace.1999.14.4.691

Karim, S., & Mitra, K. (2011). Time management skills impact on self-efficacy and academic performance. *Journal of American Science, 7*(12).

Karlsson-Brown, P., Gibb, A., & Ferri, P. (2020). *Utilising the digital one-minute paper to improve student experience in post-COVID-19 remote business school teaching*. https://charteredabs.org/digital-one-minute-paper-covid/

Katz, J., & Sugden, R. (2013). The three-block model of universal design for learning implementation in a high school. *Canadian Journal of Educational Administration and Policy*, *141*. https://journalhosting.ucalgary.ca/index.php/cjeap/article/view/42841

Laci, C., & Pentucci, M. (2021, November). *Feedback in university didactics through one minute paper tool* [Paper presentation]. The 14th annual International Conference of Education, Research and Innovation, Online Conference.

Macan, T. H. (1994). Time management: Test of a process model. *Journal of Applied Psychology, 79*(3), 381-391. https://doi.org/10.1037/0021-9010.79.3.381

McDonald, B., & Boud, D. (2003). The impact of self-assessment on achievement: The effects of self-assessment training on performance in external examinations. *Assessment in Education*, *10*(2), 209-220.

Nasrullah, S., & Khan, M. S. (2015). The impact of time management on the students' academic achievements. *Journal of Literature, Language, and Linguistics, 11*. 66-71

National Research Council (2000). *How people learn: Brain, mind, experience, and school.* National Academy Press.

Nicol, D. J., & Macfarlane, D. (2006). Formative assessment and self-regulated learning: A model and seven principles of good feedback practice. *Studies in Higher Education, 31*(2), 199-218.

O'Neil, H. F. Jr., & Herl, H. E. (1998). *Reliability and validity of a trait measure of self-regulation.* [Paper presentation]. The Annual Meeting of the American Educational Research Association, San Diego, CA.

Oxford, R. L. (2011). *Teaching and researching language learning strategies.* Pearson.

Pintrich, P. R. (2000). The role of goal orientation in self-regulated learning. In M. Boekaerts, P. R. Pintrich, & M.Zeidner (Eds.), *Handbook of self-regulation* (pp. 451-502). Academic Press. https://doi.org/10.1016/B978-012109890-2/50043-3

Pintrich, P. R., & De Groot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational Psychology, 82*(1), 33-40. https://doi.org/10.1037/0022-0663.82.1.33

Sahoo, B. K., & Taywade, M. (2021). One-minute paper: The reflective way to teach and learn in medical education. *Indian Journal of Forensic and Community Medicine, 8*(1), 58-62. https://doi.org/10.18231/j.ijfcm.2021.012

Stevens, T. E. (2019). Just one more thing: Getting the most out of one-minute papers. *Pennsylvania Libraries: Research & Practice, 7*(1), 38-45. https://doi.org/10.5195/palrap.2019.174

Tsushima, A. (2015). The minute paper in EDC. *New Directions in Teaching and Learning English Discussion*, *3*, 189-195.

Turan, S., & Demirel, O. (2010). The relationship between self-regulated learning skills and achievement: A case from Hacettepe University medical school. *Hacettepe University the Journal of Education*, *38*, 279-291

Vygotsky, L. S. (1978). *Mind in society: The development of the higher psychological processes*. The Harvard University Press (Originally published 1930, Oxford University Press.)

Yorke, M. (2003). Formative assessment in higher education: Moves towards theory and the enhancement of pedagogic practice. *Higher Education*, *45*, 477-501.

Zimmerman, B. J. (1990). Self-regulated learning and academic achievement: An overview. *Educational Psychologist, 25*(1), 3-17.

Zimmerman B. J. (2002). Becoming a self-regulated learner: An overview. *Theory into Practice, 41*(2), 64-70 https://doi.org/10.1207/s15430421tip4102_2

Zimmerman, B. J. (2008). Investigating self-regulation and motivation: Historical background, methodological developments, and future prospects. *American Educational Research Journal, 45*(1), 166-183. https://doi.10.3102/00002831207312909

Zimmerman, B. J. (2013). From cognitive modeling to self-regulation: A social cognitive career path. *Educational Psychologist, 48*(3), 135-147. https://doi.10.1080/00461520.2013.794676

Zumbrunn, S., Tadlock, J., & Roberts, E. D. (2011). *Encouraging self-regulated learning in the classroom.* https://scholarscompass.vcu.edu/merc_pubs/18

A Study of Chinese Idiom Expressions
Containing the Word *jin* (Gold)[1]

การศึกษาสำนวนจีนที่มีคำว่าทอง

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Abstract

Idioms are phrases or sayings metaphorically composed with a subtle hidden meaning that cannot be deciphered by direct literal translation of individual words. Long-standing idiomatic expressions that have been passed down through ages in each language are precious cultural heritage for people using that language, as they can reflect, for instance, thoughts and beliefs of people from earlier generations within the society. Chinese people often use idiomatic expressions in their daily communication. Many idioms are derived from natural environment, and are in line with ancient Chinese beliefs in the five elements of earth, water, fire, wood and metal, considered the basic components of everything in the world. Due to the fact that gold is a representation of preciousness often related to certain beliefs or concepts in Chinese culture, this article therefore aims to study and analyse idioms containing the word "jin"(金 gold) in order to understand their metaphorical meanings, as well as beliefs, values and other aspects related to them. It was shown that there were 411 idioms containing "jin" (gold) collected from eight selected Chinese idioms dictionaries, with a total of 414 metaphorical meanings. These

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metaphorical meanings can be further divided into nine groups: human, preciousness, beauty, money and treasured items, social status and standard, goodness, stability and strength, nature, and other meanings. Chinese idioms containing the word "jin" (gold) can help us gain insights into the past Chinese society, as well as the values, culture, traditions, and beliefs of the Chinese people.

บทคัดย่อ

สำนวนคือวลีหรือคำพูดที่แต่งขึ้นในเชิงอุปลักษณ์ แฝงเร้นความหมายลึกซึ้ง ไม่สามารถถอดความด้วยการแปลคำแต่ละคำตามตัวอักษรโดยตรง สำนวนที่มีใช้สืบทอดกันมาช้านานในแต่ละภาษาล้วนเป็นมรดกทางวัฒนธรรมอันล้ำค่าสำหรับผู้ใช้ภาษานั้น ๆ เนื่องจากสามารถสะท้อนให้เห็นถึงความคิด ความเชื่อของคนในสังคมนับแต่อดีตมา คนจีนมักใช้สำนวนในการสื่อสารในชีวิตประจำวัน สำนวนหลายสำนวนได้มาจากสภาพแวดล้อมธรรมชาติและสอดคล้องกับความเชื่อของจีนโบราณเกี่ยวกับธาตุทั้งห้า ได้แก่ ดิน น้ำ ไฟ ไม้ และโลหะ ซึ่งถือเป็นองค์ประกอบพื้นฐานของทุกสิ่งในโลก เนื่องจากทองเป็นตัวแทนของความล้ำค่า ซึ่งมักเกี่ยวข้องกับความเชื่อบางประการในวัฒนธรรมจีน บทความนี้จึงมุ่งศึกษาวิเคราะห์สำนวนที่มีคำว่า "jin" (金) เพื่อเข้าใจความหมายเชิงอุปลักษณ์ ตลอดจนความเชื่อ ค่านิยม และประเด็นอื่น ๆที่เกี่ยวข้อง ซึ่งผลการวิจัยพบว่า สำนวนที่มีคำว่า "jin" ที่รวบรวมจากพจนานุกรมสำนวนจีน 8 เล่มมีทั้งหมด 411 สำนวน ให้ความหมายเชิงอุปลักษณ์ได้ทั้งสิ้น 414 ความหมายและสามารถจัดแบ่งเป็น 9 กลุ่ม ได้แก่ มนุษย์ ความล้ำค่า ความงาม เงินทองของมีค่า สถานะและมาตรฐานทางสังคม ความดีงาม ความมั่นคงและความแข็งแกร่ง ธรรมชาติ และความหมายอื่น ๆ ทั้งนี้สำนวนจีนที่มีคำว่า "jin" ยังสามารถช่วยให้เราเข้าใจสังคมจีนในอดีต รวมถึงค่านิยม วัฒนธรรม พิธีกรรมและความเชื่อของชาวจีนได้อีกด้วย

คำสำคัญ: ทอง ภาษาจีน สำนวน อุปลักษณ์

Introduction

Belief in the concept of the five elements is considered a fundamental aspect of Chinese culture. The idea of the five elements, especially yin and yang, has a rich historical background. Although its origins are unclear, the concept is recorded in several important Chinese books, such as *Guoyu* (国语), *Zuo Zhuan* (左传), *Shang Shu* (尚书), and *Sunzi* (孙子). Chinese people have long held the belief that humans are one with nature, and everything in the world is composed of

these five basic elements. They then simplify the complicated phenomena they observe for easy understanding by using the idea of the five elements to explain them. The five-element concept therefore greatly influences Chinese culture and thinking, such as in Chinese cuisine, traditional Chinese medicine, architectural design, etc. Among the five elements, "jin" (gold) is considered the most prominent and is associated with purity and value. Therefore, it is often linked to various aspects of Chinese culture. According to Wei (2018), "jin" (gold) has carried the Chinese civilization for thousands of years. The bodily and cultural experience of "jin" (gold) gave rise to conceptual metaphors of "jin" (gold), which were often used by ancient Chinese people to highlight properties of other objects reflected in many Chinese idioms.

The Chinese language uses idioms in both spoken and written communication. Idioms not only convey meanings clearly and succinctly but also facilitate rapid communication, offer diverse communication formats, and beautify the language. Through research, it has been found that the Chinese language contains a significant number of idioms featuring the word "jin" (gold). These idioms enhance the conveyance of meanings due to the nature of idiomatic expressions, which cannot be directly translated from their characters. They often involve similes that make them challenging to understand.

The idea of the five elements is recorded in the *Shang Shu* which is the oldest historical book in China. The book explains the relationships between the five elements. There are two types of relationship between these five elements, namely promoting and supporting each other (相生) and constraining and inhibiting each other (相克). The specific mutual supporting relationship is gold supports water, water supports wood, wood supports fire, fire supports earth, and earth supports gold. The specific mutual constraining relationship is gold refutes wood, wood refutes earth, earth refutes water, water refutes fire, and fire refutes gold. The supporting and constraining relationships of these five elements have been used to explain the complex interrelationships of our surroundings. Observing the nature around us gave rise to the ancient Chinese system of thinking about the world that was passed on from generation to generation.

The five elements are deeply related to Chinese thought and culture. Therefore, many researchers are interested in and study the five elements through different cultural perspectives, such as the influence of yin and yang and the five elements' philosophical concepts on traditional Chinese food culture. Xu (2009) shows that belief in the five elements influences the food culture of the Chinese people. For example, each taste is related to the five elements. Eating food must be in accordance with the season, and eating food appropriate to the elements will make the body strong and have a long life. Zhang (2010) divides the evolution of the five elements into three periods: The first period, the beginning of Xia and Shang dynasties, was the time when the idea of the five elements was being formed. The second period, the Spring and Autumn Period, was the time when the idea of the five elements developed forming the Five Elements promoting and supporting relationships that had a great influence on the society. The belief in the five elements

was linked with the idea of the school of Si-Meng (思孟学派)[4] and caused belief in Wu de (五德), which teaches that a good soul must have five virtues. Wu de consists of love (仁), justice (义), etiquette (礼), knowledge (智), and holy (圣). The third period, Late Spring and Autumn Period, was the time when the "earth" was elevated to the highest position among the five elements. Later, the concept of the five elements was continually developed. The thought of Wu de was fused with the thought of the Han Dynasty Confucian School (汉儒), giving rise to the idea of Wu chang (五常), which consists of love (仁), justice (义), etiquette (礼), knowledge (智), and integrity (信). This is the core concept of Confucian thought, which is a doctrine that has influenced China for centuries.

The idea of the five elements has also been studied in various aspects of culture, such as Zhang and Ma's (2018) work on the influence of the five elements through Chinese architecture, which shows that the five elements influence the design of selected materials as well as the colours used in Chinese art. Xu (2011) studied gold in accounting corporate culture and found that there are 110 words related to "jin" (gold) in Chinese accounting vocabulary. Words containing "jin" (gold) reflect that Chinese people regard gold as a good word. Many Chinese trademarks contain the word "jin" (gold). Xu's (2011) study also reflects accounting relationships through meaningful terms related to shareholders, income, expenses, assets, and costs. In addition to the above-mentioned articles, there are many other studies, indicating that the idea of the five elements is deeply related to Chinese life and culture.

The five elements are studied through a linguistic perspective in semantic and cognitive ways. The studies of semantics focus on the evolution of the meanings of earth, water, fire, wood, and gold in various eras to see how the meanings have changed. For example, Xu（2001）studied the development of the meaning of the word "jin" (gold) and the original meaning of gold as metal has evolved to represent the idea of qi（气）or air.

Wang and Sun (2010) studied the metaphors of idioms containing the word "jin" (gold) through metaphorical cognitive analysis of "jin" (gold) in Chinese idioms, suggesting that the metaphors of idioms containing the word "jin" (gold) in the Chinese language can be divided into four groups by origin of expressions. The metaphors are from social experience, production experience, life experience, and literary works or history. Wang and Chen (2015) studied metaphors in the five elements through statistical analysis and translation research, providing evidence for cross-domain mappings with people's body parts. Wei (2018) studied 285 idioms containing the word "jin" (gold), finding six major categories of conceptual metaphors of "jin"

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[4] The Si-Meng School is the common name of the connection between the Zisi School (子思 483 BC-402 BC) and the Mencius School (孟子 circa 372 BC- circa 279 BC) because the two schools have some consistency in their thoughts.

(gold) in Chinese idioms: valuable objects, good objects or phenomena, human beings, high social status, wealth, and standards.

From studying related metaphors of "jin" (gold), it was found that most works focus on studying the five elements that are related to the way of life of Chinese people, such as beliefs about the five elements and food culture, Chinese medicine, Chinese architectural design, and art. The studies from a linguistic perspective are not comprehensive. Some studies on expressions of the five elements are not profound because there are many idioms in Chinese, and it is hard to collect the data. This research will help complete and present different information. This work collects information from eight authoritative dictionaries that have been used in China for a long time. Each dictionary was published at a different time. This makes the collected expressions complete. The results of the analysis of the meaning of the expressions as well as the culture reflected through them become more complete.

This study utilises the cognitive metaphor theory of Lakoff and Johnson (1980), which posits that communication in human daily life takes the form of metaphors or comparisons. Conceptual metaphors consist of two domains: what we want to understand is called the target domain, and the concepts that are used to achieve understanding are called the source domain. It can be said that conceptual metaphors are to understand and perceive one thing from one concrete thing. However, metaphors are not just comparing one thing with another. It is also a matter of thought, rationality, and understanding. All metaphors are based on our collective experiences and come from our culture. The study of metaphors can help us understand the way that people think. The study of the meaning of idioms in Chinese containing the word "jin" (gold) not only helps us better understand the meaning and reduce miscommunication, but also helps us understand culture, beliefs, and social values through idioms.

Objectives

1.To study the metaphorical expressions of idioms containing the word "jin" (gold) in Chinese.

2.To analyse the conceptual metaphors of idioms containing the word "jin" (gold) in Chinese through the metaphorical meanings conveyed by the idioms.

3.To examine the imagery reflecting the perspectives of idioms containing the word "jin" (gold) in the Chinese language.

Research Methodology

Idioms in Chinese mean a concise and eloquent word that people have been using for a long time. Chinese idioms typically consist of four Chinese characters. Some idioms cannot be understood directly from the characters, and in some cases, it is necessary to know their origins to understand their meanings. This study collects 411 idioms containing the word "jin" (gold) from the following eight authoritative Chinese idiom dictionaries:

　　　1．Luo, Z.（1986）. *Grand Chinese dictionary*（汉语大词典）. Hanyu Dacidian Chubanshe (汉语大词典出版社).

　　　2.Language Research Institute of Hubei University. (2004). *Chinese idioms dictionary* (汉语成语大辞典). Zhonghua Book Company (中华书局).

　　　3. Li, X. (2006). *Modern Chinese standard idioms dictionary* (现代汉语成语规范大词典).　Changchun Publishing House (长春出版社).

　　　4. Liu, J. (2012). *Chinese idioms essence dictionary* (white) (汉语成语精华词典/白皮). Kaiming Publishing House (开明出版社).

　　　5. Zhao, J., Zhang, Y., & Tan, L. (2013). *Zhonghua idioms dictionary* (中华成语大词典). Sinolingua Press (华语教学出版社).

　　　6. Lexicographical Center of Commercial Press (商务印书馆辞书研究中心编). (2015). *Xinhua idioms dictionary* (新华成语词典). The Commercial Press (商务印书馆).

　　　7. Wang, X. (2017). *Chinese idioms dictionary* (汉语成语大词典). Sinolingua Press (华语教学出版社).

　　　8. Song, Y. (2017). *Chinese idioms dictionary* (汉语成语词典). Sichuan Lexicographical Press (四川辞书出版社).

　　　After collecting idioms containing the word "jin" (gold), we then analysed the meaning of each idiom and categorise it based on its metaphorical meaning. Subsequently we examined the metaphorical meanings of these idioms to reflect the imagery that each idiom expression conveyed, including the traditions, beliefs, culture, and values embedded within the idioms featuring the word "jin" (gold).

Findings and Discussion

Findings

　　　Through the analysis of 411 idioms containing the word "jin" (gold), it is found that these idioms have complex meanings, and some even have multiple meanings. Of all the collected 411 idioms containing the word "jin" (gold), a total of 414 metaphorical meanings has been identified. All these metaphorical meanings can be re-classified into 26 distinct categories. In terms of their conceptual metaphors, these 26 categories in turn can be further divided into 9 groups: human, preciousness, beauty, money and treasured things, social status and standard, goodness, stability and strength, nature, and other meanings. For detailed information, please refer to Table 1.

Table 1

Semantic Statistics of Chinese Idioms Containing the Word "Jin" (Gold)

Groups of metaphors	No.	Meaning of the idiom	Examples	No. of idioms	Percentage of total idioms
Human 105 idioms (25.36%)	1	Human behaviour	大马金刀 (dà mǎ jīn dāo) speaking bluntly, sharply, and without mercy	40	9.66
	2	Human being	精金百炼 (jīng jīn bǎi liàn) People must go through various tests before they can become talented.	29	7.00
	3	A person's wealth or luxurious life	千金之家 (qiān jīn zhī jiā) a wealthy family	25	6.04
	4	Good qualities of people	精金美玉 (jīng jīn měi yù) a person with a good heart	7	1.69
	5	A person's superb skills or valuable talents	匠石运金 (jiàng shí yùn jīn) a person who is highly skilled	4	0.97
Preciousness 60 idioms (14.50%)	6	The value of the object	千金难买 (qiān jīn nán mǎi) some things that money can't buy	30	7.25
	7	The value of advice, words, or promises	一诺千金 (yī nuò qiān jīn) A promise is valuable.	12	2.90

	8	The value of artistic works such as articles, poems, or calligraphy	一字千金 (yī zì qiān jīn) a writing or calligraphy that is highly valued	11	2.66
	9	The value of time	一刻千金 (yī kè qiān jīn) Time is gold.	7	1.69
Beauty 58 idioms (14.00%)	10	Beautiful articles, poems, or calligraphy works	金声玉润 (jīn shēng yù rùn) beautiful rhyming poems	26	6.28
	11	Beautiful clothing, decoration, or architecture	金碧辉煌 (jīn bì huī huáng) (buildings or furnishings, etc.) gorgeous, exquisite, dazzling	19	4.59
	12	Beautiful sound	敲金击玉 (qiāo jīn jī yù) Resounding and melodious tone of poetry and prose	8	1.93
	13	Beautiful appearance	金玉其外 (jīn yù qí wài) beautiful on the outside, but terrible on the inside	5	1.21
Money and treasured things 51 idioms (12.32%)	14	Items made of metal	击鼓鸣金 (jī gǔ míng jīn) to order an advance or retreat in battle	33	7.97
	15	Money or valuable objects	金银财宝 (jīn yín cái bǎo) gold, silver, and precious things	18	4.35

Social status and standard 48 idioms (11.59%)	16	Social status	腰金拖紫 (yāo jīn tuō zǐ) high-ranking officials	36	8.70
	17	Standard law	金石之策 (jīn shí zhī cè) a plan, strategy, or decision that is enduring and unshakable	12	2.90
Goodness 39 idioms (9.42%)	18	Beautiful relationship	黄金搭档 (huáng jīn dā dàng) the best partners	20	4.83
	19	Good thing or good phenomenon	黄金世界 (huáng jīn shì jiè) beautiful and perfect situation	10	2.42
	20	The best thing	淘沙得金 (táo shā dé jīn) selecting the highest-quality things from a large quantity	9	2.17
Stability and strength 28 idioms (6.77%)	21	Strong and hard-to-break things	金城千里 (jīn chéng qiān lǐ) The territory is very strong and safe.	24	5.80
	22	Steadfast and unwavering spirit	心如金石 (xīn rú jīn shí) unwavering determination	4	0.97
Nature 13 idioms (3.14%)	23	Hot weather	流金铄石 (liú jīn shuò shí) extreme heat	6	1.45
	24	Sun	金乌玉兔 (jīn wū yù tù) the sun and the moon	4	0.97

	25	Autumn	金风玉露 (jīn fēng yù lù) autumn scenery	3	0.72
Other meanings 12 idioms (2.90%)	26	Other meanings	金吾不禁 (jīn wú bù jìn) no night ban; can access throughout the night	12	2.90
Total				414	100

From the table above, it is found that the attributes of idioms containing the word "jin" (gold) with the highest number are idioms related to humans, with a total of 105 idioms, which is 25.36% of all Chinese idioms containing the word "jin" (gold). Second is preciousness, involving 60 idioms, accounting for 14.50%. Third is beauty, with a total of 58 idioms, accounting for 14.00%. Fourth is money and treasured things, with 51 idioms, accounting for 12.32%. Fifth is social status and standard, with 48 idioms, accounting for 11.59%. Sixth involves goodness, with 39 idioms, accounting for 9.42%. Seventh involves stability and strength, with 28 idioms, accounting for 6.77%. Eighth involves nature, with 13 idioms, accounting for 3.14%. And ninth involves other meanings, there are 12 idioms, accounting for 2.90%.

Discussion

1. Chinese Idioms Containing the Word "jin" (gold)

   1.1 Chinese Idioms Containing the Word "jin" (gold): Metaphors Related to Humans

   "Gold" is a substance with many properties. In addition to being a rare and expensive element, gold also possesses qualities such as resilience to heat, non-corrosiveness, and hardness. Due to its unique characteristics, people use the word "jin" (gold) to symbolise various meanings. Among the idioms containing the word "jin" (gold) in the Chinese language, the attributes related to human's behaviours are the most prevalent. The meanings of these idioms can be divided into five groups, as follows:

   1.1.1 A total of 40 idioms convey human behaviour, accounting for 9.66%. These idioms describe characteristics, speech, actions, attitudes, and other related meanings associated with humans. For example, 大马金刀 (dà mǎ jīn dāo) speaking straightforwardly, 分金掰两 (fēn jīn bāi liǎng) overly calculating, narrow-minded, and 金舌弊口 (jīn shé bì kǒu) loquacious.

   1.1.2 A total of 29 idioms symbolise a human being, accounting for 7.00%. This type of idiom often attributes certain qualities of people to gold. For instance, 金无足赤 (jīn wú zú chì) no one is perfect, like impure gold; 精金百炼 (jīng jīn bǎi liàn) pure gold

can be melted many times, describing the process of mastery through training and challenges; and 真金不怕火炼 (zhēn jīn bù pà huǒ liàn) comparison between gold and a human being, be brave and never give up to the obstacles and various challenges.

1.1.3　A total of 25 idioms convey the idea of wealth or a luxurious and affluent life, accounting for 6.04%. "jin" (gold) here signifies something valuable, including people with great wealth, luxury, or lavish lifestyles. For example, 千金之家 (qiān jīn zhī jiā) a wealthy family and 千金之子 (qiān jīn zhī zǐ) a rich person.

1.1.4　A total of 7 idioms symbolise purity, kindness, and good qualities of a person, accounting for 1.69%. For instance, 良金美玉 (liáng jīn měi yù) a person of high moral character and 精金美玉 (jīng jīn měi yù) a person with a good heart.

1.1.5　A total of 4 idioms represent exceptional skills or the precious blessings of an individual, accounting for 0.97%. For example, 金针度人 (jīn zhēn dù rén) pass on the ultimate secrets to others, meaning to teach secrets or skills to others, and 匠石运金 (jiàng shí yùn jīn), according to the Xinhua dictionary's explanation, originally referring to the carpenter's stone ax that chopped off the white ash on the tip of the Ying people's noses without bruising the Ying people's noses, metaphorically implying extraordinary abilities or skills.

1.2　Chinese Idioms Containing the Word "jin" (gold): Metaphors Related to Preciousness

Humans consider "gold" as a symbol of preciousness because gold is expensive and rare. There are 60 Chinese idioms containing the word "jin" (gold) that also convey the same meaning of preciousness or value. The meaning of these idioms can be divided into 4 groups: 1) the value of the object; 2) the value of advice, words, or promises; 3) the value of articles, poems, and calligraphy; and 4) the value of time.

1.2.1　Chinese idioms containing the word "jin" (gold) convey meanings similar to that of preciousness, just like gold itself. There are a total of 30 idioms, accounting for 7.25%. These idioms often include words like 千金 (qiān jīn) a thousand pieces of gold and 万金 (wàn jīn) 10,000 pieces of gold. For example, 千金难买 (qiān jīn nán mǎi) some things are so valuable that they cannot be bought with a large amount of money, 千金不换 (qiān jīn bù huàn) of such great value that it cannot be exchanged for money, and 家书抵万金 (jiā shū dǐ wàn jīn) in ancient times, receiving letters from home was not easy due to limited communication and transportation, so they were highly valued.

1.2.2　A total of 12 idioms convey the value of advice, words, or promises, accounting for 2.90%. For example, 金石之言 (jīn shí zhī yán) words like gold and jade, meaning valuable advice or counsel, 金石良言 (jīn shí liáng yán) good words like gold and

jade, referring to valuable words of advice, and 金玉良言 (jīn yù liáng yán) valuable words of wisdom or beneficial advice.

1.2.3 A total of 11 idioms convey the value of articles, poems, or painting, accounting for 2.66%. For example, 一字千金 (yī zì qiān jīn) a single word is worth a thousand pieces of gold, meaning profound and valuable articles or poetry, and 金壶墨汁 (jīn hú mò zhī) ink and paper are as precious as gold, referring to high-quality and rare literary works.

1.2.4 A total of 7 idioms convey the value of time, accounting for 1.69%. For example, 一刻千金 (yī kè qiān jīn) every moment is worth a thousand pieces of gold, signifying the high value of time, and 寸金难买寸光阴 (cùn jīn nán mǎi cùn guāng yīn) an ounce of gold cannot buy any second of time, meaning that time is highly valuable and cannot be bought by money.

1.3 Chinese Idioms Containing the Word "jin" (gold): Metaphors Related to Beauty

There are 58 Chinese idioms containing the word "jin" (gold) that convey a sense of appreciating beauty, accounting for 14.00%. Through analysis, the meaning of this group can be divided into four aspects: 1) beautiful articles, poems, or calligraphy works; 2) beautiful clothing, decoration, or architecture; 3) beautiful sound; and 4) beautiful appearance.

1.3.1 A total of 26 idioms signify the beauty and delicacy of literature, poetry, or calligraphy, accounting for 6.28%. For example, 金章玉句 (jīn zhāng yù jù) poetry that has been well selected using words and 锵金铿玉 (qiāng jīn kēng yù) poetry that is a beautiful rhyme.

1.3.2 A total of 19 idioms represent the beauty of clothing, decoration, or architecture, accounting for 4.59%. This is because when gold is exposed to sunlight, it shimmers and shines. Chinese idioms with the word "jin" (gold) not only convey the meaning of the golden colour but also symbolise the beauty of clothing, decorative accessories, or architectural elements. For instance, 金碧辉煌 (jīn bì huī huáng) is used to describe the magnificence and grandeur of architecture, and 镂金铺翠 (lòu jīn pù cuì) describes the exquisite and delicate craftsmanship of carving.

1.3.3 A total of 8 idioms signify beautiful sounds, accounting for 1.93%. Gold is one of the primary materials used in ancient Chinese musical instruments. Yi (2010) described the materials used in ancient Chinese musical instruments, include gold, stone, clay, leather, wood, silk, gourd, and bamboo. Gold produces distinctive and prominent sounds. Idioms with the word "jin" (gold) thus convey the meaning of melodious sounds. For example, 敲金击石 (qiāo jīn jī shí) the melodious sound like

striking gold and hitting stones, rotund sounds, and 敲金戛玉 (qiāo jīn jiá yù) referring to musical sounds, singing, or other pleasant and melodious sounds.

1.3.4 A total of 5 idioms symbolise the beautiful appearance of people, accounting for 1.21%. For example, 金相玉质 (jīn xiàng yù zhì) refers to an individual who is beautiful inside out, and 金玉其外 (jīn yù qí wài) describes people who are beautiful on the outside but have a bad nature or quality on the inside.

1.4 Chinese Idioms Containing the Word "jin" (gold): Metaphors Related to Money and Treasured Things

Adjectives related to objects with the character "jin" (gold), according to Modern Chinese Dictionary（现代汉语词典）, refer to "five metals" (五金), i.e., gold, silver, copper, iron, and tin, generally referring to metals (金属). The Chinese have recognised the significance of gold and had metallurgical technology since the early Western Zhou Dynasty. Ancient people used metal materials to create various objects such as coins, weapons, musical instruments, and other valuable items. Likewise, there are 51 idioms containing the word "jin" (gold) that also has diverse meanings related to objects, accounting for 12.32%. These idioms can be categorised into those conveying the meaning of items made of metal and those conveying the meaning of money or valuable objects.

1.4.1 A total of 33 idioms express the meaning of items made of metal, accounting for 7.97%. This category of idioms often refers to weapons or metal tools used in warfare. The meaning of these idioms can be linked to warfare. For example, 击鼓鸣金 (jī gǔ míng jīn) drumming and blowing metal instruments, used in ancient times to issue commands in warfare, which refers to engaging in a battle, and 金戈铁马 (jīn gē tiě mǎ) golden spears and ironclad horses, a metaphor for the splendid demeanour of warriors.

1.4.2 A total of 18 idioms express the meaning of money, substances, or valuable items, accounting for 4.35%. For example, 金银财宝 (jīn yín cái bǎo) gold and silver treasures, referring to wealth and valuable possessions, and 金帛珠玉 (jīn bó zhū yù) gold, silk, pearls, and jade, symbolising precious and valuable things.

1.5 Chinese Idioms Containing the Word "jin" (gold): Metaphors Related to Social Status and Standard

There are 48 Chinese idioms containing the word "jin" (gold) that can be related to the golden mindset, including social status and standards, accounting for 11.59%. These idioms convey two main social implications: those signifying social status and those representing important legal standards or requirements.

1.5.1 A total of 36 idioms signify social status, accounting for 8.70%. These idioms mainly consist of the characters 金, symbolising a golden insignia and 紫,

signifying purple robes. Wang and Sun (2010) explain that in ancient China, high-ranking officials wore purple robes and had a gold emblem at their waist. Therefore, idioms containing the characters 金 and 紫 are often used to describe high-ranking officials' prestigious status, such as 腰金拖紫 (yāo jīn tuō zǐ) and 腰金衣紫 (yāo jīn yī zǐ) gold at the waist and trailing purple, indicating a high-ranking official.

1.5.2   A total of 12 idioms represent important legal standards or requirements, accounting for 2.90%. For example, 试金石 (shì jīn shí) testing gold with a stone, originally referring to a method of testing the quality of gold, which later symbolises a reliable testing method, 玉圭金臬 (yù guī jīn niè) a jade square and a golden standard, a metaphorical expression for important standards or regulations, and 玉律金科 (yù lù jīn kē) jade rules and golden principles, referring to crucial conditions or requirements that must be followed.

1.6   Chinese Idioms Containing the Word "jin" (gold): Metaphors Related to Goodness

People's experiences and perceptions of "gold" allow it to connect with various meanings and symbols. For the Chinese, gold can symbolise goodness in many ways. There are 39 Chinese idioms with the word "jin" (gold) that convey the meaning of goodness, accounting for 9.42%. These idioms can be subdivided into three groups: beautiful relationship, good thing or good phenomenon, and the best thing.

1.6.1   A total of 20 idioms signify beautiful relationships, accounting for 4.83%. For example, 金石之交 (jīn shí zhī jiāo) intimate friendship between two people, also referring to good international relations, and 金石交情 (jīn shí jiāo qíng) deep and enduring friendship or unbreakable bonds.

1.6.2   A total of 10 idioms convey the meaning of good stories or beautiful events, accounting for 2.42%. For example, 黄金世界 (huángjīn shì jiè) a beautiful and perfect situation and 金瓯无缺 (jīn ōu wú quē) an integrity of a country or territory.

1.6.3   A total of 9 idioms convey the meaning of good or high-quality things, accounting for 2.17%. Idioms like 沙里淘金 (shā lǐ táo jīn), 排沙简金 (pái shā jiǎn jīn), and 淘沙得金 (táo shā dé jīn) finding gold through the process of sifting sand all mean the difficulty of obtaining something valuable, as well as the idea that achieving valuable results requires a great deal of effort. Additionally, these idioms also indicate the importance of selecting the highest-quality items from a large number of items.

1.7   Chinese Idioms Containing the Word "jin" (gold): Metaphors Related to Stability and Strength

Hardness is one of the qualities attributed to all the metals and in Chinese "jin" (gold) can symbolise strength and difficulty to destroy. There are 28 idioms that convey the meaning of strength or durable things, accounting for 6.77%. They can be divided into two groups: those representing strong and hard-to-break things and those signifying a steadfast and unwavering spirit in the face of obstacles.

1.7.1 A total of 24 idioms convey the meaning of strength or durable things, accounting for 5.80%. The ancient Chinese used gold as a metaphor for things that are tough, not easily broken or not corroded. For example, 金城汤池 (jīn chéng tāng chí) a city wall as strong as gold and a boiling moat, which metaphorically represents a city or fortress that is extremely strong. Another idiom is 金石之坚 (jīn shí zhī jiān) as hard as metal and stone, which means something is incredibly strong.

1.7.2 A total of 4 idioms convey the meaning of a steadfast and unwavering spirit in the face of obstacles, accounting for 0.97%. The idioms containing the word 断金 (duàn jīn) mean cutting gold, which in Chinese signifies that if one's determination is unwavering, even if the task is difficult, success can be achieved. For instance, 二人同心，其利断金 (èr rén tóng xīn, qí lì duàn jīn) when two people work together with a united heart, they can overcome any difficulties, and 心如金石 (xīn rú jīn shí) a heart as strong as gold and stone, which signifies having a firm and unwavering determination.

1.8 Chinese Idioms Containing the Word "jin" (gold): Metaphors Related to Nature

Taoism is a religion that has existed for a long time in China. The core ideas of Taoism profoundly affected Chinese thought and culture. Some Chinese expressions containing the word "jin" (gold) are also influenced by Taoism, especially expressions that refer to nature. There are 13 expressions with the word "jin" (gold) implying nature, accounting for 3.14%. Idioms with the word "gold" related to nature include hot weather, autumn, and the sun.

1.8.1 A total of 6 idioms convey the meaning hot weather, accounting for 1.45%. The process of melting gold requires extremely high heat. The experiences of observing the world have led people to establish a conceptual link between "gold" and "heat." For example, 焦金烁石 (jiāo jīn shuò shí) and 流金铄石 (liú jīn shuò shí) have similar meanings: stone and melting and turning into liquid, referring to scorching hot weather.

1.8.2 A total of 4 idioms convey the meaning of the sun, accounting for 0.97%. Fang (2013) gives details of beliefs about birds in Chinese culture; the Chinese believed that there was a golden bird "金乌" (jīn niǎo) in the sun. This divine bird resided

within the sun and would fly from east to west every day, causing the sun to rise in the east and set in the west according to the auspicious bird's movement. The wisdom in observing and attempting to understand the natural phenomena of ancient Chinese led to folklore and beliefs. Chinese idioms containing the word "jin" (gold) that refer to the sun include 金乌玉兔 (jīn wū yù tù) golden bird and jade rabbit, referring to the sun and the moon. This idiom comes from Taoist anecdotes. According to Yuan (1998), Chinese mythology believes that there is a rabbit on the moon, which is as white as jade, so it is called "Jade Rabbit". Likewise, there is a three-legged crow in the sun, which is a sacred bird. 玉走金飞 (yù zǒu jīn fēi) jade walks, gold flies, referring to the sun and the moon are like flying, thus signifying how time flies.

1.8.3 A total of 3 idioms convey the meaning of the season of autumn when leaves fall, accounting for 0.72%. Chen (1986) states that by expanding the understanding of the five element concepts, the ancient Chinese divided the year into five seasons, corresponding to the five elements of wood, fire, earth, gold, and water respectively. Spring belongs to wood; summer belongs to fire; the period between summer and autumn belongs to earth; autumn belongs to gold; and winter belongs to water. For example, 金风玉露 (jīn fēng yù lù) golden wind and jade dew, referring to the cool and refreshing autumn weather, and 金风送爽 (jīn fēng sòng shuǎng) golden wind brings freshness, meaning the breeze in autumn.

1.9 Chinese Idioms Containing the Word "jin" (gold): Metaphors Related to Other Meanings

There are 12 Chinese idioms containing the word "jin" (gold) that are difficult to classify because they often convey specific noun meanings, such as place names, royal titles, surnames, etc. This study then categorises all these idioms into one category "other meanings," accounting for 0.90%. For example, 金谷酒数 (jīn gǔ jiǔ shù) originally meant a large amount of wine in the Golden Valley of the Jin Dynasty's garden in Luoyang City; later, it referred to a punishment of drinking three glasses of wine at a banquet. 玉堂金马 (yù táng jīn mǎ) Jade Hall and Golden Horses refer to the names of the palace and palace gate in the Han dynasty, it was a place for selecting talented individuals for government positions. Later, this expression came to symbolize a person who is knowledgeable skilled, wealthy, and prominent.

2. The Perspectives of Idioms Containing the Word "jin" (gold) in the Chinese Language

The Chinese idioms that contain the word "jin" (gold) can convey aspects of Chinese society, history, culture, and beliefs, as follows:

2.1 The Society in the Feudal System in Ancient China

Chinese idioms with the word "jin" (gold) can effectively reflect the social system of China, especially during the feudal regime in the past. During that time, the highest authority in government was concentrated at the centre. Wang and Sun (2010) explain that according to historical records, the rulers began to issue official seals and ribbons to leaders and officials of border ethnic minorities in the eleventh year of Emperor Gaozu of the Han Dynasty (汉高祖). In the ninth year of the Yongyuan (永元) era of the Eastern Han Dynasty (AD 97), Emperor He (汉和帝) gave officials gold seals and purple ribbons. Later rulers followed the example of Emperor He. In the long history of more than 2,000 years, a system gradually formed. So "gold seal" and "purple ribbon" mean high-ranking officials. In addition, some idioms also showed the level of class in feudal society. For example, 玉叶金枝 (yù yè jīn zhī) and 金枝玉叶 (jīn zhī yù yè) mean jade leaves and golden branches, referring to people from noble or high-status backgrounds.

In ancient China, there were frequent wars, often characterised by intense battles. During the war, music was used to issue orders for launching attacks or retreats. The weapon played a significant role in warfare. The country emphasised a defence system by constructing strong city walls and moats to protect against invasions. Examples of idioms involving the word "jin" (gold) reflecting all the above situations or backgrounds include 金鼓连天 (jīn gǔ lián tiān) the sound of golden drums echoing endlessly, depicting intense and fierce warfare；金戈铁马 (jīn gē tiě mǎ) golden spears and iron horses, referring to formidable and fearsome warriors; and 金城汤池 (jīn chéng tāng chí) a city with golden walls and a moat filled with boiling water, symbolising a strong and well-protected city or fortress.

2.2 Social Values in Chinese Society

The analysis of the meaning and conceptual metaphors of idioms containing the word "jin" (gold) can be broadly categorised into two main types: values related to humans and values related to various things.

Values related to humans: Chinese society valuesb talented people and admires those who are resilient, patient and tolerant in the face of difficulties. Chinese people also respect those who are moral and virtuous, those who are not influenced by materialism, greed for wealth and fame, and believe that inner beauty is more important than appearance. They also appreciate those who embody qualities such as sincerity and determination. For example, 金相玉质 (jīn xiàng yù zhì) beautiful in both appearance and character；精金美玉 (jīng jīn měi yù) refers to people with moral virtues；心如金石 (xīn rú jīn shí) a heart as unyielding as gold and stone；金石不渝 (jīn shí bù yú) determined and unwavering；浪子回头金不换 (làng zǐ huí tóu jīn bù huàn) a reformed person is

more valuable than gold; and 真金不镀 (zhēn jīn bù dù) real gold does not need gilding, meaning genuine qualities do not require embellishment.

Social values related to various things, including emphasizing the importance of language and commitment, and recognizing the value of words, guidance, or advice as precious as gold and gemstones. In addition, the Chinese community values time as a precious commodity, and it also treats gold and wealth as scarce resources. The Chinese community also values the importance of friendship and trust. For example, 金石良言 (jīn shí liáng yán) good words are as valuable as gold and jade; 一诺千金 (yī nuò qiān jīn) a promise worth a thousand pieces of gold, emphasising the importance of keeping promises; 寸金难买寸光阴 (cùn jīn nán mǎi cùn guāng yīn) a second of time cannot be bought with an ounce of gold, signifying the irreplaceable nature of time; 赢金一经 (yíng jīn yī jīng) great advice is valued more than money; 金石之交 (jīn shí zhī jiāo) friendship is as strong as gold or stone, indicating a deep and unwavering friendship.

2.3 Arts and Culture

Some Chinese idioms that contain the word "jin" (gold) partly reflect the significant importance placed on culture and Chinese traditions in society. These idioms illustrate the value of various forms of artistic expression, such as poetry, music, and art, as well as appreciation for the beauty of objects, clothing, accessories, and architecture. They also emphasise the high regard for aesthetics in Chinese culture. Here are some examples: 金声玉润 (jīn shēng yù rùn) poetry that is a beautiful rhyme; 镂金错采 (lòu jīn cuò cǎi) exquisite craftsmanship or artistry with outstanding carving or colouring skills; 金碧辉煌 (jīn bì huī huáng) elaborate decoration, artwork, or architecture with dazzling beauty; 镂金铺翠 (lòu jīn pù cuì) exceptional carving skills that create intricate and beautiful designs; and 敲金戛玉 (qiāo jīn jiá yù) music, singing, or sounds that are melodious and harmonious. These idioms emphasise the importance of artistic and cultural values in Chinese society.

2.4 Ancient religion of the Chinese people

Some Chinese idioms that contain the word "gold" partly reflect beliefs related to Taoism and Buddhist religion, which have had significant influence in China's history, especially Taoism. For example, 金风玉露 (jīn fēng yù lù) golden wind and jade dew, referring to the season of autumn. As mentioned earlier, based on the concept of the five elements in Taoism, gold represents the autumn season. 金刚怒目 (jīn gāng nù mù), A face with the eyes widening in anger, resembling that of the Buddha's attendant warrior holding the Vajra pestle (an ancient Indian weapon), In ancient China, there was an artistic tradition of angry faces, such as statues of gods, and images of gods in Chinese temples. 金乌玉兔 (jīn wū yù tù) the golden crow 金乌 (jīn wū) is a

sacred bird. In Chinese mythology that refers to the sun, and jade rabbit 玉兔 (yù tù) refers to the moon. This idiom alludes to the sun and the moon. Taoists believe that there is a rabbit on the moon and a sacred bird on the sun.

Conclusion

This study demonstrates that the word "jin," which means "gold," appears frequently in Chinese idioms and has a variety of meanings. It illustrates that Chinese people have had diverse experiences with gold, allowing the Chinese language to convey a wide range of meanings related to it. Additionally, the reflection of history, values, culture, and religion through idioms incorporating the word "gold" indicates that gold has been deeply ingrained in Chinese culture and religion from ancient times.

References

Chen, J. (1986). *Yin Yang Wuxing Babu Qiyuan Xinshuo* (in Chinese) [A new theory of the origin of the five elements of Yin yang]. *Studies in the History of Natural Sciences*, *5*(2),97-112.https://kns.cnki.net/kcms2/article/abstract?v=3uoqIhG8C44YLTlOAi TRKqd0WnNPv0wTDjtDUwHroNxgjGwOdF8RaTDfBuBEXguNGI4b_N0ATFVpr Ci_mMBcR5JLdSbdgq2v&uniplatform=NZKPT

Dictionary Editing Office Institute of Linguistics Chinese Academy of Sciences. (1996). *Xiandai Hanyu Cidian* (3th ed) (in Chinese) [Modern Chinese dictionary]. The Commercial Press.

Fang, H. (2013). *Qingdai Manzu de Jing Ya Wenhua* (in Chinese) [The crow culture of the Manchus in the Qing Dynasty]. *Gansu Ethnic Studies*, *2013*(2), 86-90.

Lakoff, G., & Johnson, M. (1980). *Metaphors we live by*. Chicago University Press.

Language Research Institute of Hubei University. (2004). *Hanyu Chengyu Da Cidian* (in Chinese) [Chinese idioms dictionary]. Zhonghua Book Company.

Lexicographical Center of Commercial Press. (2015). *Xinhua Chengyu Cidian* (in Chinese) [Xinhua idioms dictionary]. The Commercial Press.

Li, X. (2006). *Xiandai Hanyu Chengyu Guifan Da Cidian* (in Chinese) [Modern Chinese standard idioms dictionary]. Changchun Publishing House

Liu, J. (2012). *Hanyu Chengyu Jinghua Cidian* (Baipi) (in Chinese) [Chinese idioms essence dictionary (white)]. Kaiming Publishing House.

Luo, Z. (1986). *Hanyu Da Cidian* (in Chinese) [Grand Chinese dictionary]. Hanyu Dacidian Chubanshe.

Song, Y. (2017). *Hanyu Chengyu Cidian* (in Chinese) [Chinese idioms dictionary]. Sichuan Lexicographical Press.

Wang, J. & Chen, Y. (2015). *Jiyu Yuliaoku de Zhongguo Chuantong Zhexue Shuyu "Wuxing" Yinyu Fanyi yu Duiwai Hanyu Jiaoxue Yanjiu* (in Chinese) [Translation of the metaphor of the traditional Chinese philosophical term "Five Elements" based on corpus and research on teaching Chinese as a foreign language]. Journal of Dalian University *36*(6), 139-143. https: //kns.cnki.net/kcms2/article/abstract? v=3uoqIh G8C44YLTlOAiTRKibYlV5Vjs7ijP0rjQDAVm8oHBO0FTadrZLl_Ipm5LyqMe6Fn aHagErledaPQvjS86sEm8ZZmpB&uniplatform=NZKPT.

Wang, S., & Sun, Y. (2010). *"Jin" Ciqun zhong Chengyu de Yinyu Renzhi Fenxi.* (in Chinese) [Metaphorical cognitive analysis of idioms in the "gold" word group]. *Journal of Anhui Literature*, *2010*(12), 242-243. https://kns.cnki.net/kcms2/article/abstract?v=3uoqI hG8C44YLTlOAiTRKgchrJ08w1e7_IFawAif0my9J275rTFshgZNvF_X-nQiYD_D R5yRTamKojo7aMWe5AY6w90IOM9Q&uniplatform=NZKPT

Wang, X. (2017). *Hanyu Chengyu Da Cidian* (in Chinese) [Chinese idioms dictionary]. Sinolingua Press.

Wei, Y. (2018). *A study on the Metaphor of "Gold" in Chinese idioms.* Southwest University. https://kns.cnki.net/kcms2/article/abstract?v=2KdPcD7ewrS11XtuYOYWgZGu_ukI 88lfERdH2b0LfJYM_DxDV5xC2klB_STNfVwSB-SBSPaqzXynVlD5oSTtt6myJ73 SiOM7zvghmKKWXDVbN2FiGLDxdg==&uniplatform=NZKPT&language=gb

Xu, G. (2009). *Yin Yang Wuxing Zhexue Guannian dui Zhongguo Chuantong Yinshi Wenhua de Yingxiang* (in Chinese) [The influence of the philosophical concept of yin and yang and the five elements on traditional Chinese food culture]. *New West Journal*, *2009* (09), 135-136. https://kns.cnki.net/kcms2/article/abstract?v=3uoqIhG8C44YLTlOAi TRKgchrJ08w1e75TZJapvoLK2mqDPZWAthiDRhFYDG3hN3In5heJ9iIXikh99Bb5 44W7yHfyzcJK_P&uniplatform=NZKPT

Xu, H. (2011). *Jinzi Wenhua dui Zhongguo Kuaiji Wenhua Jianshe de Gongxian* (in Chinese) [The contribution of the "gold" character culture to the construction of China's accounting culture]. *Journal of Inner Mongolia University of Electricity*, *2011*(125), 14-15. https://doi.org/10.16162/j.issn.1672-3473.2011.01.038

Yi, M. (2010). *Gudai Yueqihua Bayin* (in Chinese) [Eight tones of ancient musical instru-ments]. *Guoxue*, *2010*(4), 78-80. https://kns.cnki.net/kcms2/article/abstract?v=3uoqIhG8C44 YLTlOAiTRKgchrJ08w1e7_IFawAif0myv4JBlAN9nd2r0igGYEDXMGQ1I6LBx-g O0IFC2wOV1uqK7crxILuND&uniplatform=NZKPT.

Yuan, K. (1998). *Zhongguo Shenhua Chuanshuo* (in Chinese) [Chinese myths and legends].214 People's Literature Publishing House

Zhang, L. (2010). *Wuxing guan dui Zhongguo gudai renxue sixiang de yingxiang* (in Chinese) [The influence of the Five Elements on ancient Chinese anthropological thought]. *Journal of Liaoning University (Philosophy and Social Science)*, *38*(2), 1-7. https://kns.cnki.net/kcms2/article/abstract?v=3uoqIhG8C44YLTlOAiTRKgchrJ08w1e7_IFawAif0mxyjUStHz4nG-l2RjDhjdM5FFeBxkpmiIzE7paIzWv9Z8AmvDZbHv1K&uniplatform=NZKPT

Zhang, Y., & Ma, Q. (2018). *Wuxing Wenhua dui Yishu Sheji de Yingxiang Chutan* (in Chinese) [A preliminary study on the influence of the Five Elements culture on art design]. *Space Art Journal*, *2018*(1), 50-53. https://doi.org/10.13337/j.cnki.packaging.world.2018.01.008

Zhao, J., Zhang, Y., & Tan, L. (2013). *Zhonghua Chengyu Da Cidian* (in Chinese) [Zhonghua idioms dictionary]. Sinolingua Press.

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Abstract

Social innovation is a new approach to addressing problems, deepening needs, and co-creating new ideas for solutions with social members. This research focused on implementing design thinking for social innovation, which can be utilized for new products and services, new processes and practices, and new regulations. It was aimed to investigate the deep needs, propose guidelines, create and test the social innovation prototype to maintain Tai Khern ethnic group's identity. The participants were 15 Tai Khern community members in Ton Haen Noi, Sanpatong, Chiang Mai, and 15 stakeholders; selected by purposive and snowball sampling techniques. The data collection methods comprised three phases of design thinking. In phase 1, Empathize and Define, field observation and in-depth interviews were conducted to understand the local context and define the need to preserve and sustain Tai Khern identity. In phase 2, Ideate and Prototype, group discussions were conducted for brainstorming and selecting ideas to design a prototype for preserving and sustaining the identity. In phase 3, Test, the prototype was presented to the community, and their feedback was used to revise it. The findings indicated the main problem of youth's disinterest and lack of participation in Tai Khern cultural activities, leading to the need to create career opportunities from the identity of Tai Khern community to earn supplementary income and attract younger generations to return to the community. The solutions for preserving and sustaining Tai Khern identity were then proposed as guidelines, including establishing databases and learning materials of

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หน่วยงาน: คณะบริหารธุรกิจและศิลปศาสตร์ มหาวิทยาลัยเทคโนโลยีราชมงคลล้านนา ประเทศไทย

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Tai Khern culture, cultural tour programs, merchandise of souvenirs, and social media activities. These guidelines were finally combined to design "Tai Khern Identity Center" as a prototype of social innovation to transfer Tai Khern identity and local wisdom to younger generations, enhance their engagement and inheritance, and generate supplementary jobs and incomes based on Tai Khern's identity.

Keywords: Tai Khern, Identity, Design Thinking, Social Innovation

บทคัดย่อ

นวัตกรรมเพื่อสังคมเป็นแนวทางใหม่ในการระบุปัญหาและความต้องการที่ลึกซึ้ง และร่วมสร้างสรรค์แนวคิดใหม่ๆกับสมาชิกในชุมชนในการแก้ปัญหา งานวิจัยนี้มุ่งเน้นการใช้กระบวนการคิดเชิงออกแบบเพื่อศึกษาความต้องการเชิงลึก เสนอแนวทาง ร่วมสร้างและทดสอบแบบจำลองนวัตกรรมเพื่อสังคมในการสืบสานอัตลักษณ์ไทเขิน ที่อาจจะอยู่ในรูปแบบของผลิตภัณฑ์และบริการ กระบวนการและแนวทางปฏิบัติ ตลอดจนข้อกำหนดใหม่ๆ ผู้เข้าร่วมวิจัยประกอบด้วย สมาชิกในชุมชนไทเขินบ้านต้นแหนน้อย อำเภอสันป่าตอง จังหวัดเชียงใหม่ จำนวน 15 คน และผู้ที่มีส่วนได้ส่วนเสีย จำนวน 15 คน จากการคัดเลือกแบบเจาะจงและคัดเลือกกลุ่มตัวอย่างแบบลูกโซ่ วิธีการรวบรวมข้อมูลแบ่งเป็น 3 ระยะของกระบวนการคิดเชิงออกแบบ ระยะที่ 1 เข้าใจบริบทและระบุความต้องการเชิงลึก (Empathize and Define) โดยการสังเกตการณ์และสัมภาษณ์เชิงลึก ระยะที่ 2 เสนอแนวทางและสร้างแบบนวัตกรรมสังคม (Ideate and Prototype) โดยการประชุมกลุ่มและระดมสมองเพื่อเสนอแนวทางคัดเลือก และออกแบบรูปแบบนวัตกรรมสังคมความต้องการเชิงลึกของชุมชน และระยะที่ 3 ทดสอบเพื่อประเมินรูปแบบนวัตกรรมสังคม (Test) โดยการประชุมกลุ่มร่วมกับชุมชนเพื่อแลกเปลี่ยนความคิดเห็นและปรับปรุงนวัตกรรมสังคม ผลการวิจัยพบว่า ปัญหาหลักคือเยาวชนไม่สนใจและไม่เข้าร่วมกิจกรรมสืบทอดวัฒนธรรมไทเขินจากบรรพบุรุษ นำไปสู่ความต้องการในการสร้างโอกาสประกอบอาชีพจากอัตลักษณ์ชุมชนไทเขิน เพื่อสร้างรายได้และดึงดูดเยาวชนให้กลับมาสู่ชุมชน แนวทางสำคัญที่เสนอ ได้แก่ สร้างฐานข้อมูลและสื่อการเรียนรู้วัฒนธรรมไทเขิน โปรแกรมท่องเที่ยวเชิงวัฒนธรรม สินค้า ของที่ระลึก และกิจกรรมโซเชียลมีเดีย รวมเป็น "ศูนย์อัตลักษณ์ไทเขิน" ถือว่าเป็นรูปแบบจำลองนวัตกรรมสังคมที่ถ่ายทอดอัตลักษณ์ไทเขินและภูมิปัญญาท้องถิ่นสู่คนรุ่นใหม่ ส่งเสริมการมีส่วนร่วมและสืบทอดอัตลักษณ์ไทเขินของชุมชน ตลอดจนสร้างอาชีพและรายได้จากอัตลักษณ์ไทเขิน

คำสำคัญ: กลุ่มชาติพันธุ์ไทเขิน, อัตลักษณ์, กระบวนการคิดเชิงออกแบบ, นวัตกรรมสังคม

Introduction

Thailand is a country well-known worldwide for its outstanding and diverse cultural capitals from region to region. As one of the world's most popular tourist destinations, people from all over the world visit Thailand to experience the Thai cultures which possibly include their ways of life, food, languages, festivals, and traditions. Thus, Thailand's National Strategy 2018 – 2037 for developing urban and rural areas focuses on sustainably conserving, reviving, and developing architectural heritage, art, culture, local identity, and lifestyles. Empowerment which centers particularly on social and cultural capital development is also promoted. The strategies include highlighting the knowledge and wisdom of ethnic groups, creating local

people's pride in their roots, and improving social and cultural values to make creative economic benefits in order to support local economies.

The northern areas of Thailand, in particular, comprise a diversity of ethnicities; including Tai Lue, Tai Yai, Tai Yong, and Tai Khen, each of which has its own distinctive identity. Attempts to conserve and preserve the identities of these ethnic groups were shown in many studies. For example, Inthaniwet (2014) proposed the musical wisdom preservation guidelines of Tai Khern's folk dance and music (e.g., Krup Sern), Tai Lue's music (e.g., Krup Lue), and Lahu's musical instruments (e.g., Tessuekoy-guitar, Laekachui-bamboo flute, and Jako-drum) in Chiang Rai. The guidelines included organizing cultural conservation clubs, knowledge management and publication, and music lessons at school. Also, Kongsri et al. (2021) compared the identities of Tai Lue, Tai Yong, and Tai Yuan in Baan Thai and Lamphun and found that spoken languages and weaving patterns were different among these groups. They also revealed noticeable social and cultural changes. The spoken language as well as the previous traditions and rituals were modified by the younger generations, leading to the need to conserve traditional culture and language. In addition, in Phuwanatwichit's (2018) study, the cultural identities of Tai Yong, Tai Yuan, and Tai Kuen at Wiang Tha Kan, Sanpatong, Chiang Mai could be promoted by integrating tourism management, providing village funds, establishing homestay businesses, and creating a cultural learning center.

Tai Khern is an ethnic group with the roots of civilization in terms of language, religion, art, and culture. Tai Khern communities can be seen in the north, including Chiang Rai, Lumphun and Phayao. In Chiang Mai, Tai Khern communities include those at Baan San Kang Pla, and San Kamphaeng District; Ban Pa Pong, and Doi Saket District; as well as Ban Thung Siew, Ban Pa Sak, Baan Ton Kok, Baan Ton Ked, Ban Tha Dua, Baan Ton Haen Luang, and Baan Ton Haen Noi of Sanpatong District. Baan Ton Haen Noi, in particular, appeared to maintain their identity, way of life, and culture evident in Tai Khern's spoken and written language, local cuisine, traditional costumes, crafts, and architecture. With abundant evidence, Tai Khern Museum was established to exhibit their traditional ways of life. This so-called cultural village comprised of 23 hip-roof houses, representing a distinctive Tai Khern architecture (Sunkanaporn, 2017). In addition, Baan Ton Haen Noi has village philosophers who can pass on local wisdom, experiences, and cultural traditions which are the identities of Tai Khern.

All of the identities above are valuable learning resources for the Tai Khern ethnic community, and they are considered significant social capital for developing a lifelong learning society. However, rapid and undirected changes in global trends are inevitable; this may lead to changes in community life and the loss of the identity that has been preserved for a long time. It is essential to co-create ethnic community innovations to defend and prevent the loss of ethnic community identity for the next generation so that they become conscious of their heritage and create opportunities to express their ethnic identity. Such social innovations could be in the form of new products and services, new processes, new practices, as well as new rules and regulations on the basis of community engagement, co-creation, and implementation to meet the needs of the community, according to the Theoretical, Empirical, and Policy foundations for building Social Innovation in Europe (TEPSIE, 2014). The social innovations

in this research were designed through a design thinking process as it helps deepen understanding of the community's problems and needs, allow unlimited creative ideas for solutions, and promote social co-creation and engagement. It is anticipated that the Tai Khern ethnic community will be able to co-create and implement social innovation to maintain its identity. This research can also be a case study for public and private sectors, as well as the community and its network, to implement the design thinking process to develop ethnic communities in the future.

Objectives

1. To investigate context, problems, and deep needs for preserving and sustaining Tai Khern identity.

2. To propose guidance and to design a social innovation prototype for preserving and sustaining Tai Khern identity.

3. To assess the prototype for preserving and sustaining Tai Khern identity.

Literature Review

1) Tai Khern Identity

A wide range of Tai Khern's identities have been conserved from the past to the present and have become evident within the Tai Khern community. Firstly, distinctive Tai Khern architecture includes hip-roofed houses made from wood and high-rise floors (Ministry of Culture and National Electronics and Computer Technology Center, 2011). The house commonly comprises an outer part, an inner part, and a terrace. The outer part is used as a common area to welcome guests, rest, and work in the daytime, while the inner part functions as a bedroom, and the terrace, which is typically located in the back of the house, is used for washing. Secondly, Tai Khern has its own spoken and written language. The written language uses an Abugida writing system similar to Lanna's scripture. The spoken language is more widely used in the present. However, each Tai Khern community (e.g., in Chiang Mai vs. in Myanmar) shares similar and different sound systems, according to Borwornraksa and Hongwiangchan (2020). Thirdly, lacquerware represents a contemporary artisanal identity. With its significance deeply rooted in cultural identity, craftsmanship involves two distinctive styles: Scratch-patterned and pattern-enhanced (Princess Maha Chakri Sirindhorn Anthropology Centre, 2022). Fourthly, food represents the identity of the Tai Khern people, as most of the ingredients are obtained from nature, such as native vegetables and herbs planted around the house, along the fence, or grow naturally. Tai Khern people consume sticky rice like other Thai ethnic groups, such as the Northern Thai and Tai Lue. The renowned dishes of the Tai Khern people include "Khao Soi Noi" or "Khao Soi On," which are local specialties of the Tai Khern and Northern Thai people. Additionally, there are other distinctive dishes among the Tai Khern people, such as "Kaeng Phak Waen" (green vegetable curry), "Sai Aua" (Northern Thai sausage), "Prik Kha" (galangal chili dip), and "Khao Tom Hua Ngok" (boiled sprouted garlic rice). The culinary practices of the Tai Khern people continue to be popular in almost every household, featuring a variety of unique dishes.

Lastly, Tai Khern people's clothing is divided into men's and women's. According to Khamnoy (2022), men's clothing is light-colored (white, light brown, blue, and black), long-sleeved, cylindrical, round-necked, with buttonholes made from cotton, while the buttons themselves are either cloth or silver. A towel or cloth is draped over the shoulder, woven in a pattern. There is a turban and a dark-colored sarong with small horizontal patterns alternating at the bottom edge of the sarong. The hem of the pants or loincloth is dark, similar to the color of a shirt with a turban. Women's dress is long-sleeved, light-colored, cylindrical cotton shirts. The round neck can have a center or diagonal slit and has buttonholes made from cotton. The buttons are made of cotton or silver. A shawl or cloth is draped over the shoulder and woven in a pattern. Tai Khern dress is worn on merit-making occasions or auspicious merit-making events such as the Poy Luang ceremony, ordination ceremony, Songkran festival, housewarming ceremony, and welcoming guests.

2) **Design Thinking**

Design thinking is a systematic process for solving problems and fostering social innovation in collaboration with the target community (design with users). Widely used across various fields such as business, engineering, science, social sciences, economics, and education, design thinking is a crucial process for developing innovations for society. It originates from the need to address complex and challenging problems, particularly in today's ever-changing global landscape (Koh et al., 2015). The problems that arise require expertise from various disciplines to gather analytical and creative thinking to find solutions.

Design thinking can be categorized into various models, one of which is the Stanford model. The Stanford model, as shown in Figure 1, originated from Stanford University's "d.school" in the United States, divides the process into five stages:

Empathize: It involves deeply understanding the target audience by putting ourselves in their shoes. It is crucial, as creating or solving anything requires a genuine understanding of the target group. It can be achieved through on-site visits, interviews, and detailed observations.

Define: It suggests synthesizing information and formulating open-ended questions that push for creative thinking without limiting the problem-solving framework. After learning and understanding the target group, the next step is to analyze the problem, clarify the actual problem, and select possible directions.

Ideate: This stage can take various forms, such as brainstorming new ideas without limitations, or creating diagrams and prototypes to encourage the generation of diverse ideas. The focus is on finding various ideas and approaches to solving the problem, with the ideas and directions developed in response to the problems defined in the previous stage.

Prototype: It involves taking the most suitable ideas and creating a model or prototype. This stage allows users to test and ask questions, stimulating feedback to understand what we want to know more about. The faster we create and test, the more quickly we can identify the mistakes and learn about the ideas.

Test: Testing involves presenting the prototype to users or the target group to observe the efficiency of its use. Feedback, suggestions, and recommendations are collected and utilized in the ongoing development and improvement process.

In summary, design thinking is a comprehensive and adaptable process that combines analytical and creative thinking to address complex problems and encourage innovation.

It emphasizes the importance of understanding the target audience, defining the problems clearly, generating diverse ideas, creating prototypes, and continuously testing and improving the solutions.

Figure 1 *The Stanford Model (Hasso Plattner Institute of Design)*
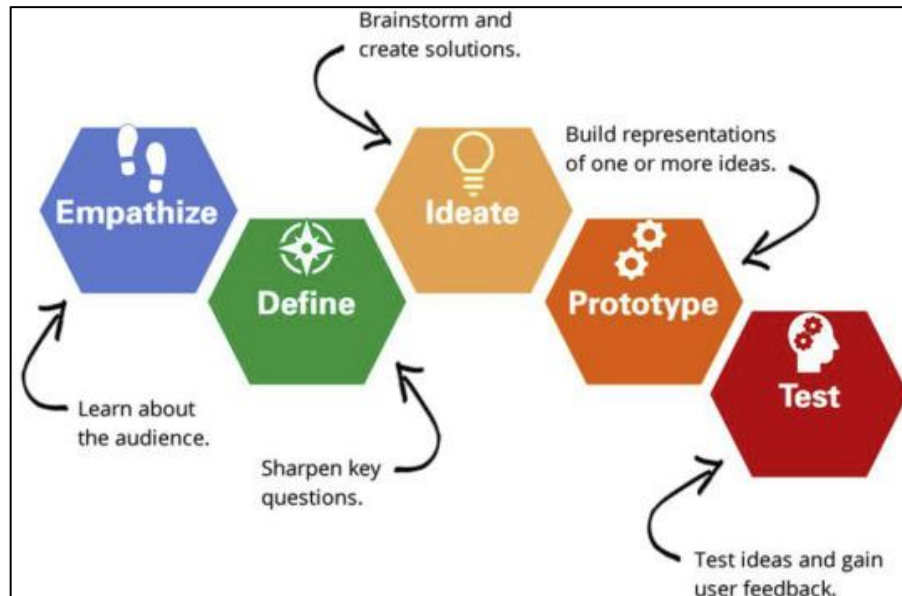
The Double Diamond Design Process or 4D, put forth by the Design Council of the United Kingdom, outlines a conceptual framework for design thinking in developing services and products. As shown in Figure 2, it comprises four key stages: Discover, Define, Develop, and Deliver. The process involves in-depth comprehension, rigorous problem analysis, and the generation and testing of diverse solutions. Additionally, International Business Machines Corporation (IBM) has introduced a cyclical design thinking framework involving continuous Observation, Reflection, and Making loops. This perpetual cycle includes observing real-world contexts, synthesizing thoughts through reflection, and translating ideas into tangible forms through action.

Figure 2 *Double Diamond Process (Council, 2015)*
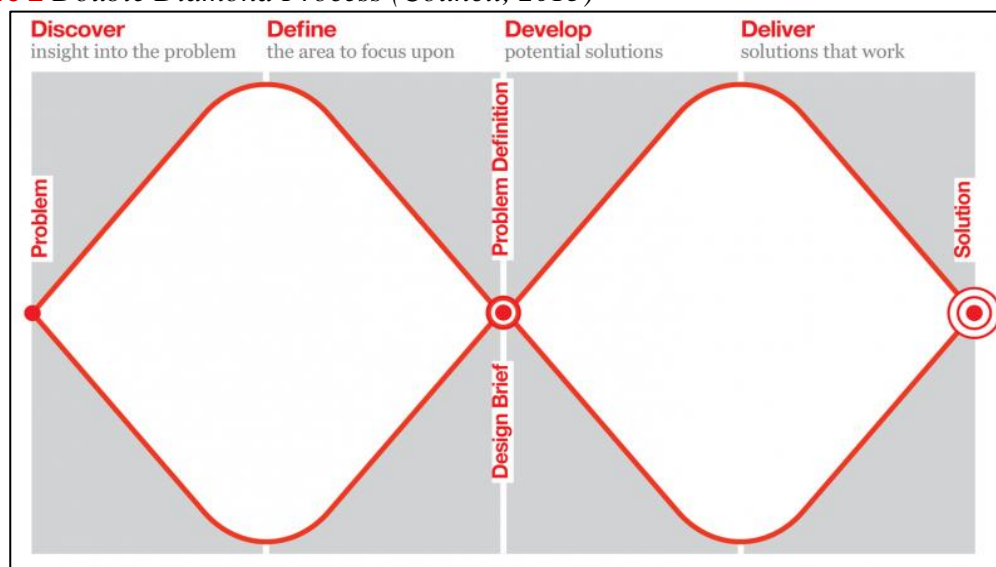
By integrating the design thinking methodologies of Stanford University with the Double Diamond Diagram, the workflow can be broadly categorized into three phases. The initial phase focuses on establishing understanding (Understand), involving empathizing with the target group (Empathize or Discover) and defining problem scopes (Define). The second phase centers on the creative process (Create), including ideation (Ideate or Develop). The third and final phase encompasses testing and refining for user delivery or market launch (Deliver), involving prototyping (Prototype) and testing (Test or Deliver). While the diagram may imply a sequential progression, practical application involves iterative cycles, allowing teams to refine problem-solving approaches and identify optimal solutions. Quick implementation and error identification facilitate team adjustments, enhancing the thoroughness of ideation. In summary, the design thinking process is a dynamic, iterative framework involving continuous understanding, creativity, and refinement cycles. The integration of methodologies from Stanford University and the Double Diamond Diagram enhances the comprehensiveness of problem-solving approaches, ensuring a robust ideation process tailored to the target audience.

What is crucial to note is that the design thinking process is inherently non-linear, as illustrated in Figure 3 by Dam and Siang (2020). The depiction reveals that the design thinking process only sometimes commences with understanding the problem context and needs (Empathize) in a linear sequence leading up to testing modeled ideas (Ideate). Instead, the process can iterate through multiple cycles, each stage having interrelated responsibilities. For instance, understanding the problem context and needs (Empathize) may stem from learning about users through testing original ideation models (Test). Likewise, defining the problem (Define) might originate from understanding the problem context and needs (Empathize), and testing original ideation models (Test) may assist in redefining the problem. Furthermore, the creative ideation process (Ideate) to propose solutions defined earlier can arise from assessing the outcomes of designing ideation models (Prototype), and testing these ideation models (Test) determines their practicality, allowing for further development from the initial concepts. The non-linear nature of the process allows for adaptability in diverse contexts, enabling the study and development of social innovations to align seamlessly with community needs.

Figure 3 *Non-Linear Process of Design Thinking (Council, 2015)*
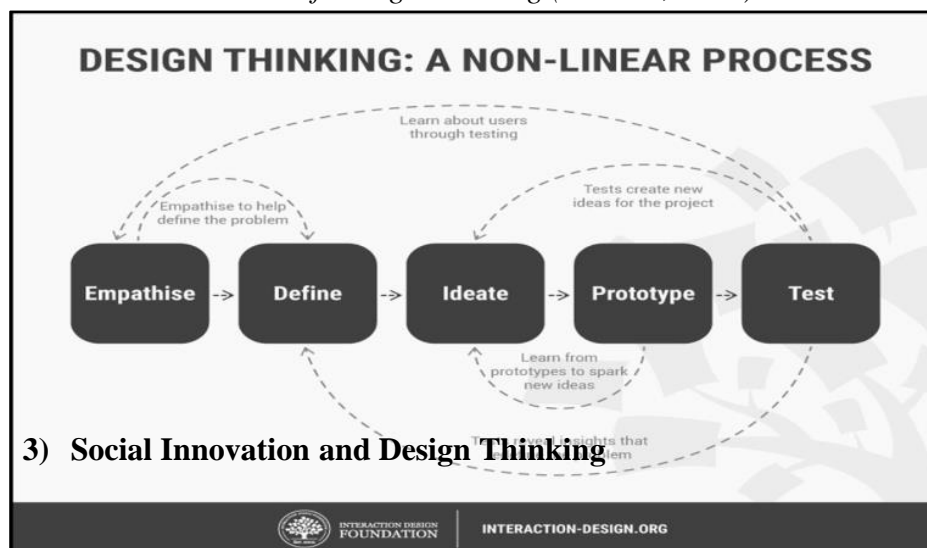
Social innovation may be defined as a novel approach to addressing the problems and needs of the impacted social groups. The Theoretical, Empirical, and Policy foundations for building Social Innovation in Europe (TEPSIE) propose five characteristics of social innovation (TEPSIE, 2014). Firstly, it is new in a particular social context. Secondly, it is designed to meet a social need positively. Thirdly, it involves ideas that have been put into practice and implementation. Fourthly, it requires engagement and involvement of community members to specify their problems and propose more innovation solutions. Lastly, it aims to transform social relations by empowering community members and making resources more accessible. Social innovations can be sorted into four types: new services and products (i.e., new interventions or programs that meet social needs), new practices (i.e., new services requiring new professional roles), new processes (i.e., co-production of new services), and new rules and regulations (i.e. new laws).

In Thailand, research has been conducted to illustrate and exemplify many forms of social innovations. Amornkitpinyo et al. (2022) provide examples of social innovation for quality of life, including social innovation for aging society (e.g., wheelchairs operated by facial movement), social innovations for improving Thailand's medicine and public healthcare (e.g., Visual Inspection with Acetic Acid (VIA) Screening Program), and social innovations for economic development (e.g., Royal Projects). Saardthia et al. (2024) conducted a qualitative study to develop community-basedtourism as a social innovation for improving Grassroots Economy in Takhli, Nakhon Sawan Province. It highlighted a one-day trip route simulation by youth and senior tour guides with "Storytelling" skills, as well as local food and souvenir products to generate income. These activities were promoted via creative and safe media, and using social marketing channels. Some research uses implemented design thinking for developing social innovation. For example, Chujun et al. (2023) implemented design thinking and creative marketing to create Malaria warning and caution signs as social innovations for malaria elimination management. Such innovations brought about highly positive attitudes towards the signs regarding the delivery of pictures, messages, and colors. Further, Nuchniyom and Sinjindawong (2023) employed design thinking to create community-based learning as a social innovation network to empower elderly potential in Chedi Hak, Ratchaburi Province. The focus was on sharing and exchanging local wisdom through online platforms in terms of food and health, handicrafts, culture and tradition, agriculture, and ways of life. This study resulted in a sustainable network of social innovation for the elderly. As can be seen, these two studies have demonstrated the potential of the implementation of Design Thinking for social innovation.

Research Methodology

A qualitative case design was employed in this study in order to gain an in-depth understanding of human behaviors, feelings, thoughts, experiences, actions and relationships in the social activities of a particular group. The data were collected through field observations, semi-structured interviews, and group discussions, based on three phases of the design thinking process, as shown in Figure 4. Phase 1, Empathize and Define, involved field observation and in-depth interviews to gain insights into Tai Khern local context and define their needs for preserving and sustaining their identity. Phase 2, Ideate and Prototype, focused on group

discussions where a multidisciplinary team of lecturers and students who experienced Tai Khern culture had brainstormed some ideas from which to select and propose. This was followed by designing a prototype to meet the needs for preserving and sustaining Tai Khern identity. Phase 3, Test, dealt with a group discussion of the community where the prototype was presented, and their feedback was collected to revise it. According to Withell and Haigh (2013), design thinking is underpinned by the human-centric approach to understanding the community's context, problems, and needs. The focus is on designing social innovation "with" the community, not "for" the community, so the involvement of community members and stakeholders are required in this study. A multidisciplinary team (e.g., researchers, community, lecturers, and students) must collaborate to co-create guidance and social innovation for preserving and sustaining Tai Khern identity.

Figure 4 *Design Thinking Process*
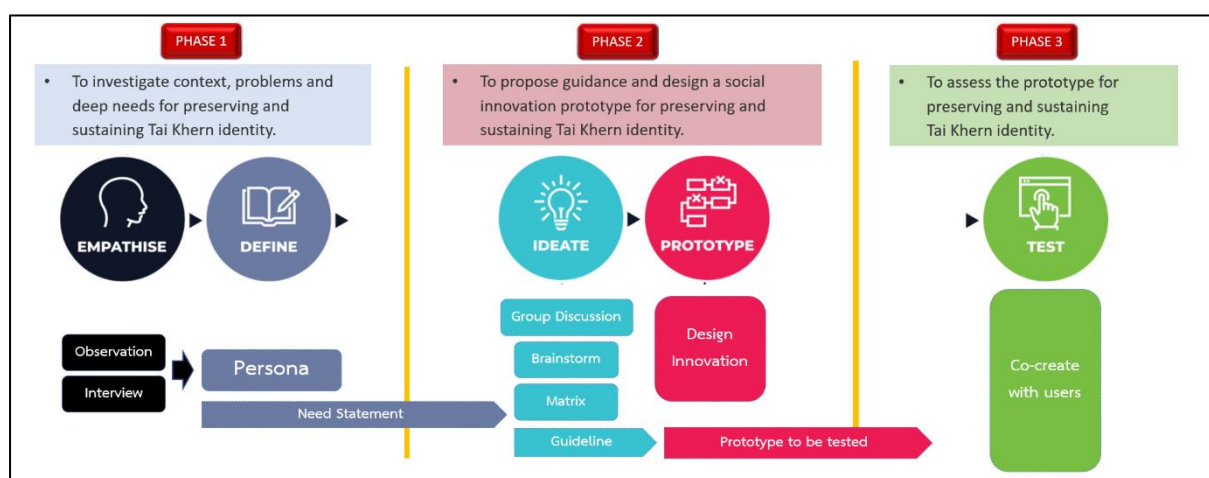
1. Research Participants

There were two groups of participants. The first group of users were 15 Tai Khern community members in Ton Haen Noi, Sanpatong, and Chiang Mai. Selected by a snowball sampling technique, the key informants were the village chief, local sages, and groups of housewives, elderlies, and youths. The second group of users were 15 stakeholders that were purposively selected regarding their high commitment to preserving Tai Khern identity. This group included the representatives of Sanpatong District Cultural Council, Tawangphrao Subdistrict Administrative Organization, Non-formal education, local schools, and researchers from a public university in Chiang Mai.

2. Data Collection Methods

a) A field observation framework was adopted from Lee's (2017) POEMS framework and used in Phase 1, Empathize and Define, to gain insights into the local context. It consisted of P for People, O for Objects, E for Environment, M for Message and Media, and S for Services. Firstly, P is concerned with observing people and critical members of the Tai Khern community, their roles, duties, and relationships. Secondly, O includes observing objects used in the ceremony, their importance, and uses. Thirdly, E deals with observing environments, locations, and atmospheres. Fourthly, M involves observing messages and

media in the ceremony and their roles and significance. Lastly, S includes observing services and support systems in the ceremony.

b) Semi-structured interviews were carried out in Phase 1, Empathize and Define, to understand the Tai Khern community's deep needs for preserving and sustaining their identity. The interview consisted of three categories of guided questions. Firstly, the demographic data of Tai Khern community members included personal information, habits, and lifestyles. Secondly, personal motivation, beliefs, aspirations, inspiration, and problems were the focus. Lastly, their thoughts and feelings about Tai Khern identity, its significance, motivation, and pain points for conserving and inheriting were noted. After gaining permission and consent, the individual interviews took place in community compounds for 30-40 minutes based on the willingness and availability of each participant.

c) A group discussion of a multidisciplinary team was undertaken in Phase 2, Ideate and Prototype, to brainstorm ideas and to select the best to meet the Tai Khern community's needs for preserving and sustaining their identity. The participants, including users and stakeholders, brainstormed as many ideas as possible. Then, similar ideas were categorized and coded into themes. The design selection matrix with two design criteria, "high impact" and "user friendly," was discussed to select the best ideas. These ideas were then combined to design the prototype.

d) A group discussion with Tai Khern community was conducted in Phase 3, Test, to present a prototype to Tai Khern community and collect their feedback. The discussion focused on "What works?" "What does not work," "What could be better?" and "Additional/New ideas."

3. Data Collection and Analysis

After gaining the approval from Ethics in Human Research, informed consent was processed. Research objectives, participants' roles, and rights were acknowledged, and permission for taking photos and voice recording was also gained before data collection.

Phase 1, Empathize and Define, involved field observation and in-depth interviews to gain insights into Tai Khern local context, and to define their needs for preserving and sustaining their identity. The observation data were categorized into the POEMS framework, while the interview data were synthesized to design the Persona to represent the users. Phase 2, Ideate and Prototype, focused on group discussions where a multidisciplinary team of lecturers and students who experienced Tai Khern culture brainstormed to propose and select ideas, followed by designing a prototype to meet the needs for preserving and sustaining Tai Khern's identity. Phase 3, Test, dealt with a group discussion of the community where the prototype was presented, and their feedback was collected to revise it.

Results

1. Context, problems, and deep needs for preserving and sustaining Tai Khern identity

1.1 To understand the local context, the data from fieldwork observation were sorted into five categories. 1) People in Tai Khern community comprised the young, active village chief who played the leading roles in cultural activities in the village under the supervision of

local sages and with cooperation from the elderly, housewives, and youth groups. Sanpatong District Cultural Council, Tawangphrao Subdistrict Administrative Organization, and Non-formal education supported many activities. 2) Objects reflected abundant Tai Khern architecture, art, and ways of life (e.g., old hip-roof houses, household and decorative items, artifacts, fishing tools, cooking and dining equipment, spirit houses, and costumes). 3) The environment was clean and peaceful, surrounded by wooden Tai Khern houses and modern concrete houses along the Nam Khan River. 4) Message and Media involved history boards, maps, and direction signs to Tai Khern's museums, temples, ancient houses, and homestays. 5) Services included a sightseeing tram with a local guide and driver, a cooking demonstration, and a local market.

1.2 To address problems and deep needs, PERSONA of Ton Haen Noi villagers was designed based on the interview data, and supported by what was observed. As shown in Figure 5, Aunty Anong, a representative of the users, was a retired teacher committed to presenting Tai Khern identity to visitors, particularly the local food. However, her primary concern was passing down Tai Khern identity to the younger generations as the youths were less likely to engage in cultural activities. Thus, she needed to find ways to sustainably enhance its values and recognition to cope with current trends of rapid changes.

Figure 5 *Persona of Ton Haen Noi Villagers*
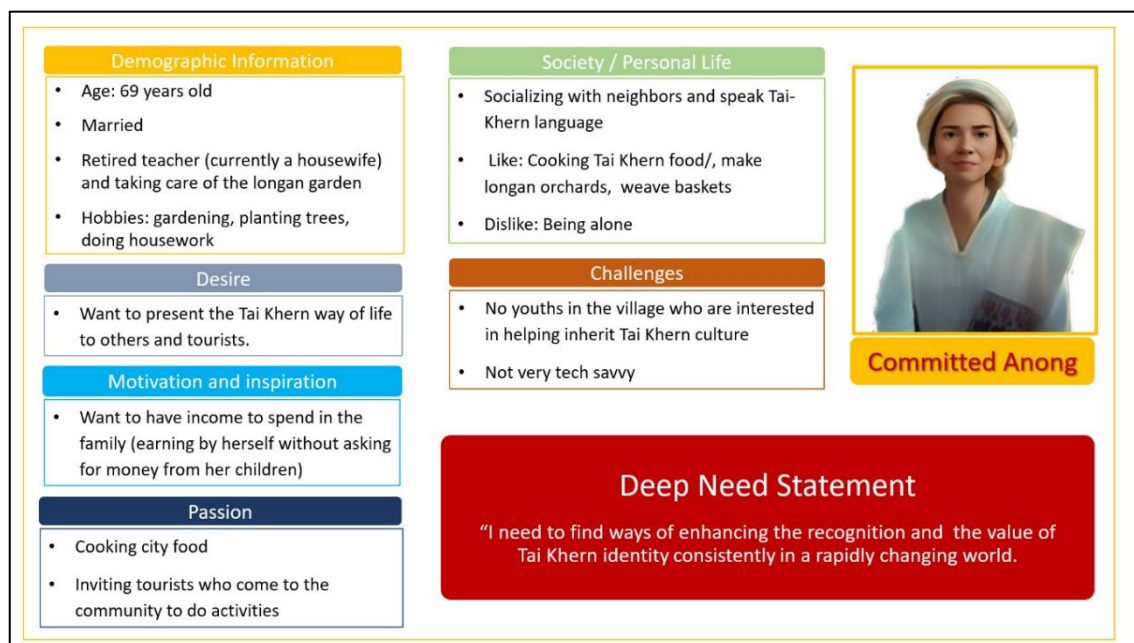
2. Guidelines and a social innovation prototype for preserving and sustaining Tai Khern identity

In the Ideate Phase, guidelines for preserving and sustaining Tai Khern identity were made based on the data gained from the brainstorming. A matrix was used to select the best ideas. Three main guidelines were proposed to form the prototype "Tai Khern Identity Center," as shown in Figure 6.

Figure 6 *Prototype of Tai Khern Identity*

a) The database and learning materials consist of online and offline media. These included a Facebook Fan Page, a Website, an Electronic Book about Tai Khern in three languages (Thai, English, Chinese), a Tai Khern Cookbook, and a Tai Khern Course/Curriculum.

b) Tai Khern cultural tour programs were designed to share knowledge about Tai Khern identity. Focusing on local participation, appointed group members should organize the activities and financial management. However, with the limitation of regular floods during the monsoon season, the tour program should also be operated in winter and summer. Furthermore,

as many activities require detailed preparation, advance bookings and small group tours should be considered.

c) Products, souvenirs, and other activities would help increase supplementary incomes to the community. By incorporating the identity of Tai Khern and adding values to their local handiworks, the potential products and souvenirs were herbal inhalers, rice crackers, and Northern Thai Rotten beans. The first item, the herbal inhaler is stored in a container similar to "Ab Mak," a unique lacquerware of Tai Khern made of rattan bamboo material. The exterior is coated with black lacquer resin for durability. The material may be modified into paper or plastic patterns to make it easier to produce. The second item, rice crackers or "Kao Taen" with longan juice is a souvenir that signifies the identity of Tai Khern people. It is an ancient dessert of the northern people and is usually made to entertain guests in various auspicious ceremonies such as Poi Luang ceremony, new housewarming ceremony, wedding ceremony, New Year (Songkran) ceremony, and Poi Luk Kaew ceremony (Buddhist novice ordination). Also, longan is the primary economic fruit of the community and is sold with a reasonable price. So, using longan juice would help the community. The third item, Northern Thai rotten beans (Tua Nao) is a typical food of the Tai Khern community, and its value can be increased by packaging, transformed versions of it into a form of "Rotten bean powder sprinkled with rice" and "Rotten bean flavored soup cubes."

Additional activities could include Tai Khern local cooking classes. Housewife groups always cooked the local food, and ingredients were locally available. Sharing cooking instructions on the local cuisine would increase interest and help gain insights into local ways of life. Another activity could also bephoto shoots of Tai Khern costumes with their unique patterns of cotton weaving, especially the headdress and the shoulder cloth/shawl, with backgrounds of Tai Khern architecture. Other activities may include sending postcards of the Tai Khern identity and culture when visiting to share impressive experiences. Furthermore, photo and video clip contests can be a good challenge amongst the teenagers who are commonly keen on using computers and media to publicize the identity of Tai Khern. These activities would bring about good memories and appreciation of Tai Khern identity and culture.

3. Feedback on the prototype for preserving and sustaining Tai Khern identity

In this phase, the prototype of a Tai Khern Identity Center was discussed in terms of "What works?", "What could be better?" and additional/new ideas. Feedback and additional suggestions are concluded below.

a) The database and learning materials: The community agreed that Tai Khern curriculum/courses could be in the form of textbooks, modules, online, and the practice of the Tai Khern language. Additional ideas included integrating Tai Khern identity into school subjects.

b) Tai Khern cultural tour programs: The community agreed that a cooking workshop and a photo contest would draw tourists' attention of any genders and ages. Organizing various activities could generate additional income for the community, leading to self-reliance in a sustainable manner, and cooperation of the young generation. New ideas proposed education

trips for Thai and international visitors and students, an extended cooperation network with other Tai Khern Ethnic groups, and public and private sectors.

c) Products, souvenirs, and other activities: The community liked the idea of adding value to local products. However, the size of the herbal inhaler should be more significant, because coiling bamboo is problematic for elderlies to weave. Additional ideas included adapting Tai Khern's unique pattern to design shawls, selling cracked rice crackers with longan syrup in a souvenir package, and making Tai Khern sour fermented pork (Naem Hor Tong) a unique, well-known souvenir. The community also agreed to create activities that would enhance the elderly's engagement as significant people. Other suggestions regarding the policy included using local wisdom to create a creative economy which could reinforce Sanpatong District as a culture-based tourist attraction, and encouraging all parties to participate in and organize their roles and duties to drive community action. Establishing a network to co-cost or sponsor the events would bring in-kind and in-cash support.

Discussion

1. Design Thinking as a Means to Social Innovation

This research adapted the Design Thinking process to create a social innovation for Tai Khern identity preservation. Firstly, the data from the field observation and in-depth interviews in the Empathize and Define phase indicated that younger generations in the community were less likely to participate in cultural activities in the Tai Khern community. In modern society, many families send their children to study in Chiang Mai city which they believe offers a better education. Many young graduates also choose to work in the city due to career opportunities, advancement, and high income. Such problems and needs tend to be shared among local communities. For example, Ban Si Kaeo and Roi Et Province, encountered challenges of transferring knowledge of Khan crafts due to the younger generation's lack of interest (Namsanga & Pantasri, 2023). Also, Mien ethnic community was concerned about their youth's lack of knowledge and understanding of beliefs and rituals (Taweepworachai, 2021). Similarly, Chedi Nerng Community needed to pass on the sacred Wisdom Reed Ceremony to younger generations and raise their awareness of the significance and original process of this sacred ceremony (Boonlue & Konchiab, 2023). The design thinking process involves empathy to gain more understanding of the local context and the challenges encountered by the users, leading to insights into the needs to create job opportunities based on the Tai Khern identity to gain additional income and attract the youth to be more engaged in community activities.

Secondly, based on the group discussions of the multidisciplinary team in phase 2, Ideate and Prototype, the guidelines for preserving and sustaining Tai Khern's identity were proposed to solve the problem regarding the youth's lack of interest and participation in their cultural activities. These guidelines were databases and learning materials of Tai Khern culture, cultural tour programs, souvenir merchandise, and social media activities. These guidelines were combined to design the "Tai Khern Identity Center prototype" that can be operated and managed by the community members. For example, the seniors could provide knowledge and local wisdom while the younger generations could create databases and learning materials. The housewife group could demonstrate cooking while others help sell the souvenirs. Thus, design

thinking tends to promote co-creation for social innovation. This phase also reflects engagement and collaboration among the multidisciplinary team to create ideas from different perspectives, resulting in tangible and agreeable innovation to preserve and sustain Tai Khern's identity. In addition, design thinking appeared to be a suitable tool for designing products and services from the local community's identity (Fongkanta et al., 2024; Phunphon et al., 2023).

Lastly, group discussions in phase 3, Test, revealed some feedback from users and stakeholders to revise the prototype in order to meet the needs of the Tai Khern community. This phase reflects co-creation, where the community's engagement and participation were promoted in the development process by including their feedback and suggestions to gain an in-depth understanding of their needs and then to refine the prototype (Lee, 2017). Regarding users' and stakeholders' feedback, it is highly possible to start by integrating Tai Khern identity into local school subjects. Thailand's Local Educational Development Plan (2023-2027) highlights the promotion of religions, arts and culture, tradition, and local wisdom in local schools. Also, with abundant cultural human resources and assets, it should be easy to manage Tai Khern cultural tour programs to meet the demands for soft power trends. However, some activities require more time to prepare, as well as in-kind and in-cash support from the public and private sectors. For example, school trips of international students in Chiang Mai could be conducted with the cooperation of international schools around Chiang Mai. In addition, selling products and souvenirs require financial support for investment as well as training in design and marketing by experts from university and business sectors.

2. Innovation for Preserving and Sustaining Tai Khern Identity

In this research, the "Tai Khern Identity Center" was designed as an innovation for preserving and sustaining Tai Khern identity. It includes a database and learning material, a cultural tour package, local products, souvenirs, and other cultural activities. The center met the needs for preserving and sustaining Tai Khern identity and ways of life and creating supplementary income for the community. Thus, it could motivate the younger generations to pay more attention to the importance of sustaining their identity.

Firstly, a database and learning material could help transfer and publish knowledge regarding Tai Khern culture and identity. The community was enriched with local wisdom, and older generations were willing to share their wisdom and knowledge, including rites and rituals, traditional treatment, and handicrafts. It could be done with educational institutions to design Tai Khern's curriculum of its spoken and written language, cooking Tai Khern cuisine, and the making of handicrafts. The significance of the body of knowledge and local wisdom should be preserved as well as transferred to the younger generations for sustainable development (Chaimuang, 2015)

Secondly, the cultural tour program for the Tai Khern community would benefit the community since the it has a high potential to serve the tourists. For example, many Tai Khern traditional houses could be used as homestays for tourists. Other exciting activities could include cooking classes and sightseeing trips to cultural attractions such as temples and ancient ruins. As Intakul and Tungchareonchai (2020) highlighted, the identity, such as ways of life, local wisdom, and arts, could be tourist attractions and lead to the ongoing conservation of local culture.

Lastly, local products and souvenirs were the main pathways to supplement income for the community. They could be promoted through marketing channels, such as the local market and even across popular social media. Encouraging the youth to learn about technology for marketing and public relations would help promote the local products, and represent Tai Khern identity (Chaimuang, 2018).

Conclusion and Recommendations

This study demonstrates the potential of design thinking for social innovation to address the challenges of Tai Khern cultural preservation and co-create ideas for solutions. The prototype for "Tai Khern Identity Center" offers a promising approach to engaging the younger generation and promoting cultural identity in Tai Khern community. Users and stakeholders also provide positive and constructive feedback on the center, as well as agree to take part in the activities once implemented. This study greatly reflects the community's engagement, and encourages collaborations and networks among the community's members, of the public and private sectors, as well as international parties for sustainable development. Thus, it is vital to put such a prototype into practice in the near future by starting with existing resources and assets. This social innovation can continuously be shaped and reshaped to meet the rapidly changing world.

These findings have significant implications for gaining some understanding and experience on how to implement design thinking to address and solve the communities' problems and seek for ideas and solutions. However, as design thinking is a continuous process, the problems can be redefined, and ideas can be regenerated when they fail to meet the needs of the users. In addition, in this research, the design thinking was implemented in a specific community and excluded outside parties, such as visors, as key stakeholders. In future research, the design thinking process can be applied to other social contexts to co-create social innovation for sustainable development. Some research might also include additional stakeholders, such as visitors to the community.

Acknowledgements

References

Amornkitpinyo, P., Amornkitpinyo, P., Satityapong, N., Wongrajit, S., & Thongnuypram, C. (2022). Social innovation for quality of life. *Journal of Educational Innovation and Research, 4*(2), 279-286.

Boonlue, T., & Konchiab, S. (2023). Design thinking process for co-creating the conservation and inheritance guidelines of the Wisdom Reed Ceremony in Chedi Nerng Community, Sanpatong District, Chaing Mai Province. *Chophayom Journal, 34*(2), 250-275.

Borwornraksa, O., & Hongwiangchan, W. (2020). A comparative sound correspondence: The study of Tai Khün in Kengtung and Chiang Mai. *Vannavidas*, *20*(1), 167–195.

Chaimuang, N. (2015). Development of community enterprise management to sustainable self-reliance. *Payap University Journal, 25*(1), 15–39.

Chujun, S., Bhumiratana, A., Pooseesod, K., Nunthawarasilp, P., Maneekan, P., & Chamnankit, A. (2023). Malaria prevention and control innovation based on design thinking and social marketing in malaria elimination management by local administrative organization. *Disease Control Journal, 49*(2), 339-352.

Council, D. (2015). *The design process: What is the double diamond*. The Design Council. https://www.designcouncil.org.uk/news-opinion/design-process-what-double-diamond.

Dam, R. F., & Siang, T. Y. (2020). *5 stages in the design thinking process*. Interaction Design Foundation. https://www.interaction-design.org/literature/article/5-stages-in-the-design-thinking-process.

Design Council. (2017). *Double diamond process*. https://www.designcouncil.org.uk/our-resources/the-double-diamond/.

Fongkanta, F., Buakanok, F. S., Kreupueng, S., & Phomngam, T. (2024). Community product development for distributing to health food markets through design thinking process: A case study of Hua Suea Village Lampang. *Disciplinary Journal Buriram Rajabhat University, 8*(1), 49-58.

Institute of Design at Standford. (2015). *An introduction to design thinking process guide*. https://web.stanford.edu/~mshanks/MichaelShanks /files/509554.pdf.

Intagoon, K., & Tungcharoenchai, N. (2020). The study of community potentials for cultural tourism management: The case of Wang Thong, Wang Thong District, Phitsanulok Province. *Nakhon Lampang Buddhist College's Journal, 9*(3), 53–70.

Inthaniwet, O. (2014). Musical wisdom of Tai Kheun, Tai Lue, Lahu in Bandu Municipality in Chiang Rai Province. *Area Based Development Research Journal, 6*(3), 107–122.

Jedeeyod, P. (2023). The design of cultural and exhibition of local museum as a Tai-Khern Community Learning Center in Baan Tonhan Noi, San Pa Tong, Chiang Mai Province. *JADE Journal, 5*(3), 86-98.

Khamnoy, P. (2022). Functionalism and beliefs through Tai-Khun woven fabric: Case study of Baan Ton Haen, Amphoe San Patong, Chiang Mai. *HUSO Journal of Humanities and Social Sciences*, *6*(2), 35–51.

Koh, J. H. L., Chai, C. S., Wong, B., & Hong, H. Y.. (2015). *Design thinking for education: Conceptions and applications in teaching and learning*. Springer.

Kongsri, R. (2021). The changes in the identity of Muang Sam Tai Community in Baan Thi, Lamphun. *The Journal of Thai Lanna Wisdom, 15*(2), 1–14.

Lee, C. H. (2017). *Design thinking guidebook*. Royal Civil Service Commission, Royal Government of Bhutan. https://www.rcsc.gov.bt/wp-content/uploads/2017/07/dt-guide-book-master-copy.pdf.

Ministry of Culture and National Electronics and Computer Technology Center. (2011). *Saranai*. http://www.m-culture.in.th/album/90716/.

Namsanga, P., & Pantasri, P. (2023). Khan craftsmen: Challenges and obstacles to the process of transmitting knowledge in Khan craftsmen family in Ban Si Kaeo, Si Kaeo Subdistrict, Mueang District, Roi Et Province. *Chophayom Journal, 34*(3), 1-16.

Nuchniyom, R., & Sinjindawong, S. (2023). Creating networks of social innovation for the elderly with communities as foundations: A case study of Chedi Hak, Mueang, Ratchaburi. *Ratchaphruek Journal, 21*(3), 108-122.

Phunphon, T., Yongphet, P., & Nakpiba, P. (2023). Design thinking for participatory organic farming community product development. *Phranakhon Rajabhat Research Journal (Humanities and Social Sciences), 8*(1), 255-275.

Phuwanatwichit, T. (2018). Cultural capital development and tourism attraction management for culture village Wiang Tha Kan, San Pa Tong District, Chiang Mai Province. *Journal of Community Development and Life Quality, 5*(1), 14–23.

Princess Maha Chakri Sirindhorn Anthropology Centre. (2022). *Tai Khern Ethnic group in Thailand*. https://ethnicity.sac.or.th/database-ethnic/175/.

Saardthia, S., Kanlap, S., Pengphit, N., & Nimnuan, N. (2024). The development of social innovation in promoting community tourism to develop the grassroots economy in Takhli Subdistrict Takhli District, Nakhon Sawan Province. *Social Sciences Research and Academic Journal*, *19*(1), 155-170.

Sunkanaporn, W. (2017). Cultural capital of Sanpatong District study for guidelines with creative economy thinking. *Veridian E-Journal, 9*(3), 815-829.

Tai Khern Cultural Conservation Center (2014). *Tai Khern Ethnic*. https://www.banklang.go.th/activities-466.html.

Taweepworachai, E. (2021). A study of guidelines for preserving based on the beliefs and rituals of Mien Ethnic in Thailand: SWOT analysis. *Humanities and Social Sciences Nakhonsawan Rajabhat University Academic Journal, 8*(2), 88–104.

TEPSIE. (2014). *Social innovation theory and research: A guide for researchers. A deliverable of the project: "The theoretical, empirical and policy foundations for building social innovation in Europe" (TEPSIE).* European Commission.

Withell, A., & Haigh, N. (2013). Developing design thinking expertise in higher education. In Reitan, J.B., Lloyd, P., Bohemia, E., Nielsen, L.M., Digranes, I., & Lutnæs, E. (Eds.), *DRS // Cumulus: Design Learning for Tomorrow: 2nd International Conference for Design Education Researchers* (pp.1-13), Oslo, Norway. https://doi.org/10.21606/learnxdesign.2013.160

The Lessons Learned from the Development of Community Enterprises into Self-Reliance Communities in the 21st Century: A Case Study of Nong Sarai Community, Phnom Thuan District, Kanchanaburi, Thailand

ถอดบทเรียนการพัฒนาวิสาหกิจชุมชนสู่ชุมชนพึ่งตนเองในศตวรรษที่ 21: กรณีศึกษาชุมชนหนองสาหร่าย อำเภอพนมทวน จังหวัดกาญจนบุรี ประเทศไทย

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กนกกาญจน์ เมืองแก้ว

Abstract

The purpose of this qualitative research was to analyze the process through which community enterprises in Nong Sarai Community, Phanom Thuan District, Kanchanaburi Province, Thailand, transformed into self-sufficient communities in the twenty-first century. It utilized in-depth interviews and participatory and non-participatory observation as data collection tools, along with field studies and relevant document reviews. The main data providers were the chairperson and members of the Nong Sarai community enterprise group, totaling 15 people, and secondary data providers included the village headman, school representatives, and development officers of Phanom Thuan District, totaling 16 people, making a total of 31 participants. Subsequently, the collected data were analyzed for content and results were reported through narrative analysis.

The results showed that 1) The Nong Sarai community is one that addresses community crises through the formation of community enterprise organizations that motivate and resolve economic issues, according to the findings. The Nong Sarai community enterprise group has demonstrated resiliency and success in both its operational activities and the provision of products and services. The achievement can be ascribed to the critical role that group participation played in the formation of community enterprises. 2) The Nong Sarai community has developed through membership, collaborative thought, decision-making, and the distribution of benefits;

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these are all examples of community participation. 3) In an age of globalization, the Nong Sarai community is capable of sustaining itself in the face of societal transformations. This independence is apparent in the management of natural resources, intellectual property, as well as in social and personal spheres. These developmental procedures are critical for bolstering and achieving self-sufficiency of the Nong Sarai community enterprises. They function as successful paradigms for sustainable development, placing a high value on quality of life, and guaranteeing ongoing advancement.

***Keywords*:** Lessons Learned, Development, Community Enterprise, Self-Reliant Communities, 21st Century

บทคัดย่อ

งานวิจัยนี้เป็นการวิจัยเชิงคุณภาพ มีวัตถุประสงค์เพื่อศึกษารูปแบบการพัฒนาวิสาหกิจชุมชนสู่ชุมชนพึ่งตนเองในศตวรรษที่ 21 ในชุมชนหนองสาหร่าย อำเภอพนมทวน จังหวัดกาญจนบุรี ประเทศไทย ใช้การสัมภาษณ์แบบเจาะลึก และการสังเกตแบบมีส่วนร่วมและไม่มีส่วนร่วมเป็นเครื่องมือรวบรวมข้อมูลภาคสนามร่วมกับการศึกษาเอกสารและงานวิจัยที่เกี่ยวข้อง โดยมีผู้ให้ข้อมูลหลักคือ ประธานและสมาชิกกลุ่มวิสาหกิจชุมชนหนองสาหร่าย จำนวน 15 คน และผู้ให้ข้อมูลรอง คือกำนันตำบลหนองสาหร่าย ผู้ใหญ่บ้าน โรงเรียนหนองสาหร่าย และพัฒนากรอำเภอพนมทวน จำนวน 16 คน รวม 31 คน จากนั้นนำข้อมูลที่ได้มาวิเคราะห์เชิงเนื้อหาและเขียนรายงานผลโดยการพรรณนาวิเคราะห์

ผลการวิจัยพบว่า 1) ชุมชนหนองสาหร่ายเป็นชุมชนที่ดำเนินการแก้ไขปัญหาวิกฤตชุมชนโดยอาศัยการสร้างกลุ่มวิสาหกิจชุมชนเพื่อขับเคลื่อนและแก้ไขปัญหาด้านเศรษฐกิจที่เกิดขึ้น ซึ่งกลุ่มวิสาหกิจชุมชนหนองสาหร่ายเป็นกลุ่มที่ประสบความสำเร็จและเข้มแข็งทั้งในการดำเนินงานของสมาชิกกลุ่ม การผลิตสินค้าและบริการ เนื่องจากวิสาหกิจชุมชนหนองสาหร่ายมีกระบวนการพัฒนาวิสาหกิจชุมชนที่อยู่บนพื้นฐานของกระบวนการมีส่วนร่วมของกลุ่มเป็นสำคัญ 2) ชุมชนหนองสาหร่ายอาศัยกระบวนการพัฒนาบนพื้นฐานการมีส่วนร่วมของชุมชน ได้แก่ ร่วมเป็นสมาชิก ร่วมคิด/ร่วมแสดงความคิดเห็น ร่วมตัดสินใจ และร่วมรับผลประโยชน์ และ 3) ชุมชนหนองสาหร่ายสามารถพึ่งตนเองได้ท่ามกลางการเปลี่ยนแปลงของสังคมในยุคโลกาภิวัตน์ ได้แก่ ด้านทรัพยากรธรรมชาติ ด้านภูมิปัญญา และด้านสังคมและบุคคล ซึ่งกระบวนการพัฒนาเหล่านี้เป็นกระบวนการสำคัญที่เป็นรากฐานในการพัฒนาวิสาหกิจชุมชนหนองสาหร่ายให้เข้มแข็ง ประสบความสำเร็จ และพึ่งตนเองได้ นำไปสู่การเป็นต้นแบบของการพัฒนาที่มีประสิทธิภาพมุ่งเน้นคุณภาพชีวิตที่ดีเป็นสำคัญ นำไปสู่การพัฒนาอย่างยั่งยืนต่อไป

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Introduction

Thailand has undergone substantial societal transformations across all spheres amidst the rapid global changes that are emblematic of the twenty-first century. Although certain components have managed to adapt, others have faced considerable obstacles in their pursuit of doing so. In light of these changing conditions, communities in numerous regions of Thailand have collectively gained knowledge and adjusted. In 1997 CE (2540 BE), the nation was confronted with a profound economic crisis that began as a crisis involving financial institutions and swiftly spread to almost all sectors of the economy, instigating a comprehensive nationwide economic decline. The economic downturn had a profound impact on the purchasing power and consumption habits of the general public, resulting in considerable challenges for the business sector. As survival mechanisms, numerous organizations and industrial facilities were forced to reduce output and implement workforce reductions, which led to extensive unemployment in a variety of sectors and industries. The social consequences of the economic losses were significant, affecting communities in both urban and rural areas. As a result, it became imperative that governmental entities promptly execute strategies to alleviate these difficulties, including the provision of assistance and the promotion of self-sufficiency among the populace via the establishment of job prospects. An effective strategy involved leveraging indigenous knowledge as a fundamental element for the advancement of local economies, thus enabling communities to rebound more robustly and attain long-term sustainability in the aftermath of economic downturns (Jeronen, 2020).

In 1997 CE (2540 BE), the Thai government launched various initiatives to mitigate the economic crisis's impact, notably through the establishment of community enterprises aimed at curbing unemployment and fostering additional family income sources. These enterprises, defined by their management by and for the community, blend local wisdom and creativity with global insights to advance self-reliance and economic sufficiency across families and communities. Central to sustainable community development, community enterprises underscore the importance of active community member involvement and embrace a bottom-up, polycentric management style, characterized by decentralized decision-making processes. This approach ensures a democratic and participatory governance model, highlighting community enterprises' pivotal role in promoting sustainable development by engaging community members actively (Bauwens et al., 2022).

In response to the challenges highlighted and amidst the rapid global changes of the 21st century, community enterprises have increasingly focused on the importance of alternative development pathways. This strategic shift aims to empower community enterprises to conduct activities more efficiently, achieve sustainable outcomes, and foster self-reliance. The fundamental goal behind developing community enterprises towards self-reliance is to ensure that both communities and their residents attain self-sufficiency in terms of community capital, resources, and various other aspects. Achieving this objective necessitates relying on community resources and local wisdom, employing collaborative processes, and facilitating

knowledge exchange as operational tools. These initiatives are crucial for empowering communities, enabling them to devise community-driven master plans that accurately reflect communal needs. A lack of capacity for self-reliance often stems from residents' insufficient knowledge and understanding of self-reliance principles and practices. Consequently, such communities might heavily depend on external organizations, potentially compromising their operational autonomy. This dependence can hinder communities' ability to navigate challenges independently when external support wanes. Therefore, promoting self-reliance involves equipping communities with the necessary knowledge, resources, and decision-making capabilities, thereby enhancing their potential to thrive even in the absence of substantial external support (Mettathamrong et al., 2022).

Self-reliance emerges as a pivotal development pathway, empowering communities to achieve self-sufficiency by placing community members at the heart of development efforts. The concept of self-reliance in community enterprises facilitates a form of interdependent living within the community. Initiatives should originate from the community's core needs, with collective ownership and management by community members. This approach ensures that the community's foundational economy can drive sustainable economic growth within the societal and community context (Romprasert & Trivedi, 2021). Highlighting the value of the self-reliant development concept is essential, focusing on providing community members with sustainable livelihoods, income, and opportunities to improve their living standards. To this end, the government should advocate for community members to take ownership of their enterprises. Such ownership encourages active participation in ideation, planning, implementation, problem-solving, and sharing the benefits of collective efforts. This collaborative model aligns with the development objectives of both the community and its enterprises, leading towards genuine self-reliance (Chantarasombat et al., 2022).

Community participation emerges as a pivotal process in the development of communities, significantly influencing the effective implementation of plans and projects. It allows community enterprises to efficiently harness their inherent potential by collaboratively addressing issues, identifying needs, devising solutions, and jointly planning and evaluating activities. Through active participation, community members engage in collaborative problem-solving, align their efforts with community needs, undertake collective planning, execute tasks, and share the benefits. Such endeavors not only strengthen the community but also promote self-sufficiency. Community-led initiatives are vital as they directly tackle the community's unique challenges. In the context of developing self-sustaining community enterprises, community participation stands as a crucial pathway, enabling communities to generate additional income to support their families. This research aims to delve into and enrich our understanding of the dynamics through which community members partake in the process of developing community enterprises towards self-reliance (Anggun et al., 2023).

The evolution of community enterprises grounded in self-reliance is a key mechanism that empowers communities towards self-sufficiency. This transformation process enables community enterprises to progress from struggling entities to robust, self-reliant units operating within the community's economic ecosystem. Currently, numerous community enterprises have evolved into medium and small-sized businesses with a primary focus on capital accumulation and profit-driven marketing strategies (Jirojkul et al., 2021). In many instances, the emphasis on product manufacturing and profit maximization overshadows the fundamental objective of fostering community cohesion. This shift has resulted in a diminished focus on shared learning processes and underutilization of community resources and local wisdom. To nurture community self-reliance and address the challenges encountered by community enterprises, it is imperative to foster a culture of collective learning and effectively leverage community resources and local expertise. Developing community enterprises for self-reliance not only fortifies these entities but also acts as a paradigm for other community enterprises facing similar challenges, thereby generating additional income and creating alternative livelihood opportunities within the community.

The development guidelines for community enterprises aimed at achieving community self-reliance function as both a mechanism and a process to fortify these enterprises. This fortification is accomplished by learning from challenges, transforming these experiences into communal wisdom, and fostering collaborative solutions within the community. An illustrative example of this process in action is observed in the community enterprise of Ban Nong Sa-rai, located in the Phanom Thuan District of Kanchanaburi Province. Originating from a collective vision and a communal aspiration for development, this enterprise capitalized on the inherent potential of its members, guided by principles of self-reliance. This approach led to its recognition as an outstanding community enterprise in 2018. The success of Ban Nong Sa-rai underscores the critical role of community collaboration, highlighting the community members' strength and their collective determination to achieve self-reliance. This exemplifies community development founded on active engagement: empowering members of the community to achieve self-sufficiency. The accomplishment is exemplified by the Ban Nong Sa-rai community, which demonstrated its capacity to come together and tackle a range of challenges by employing diverse strategies.

As a result, the residents of this community have experienced a notable improvement in their quality of life, have fostered a spirit of cooperation, and have participated in activities grounded in self-reliance and the community's economic foundations, all of which have contributed to their collective happiness. These outcomes have sparked scholarly interest in exploring the self-reliance models and processes exemplified by Ban Nong Sa-rai. Researchers aim to derive insights that can inform the development of community enterprises, ensuring they are robust and self-reliant amidst the contemporary social and economic development landscape.

Research Objective

The research aims to examine the development model of community enterprises transitioning towards self-reliance in the 21st century, focusing on the Nong Sarai Community in Phanom Thuan District, Kanchanaburi Province, Thailand.

Research Methodology

The methodology employed in this study is outlined as follows:

1. Data Collection

Primary informants were purposefully selected, comprising Mr. Raem Chiangka, the head of the community enterprise group in Ban Nong Sa-rai, and 15 members of this group. Additionally, 10 community leaders and residents were interviewed. Secondary informants consisted of 6 individuals, including development officers from Phanom Thuan District and Nong Sa-rai Sub-district, healthcare personnel from the Nong Sa-rai Sub-district health center, and the village headman of Nong Sa-rai Sub-district.

2. Research Instruments

The study utilized qualitative in-depth interviews, along with participatory and non-participatory observations, as the primary tools for data collection.

3. Data Analysis

The qualitative data were descriptively analyzed and validated for accuracy, directness, and practicality. This was achieved through a joint analysis involving the Nong Sa-rai community enterprise group and related individuals. Documentary research formed an additional component of the study's methodology. The synthesis of in-depth interviews, observations, and contributions from a diverse group of informants facilitated a thorough investigation into the development process of the community enterprise and the factors driving community self-reliance in Ban Nong Sa-rai, Phanom Thuan District, Kanchanaburi Province.

Literature Review

Community Enterprises

Community enterprises are collective initiatives aimed at the creative management of community resources to achieve self-sufficiency. These resources include agricultural products, knowledge, wisdom, culture, and local customs. As community-based enterprises, their ownership encompasses production, trade, and financial aspects, directly supporting income generation and livelihood improvement. Socially, these enterprises play a pivotal role in strengthening unity among families and the wider community. They achieve this by encouraging collective thought, collaborative work, and shared responsibilities, all facilitated through active community participation (Eijk, 2020).

Community enterprises are entities owned, operated, and governed by community members aimed at addressing local needs and fostering socio-economic development. These enterprises encompass a variety of forms, including cooperatives, social enterprises, community-owned businesses, and grassroots organizations, as detailed by Cavite et al. (2021). Rooted in the principle of collective ownership and management, community enterprises are established by community members uniting to confront shared challenges or seize opportunities. Distinct from purely profit-driven entities, these enterprises balance social, environmental, and economic goals, often arising as solutions to market inadequacies, access barriers to crucial services, or as mechanisms for empowering marginalized groups.

Community Participation

Community participation denotes the dynamic engagement of community members in all aspects of community development, encompassing decision-making, planning, implementation, monitoring, evaluation, and the sharing of benefits, undertaken with enthusiasm. Its goal is to collaboratively attain predetermined objectives. The process of community participation unfolds in four pivotal stages:

1. Participation in Problem Identification and Cause Analysis: This initial stage sees community members actively identifying problems and discerning their underlying causes within their domains. Effective problem identification is pivotal as it forms the cornerstone for subsequent initiatives. Without a deep understanding of the issues and their causes, efforts in later stages may falter in efficacy.

2. Participation in Planning Activities: Planning is a vital phase wherein community members are equipped to think critically and make informed decisions. It involves synthesizing various factors and information to craft comprehensive development plans.

3. Participation in Investment and Work Execution: Despite potential financial limitations, community members can contribute through labor investment and active involvement in work execution. This participation fosters a sense of ownership and enhances their understanding and skills by managing diverse activities.

4. Participation in Monitoring and Evaluation: Engaging community members in the monitoring and evaluation of projects or activities is crucial. Absence in this phase might lead to unawareness of the outcomes or benefits of their contributions, potentially overlooking any adverse impacts that need addressing. Such oversight could hinder the efficacy of future projects. Therefore, community participation throughout the development stages not only heightens awareness of community needs but also amplifies the chances of successfully resolving community challenges (Singh, 2022).

Self-Reliance

The objective of operating a successful operation is self-reliance. Evidently, the term "self-reliance" encompasses an extensive array of definitions.

Successful community self-reliance was defined as follows in this study: Government Agencies Perspective: Self-reliance for communities denotes the capacity of communities to maintain themselves through collaborative efforts and community development strategies (Mndebele, 2021). The program's objective is to foster community self-awareness, which empowers members to adapt to evolving societal concerns, consider and make decisions autonomously, without external influence, and efficiently develop and oversee community resources. Community Development Perspective: Community self-reliance is defined as the establishment of activities that are indispensable for individuals to achieve self-sufficiency. In situations where elements such as knowledge, materials, apparatus, or technology surpass the capabilities of the populace, aid from the government is imperative to guarantee the triumph of community initiatives and undertakings. It is essential to engage in community collaboration, which entails collective thought, consultation, and cooperative effort (Eder, 2023).

Significant influence is exerted by organizational factors on changes that occur within these groups. Participatory work, accord building, policy translation, involvement in a variety of supporting activities, and research teams and group leaders who prioritize the overall effort are some of these elements. It is imperative that knowledge management models are congruent with the learning process context of the group. Instead of exclusively prioritizing the generation, retention, or application of knowledge, it is crucial that these frameworks align with the particular intricacies and requirements of the collective's educational expedition.

Findings

Findings are reported in alignment with objectives as follows:

1. Background of the Nong Sarai community enterprise in Phanom Thuan District, Kanchanaburi Province

The approach in which community enterprises are established in order to maximize efficiency and accomplish their goals is contingent on the local environment and way of life. Long-term self-reliance development that is both sustainable and effective may be unattainable if it is founded on processes or methodologies borrowed from other communities or government agencies, without due consideration for the community's way of life. This is exemplified by the community enterprise of Ban Nong Sarai, which fostered a collective comprehension of problem-solving methodologies among its members by learning from its mistakes. Active involvement from the local residents was a pivotal element in effectively addressing issues that emerged within the community. When issues arose from within the community, only the inhabitants possessed the knowledge of the procedures required for effective progress. Furthermore, the

establishment of community enterprises necessitates a methodical progression that is consistent with the circumstances of the community. Community engagement is not only an essential element in the development process of community enterprises; community self-sufficiency is a critical mechanism that facilitates the autonomy of its members and the resilience of the community enterprise. The research results indicate that the prosperous community enterprise in Ban Nong Sarai attained its success by means of a dual approach involving community engagement and self-sufficiency. Members of the enterprise actively contributed, exchanged ideas, participated in decision-making processes, and ultimately benefited from the enterprise's endeavors. Furthermore, in terms of community capital, the self-sufficiency of the communal enterprise was demonstrated.

In conclusion, the progression of community enterprises towards self-sufficiency is an essential procedure that aids in guaranteeing the caliber and efficacy of activities conducted within the collective. Two crucial elements are critical to its success: community engagement and independence. In the past, community enterprise development in Thai society was primarily concerned with group integration. However, Nong Sarai Community Enterprise has grown by encouraging community members to participate in cooperative efforts, joint thought, and joint action in development, in addition to strengthening the community. Current development is influenced by numerous stimuli that can lead to failure. These calamities were surmounted by Nong Sarai community enterprises by means of community interdependence. The act of participating is the means by which the objective of becoming an independent community is accomplished.

2. Community Participation of the Nong Sarai community enterprise in Phanom Thuan District, Kanchanaburi Province

Community participation is indispensable for the prosperity of community enterprises. These are the three fundamental conditions that indicate this result belongs to a community. To exemplify how communities meet these conditions and are essential for ensuring meaningful community participation:

(2.1) Willingness and Intent: Participation must be voluntary, stemming from the individual's genuine willingness and intent to contribute. This voluntarism ensures that members perceive themselves as integral components of the community enterprise, fostering their commitment to the processes of problem-solving and decision-making.

(2.2) Equality and Fairness: Participation ought to be grounded in principles of equality and fairness, where the contributions and capabilities of each individual are recognized and valued. It is critical that participation does not result from coercion or intimidation by those in positions of authority.

(2.3) Active Membership: The efficacy of community enterprises hinges on the active engagement of members who join and participate in activities willingly. This voluntary and enthusiastic participation cultivates a culture of shared responsibility and collective commitment. In summary, community enterprises like Ban Nong Sarai rely on these principles of community participation to drive their development processes effectively.

(2.4) Self-Reliance: Self-reliance is identified as a crucial mechanism that enhances the resilience of community enterprises and empowers their members to be self-sufficient. It encompasses the members' active engagement, exchange of ideas, involvement in decision-making processes, and attainment of benefits. The interdependence and cooperation that characterize community engagement are crucial for the development of community-owned businesses.

They are indispensable for the group's achievement, guaranteeing that members are actively engaged, contribute their ideas, participate in decision-making, and gain from the enterprise's undertakings. In conclusion, for community enterprises to flourish and achieve self-sufficiency, they require the dedication and voluntary participation of their members, in addition to the capacity to utilize their collective wisdom. Community participation is, therefore, an indispensable pillar upon which the prosperous growth of community enterprises must be built. Contingent on the attributes and requirements of its constituents, cultural and contextual affiliations may vary from community to community. Community participation is not a one-size-fits-all process; rather, it necessitates customization to account for the particular circumstances and variables involved.

Community participation is comprised of several essential components: establishing objectives for engagement, identifying relevant stakeholders, taking into account community culture, and comprehending economic and social environments. Each of these elements has an impact on the community participation procedure. It is essential to recognize that there is no single optimal method for implementing community participation; rather, one must be adaptable and situation-dependent. Economic and social contexts, as well as community culture, exert a substantial influence on the community participation process. The examination revealed that the community participation process in the Ban Nong Sarai community enterprise encompasses a multitude of components, including membership, collaborative ideation, opinion expression, decision-making, action implementation, problem-solving, and benefit accrual.

In conclusion, the operation and growth of a community enterprise are contingent upon the active involvement and contribution of its members. At this time, Nong Sarai has evolved into a model community enterprise that can serve as an example for others on account of its transparent and tangible implementation process. This extends to the formation of an organization, the operation of activities within the community, and the coordination of goods production by a grouping. Collaboration within the community is also highly effective. Participatory development

unifies the community as a whole through the implementation of collective efforts, collective thought, collective action, collective decision-making, and collective benefit distribution.

3. Self-reliance of the Nong Sarai Community Enterprise in Phanom Thuan District, Kanchanaburi Province

Community enterprises represent an additional mechanism through which communities can cultivate resilience and adaptability in the twenty-first century. In addition to being predicated on community engagement, development initiatives ought to foster self-sufficiency within the community. Self-reliance signifies the capacity and potential of communities to engage in productive endeavors and efficiently resolve their own challenges. It is a fundamental element that facilitates the successful development and self-sufficiency of community enterprises. Self-reliance may differ between communities and community enterprises; however, it is crucial that it corresponds with the particular circumstances, way of life, and distinct requirements of each community. As an illustration, the Nong Sarai Community Enterprise operates with high efficiency, fostering self-reliance among its members through collaborative endeavors. This community enterprise's self-sufficiency began with the community's capacity to achieve self-sufficiency, predominantly through the local transformation of agricultural products (rice). The application of traditional local knowledge to the establishment of a community enterprise resulted in the creation of livelihoods. The self-reliance of the villagers was made possible by their community unity.

It is apparent from the analysis and research data that the Nong Sarai Community Enterprise's success can be attributed to the self-sufficiency of the community. Multiple facets of this community exemplify self-reliance: individual endeavors, natural resources, indigenous knowledge, and social influences. The residents of the Nong Sarai community have ultimately benefited from the development of a robust community and a prosperous community enterprise as a result of their self-reliance in these areas. The process of successfully establishing the community enterprise in Nong Sa Rai, which has contributed to its enduring nature and empowered its members to rely on themselves, holds considerable importance. Alongside the criticality of community participation, the capacity of the community to operate independently is an additional significant determinant. The researchers have conducted a data synthesis and analysis within this particular framework. Their findings indicate that the community enterprise's self-reliance process is comprised of three distinct components: natural resources, local wisdom, and social and personal aspects.

The community of Nong Sa Rai is endowed with an abundance of varied natural resources. By harnessing local knowledge, including traditional weaving and textile production, they have successfully converted these resources into community goods. Additionally, by coexisting within the community and the community enterprise group, members of the community exhibit a profound sense of solidarity, benevolence, reciprocal aid, and a shared objective. This community

is well-equipped in terms of human resources to collectively engage in a variety of community activities, such as participation, production, distribution, and consumption, due to the unity that serves as the basis for their livelihoods. The success of these processes is contingent on the expertise and capacities of individuals in every facet, who collaborate, support, and advance each endeavor individually. In brief, the Nong Sa Rai community enterprise's achievements and capacity for self-sufficiency can be ascribed to a confluence of factors: the utilization of plentiful natural resources, the implementation of indigenous knowledge, and the community's robust social and personal fabric, which enables its members to collaborate efficiently across a multitude of community endeavors.

In conclusion, the *Self-Sufficiency Process* implemented by the Nong Sa Rai community serves as a pivotal mechanism in bolstering the community enterprise and fostering a sense of unity among its members. By consuming products processed by local villagers who are members of the community, one not only sustains community income but also stimulates circulation, thereby contributing to the improvement of the local economy. In summary, the Nong Sa Rai community's process of self-reliance has propelled the formation of a robust community enterprise that has emerged as a focal point for continuous community progress.

4. Model for community Self-Reliance: Nong Sa Rai Subdistrict, Phanom Thuan District, Kanchanaburi Province, in the 21st Century

Community participation and self-sufficiency must underpin the development of community enterprises that are robust and self-sufficient in the swiftly changing globalized world of the twenty-first century. These operations are critical investments that will facilitate the success of community enterprises (Jangjarat et al., 2023). The triumph of the Nong Sa Rai community enterprise cannot be attributed exclusively to its products; rather, it is a product of community members' active engagement and the collaborative endeavors of the group. It involves considering, collaborating, and working together to overcome a variety of obstacles. The Nong Sa Rai community enterprise serves as an exemplary community enterprise that achieves success through the collaborative efforts of its members. The achievement can be ascribed to proficient group management executed by leaders, internal operations founded on the principle of member engagement, and production that integrates indigenous knowledge with natural resources in order to generate services and products.

Group Management - The chairperson of the Nong Sa Rai community enterprise effectively oversees the group, which significantly contributes to the enterprise's growth and progress. When members place trust in their leader, collaboration improves and becomes more efficient. Effective leadership is crucial in facilitating the establishment of a resilient and commendable community enterprise, which can act as an inspiration for the growth of self-sufficient community enterprises in other locales or the local community. Effective leadership at the Nong Sa Rai community enterprise has endowed the organization with the authority to

function efficiently, to its great benefit. The leadership exhibited by the group's chairperson serves as an exemplar in the process of cultivating community enterprises that strive for autonomy.

Operational Aspect - The Nong Sa Rai community enterprise's progress towards self-sufficiency and robustness is significantly propelled by its collaborative operations. Cooperative effort is a fundamental component of this development model, serving to both guarantee the excellence of the community enterprise and mirror the capabilities of its constituents. The attainment of objectives and success would be unattainable in the absence of active participation and mutual support among group members. Hence, the operational facets of the Nong Sa Rai community enterprise exemplify how operations can be conducted in accordance with the organization's members' strong group cohesion, compassion, cooperation, and mutual aid.

Creativity Aspect - The production conducted by the Nong Sa Rai community enterprise functions as a model for self-sufficient community enterprises. The production of the Nong Sa Rai community enterprise is contingent upon the utilization of community-owned internal resources and the transmission of local wisdom across generations. The outcome of this distinctive amalgamation is products that unmistakably embody the community's identity. The Nong Sa Rai community enterprise ensures a rigorous production process that incorporates the active involvement of community members throughout each stage. Moreover, they convert resources that are available in the community into tangible products. By acknowledging the worth of their existing possessions, they are able to generate additional value for their community. As a result, the Nong Sa Rai community enterprise is widely recognized as an innovatory community enterprise according to the framework illustrated in Figure 1.

The production carried out by the Nong Sa Rai community enterprise serves as a model for community enterprises that are self-reliant. This is because the Nong Sa Rai community enterprise's production is based on the internal resources within the community, combined with the local wisdom that has been passed down through generations. This unique combination results in products that clearly reflect the identity of the community. The production process of the Nong Sa Rai community enterprise is meticulous and involves the active participation of community members at every stage. Furthermore, they transform what they have within the community into products. Recognizing the value of what they already possess allows them to create new value for their community. Therefore, the Nong Sa Rai community enterprise is renowned as a pioneering community enterprise in terms of the model in figure 1.

Figure 1 *Model for Community Self-Reliance in the 21st Century*
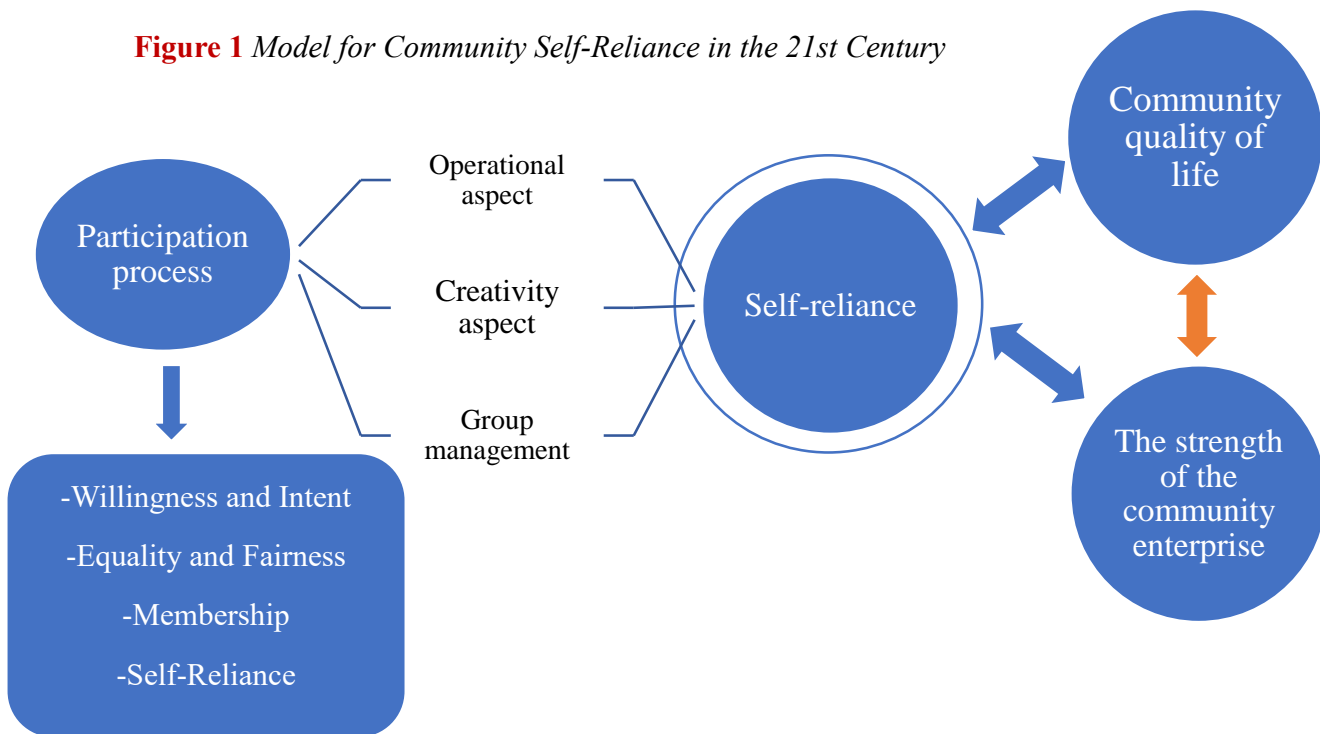
Communities and Self-Sufficiency Development Success is a desired outcome for numerous organizations and communities; however, the trajectory that culminates in success frequently fails to resonate with the interests and concerns of those very communities. Concerning the Nong Sa Rai community enterprise, it is an occupation that functions through community engagement, thereby ensuring that the outcomes of their efforts fulfill the community's requirements while diminishing its reliance on external sources of assistance. Both the villagers and the Nong Sa Rai community enterprise members operate with integrity and compassion. Moreover, the self-sufficiency of the community is a critical mechanism by which the community enterprise achieves sustainability. A high quality of life and the community's capacity for self-sufficiency are qualities that define its strength. Thus, the community enterprise contributes to the advancement of the Nong Sa Rai neighborhood.

In conclusion, the community enterprise was honored with the Outstanding Community Enterprise Award in 2018 as a result of its arduous and committed endeavors (B.E. 2561). This accolade does not serve as an indicator of the community enterprise's achievement; instead, it signifies the organization's commitment to functioning as an instrument of, for, and in collaboration with the community. This indicates that the community enterprise functions as a self-sufficient and comprehensive model, thereby exemplifying its success. The award showcases

the community enterprise's operations and development process, serving as a model for other organizations with comparable objectives and requirements. The Nong Sa Rai community enterprise exemplifies community development and operation in this manner, thereby serving as a paradigm for other community enterprises aspiring to attain comparable levels of accomplishment.

Conclusion and discussion

Numerous noteworthy accomplishments, models, and novel insights have been derived from the findings of the four research sections enumerated above. To recapitulate, these include the following:

1. Community Enterprises and Community Capital

Community capital or community resources are crucial to the success of community enterprises in Nong Sarai and to their transformation into exemplary models of the community enterprise model. The community capital utilized by Nong Sarai community enterprises consists of natural capital, human capital, social capital, and cultural capital, all of which are created through the participation of community members. The aforementioned resources are derivative of the intellectual legacy that has been transmitted across generations, which has contributed to the resilient growth and autonomy of community enterprises in Nong Sarai. This is consistent with the findings of Buratti et al. (2022), whose research investigates community enterprise development guidelines for self-sufficient communities in the twenty-first century. These guidelines serve as a blueprint for progress across multiple domains, with the intention of promoting further development. Historically, communal relationships have been the foundation of Thai society, laying the groundwork for vital collaborative efforts among all sectors. Before the onset of the economic crisis in 1997, Thailand had not experienced substantial advancements in its development trajectory. The preservation of traditional lifestyles in certain communities persisted, sustained by enduring cultural conventions and the copious natural resources present in those areas. In contrast to Western nations, Thailand had not yet been significantly influenced by modernization at this time (Petchprasert & Wongkul, 2021).

In contrast, development community enterprises (DCEUs) wield significant influence for constructive transformation, specifically when it comes to tackling regional obstacles, nurturing community resilience, and nurturing grassroots progress. These enterprises are founded upon the tenets of democratic governance, social impact, and collective ownership. The intersection of development community enterprises and the dynamics of the twenty-first century is as follows: Community enterprises dedicated to development prioritize the resolution of localized challenges while setting them in relation to more extensive global concerns, including but not limited to environmental degradation, poverty, and inequality. Through the utilization of regional resources, expertise, and knowledge, these businesses create solutions that are tailored to the specific circumstances and desires of the communities in which they operate. Through participation and

empowerment of development community enterprises, members of the community are engaged in project planning, implementation, and decision-making. The authors advocate for participatory methodologies that acknowledge the expertise, capacity, and initiative of community members, thus cultivating a perception of proprietorship and responsibility (Boonpok et al., 2023).

2. Community Enterprises and Participation

Community enterprises in Nong Sarai flourish through the utilization of the community's residents' participatory process, which includes membership engagement, collaborative thought and opinion expression, joint decision-making, and the distribution of shared benefits. These processes are the primary determinants of the robustness of Nong Sarai community enterprises; for its residents to attain self-sufficiency, it is vital that the community's resilience be strengthened. The community development master plan has facilitated the identification of a multitude of issues that transcend debt-related concerns and conflicts. These concerns include, among others, environmental, health, and occupational obstacles. In order to tackle these issues, the members of the community have collaboratively employed the resources at their disposal to identify resolutions. An embraced and implemented philosophy in the community is the sufficiency economy, which functions at the level of both households and individuals. This philosophical framework functions as a compass for the pragmatic implementation of its three governing principles and two conditions. It is critical to acknowledge that this philosophy does not represent the exclusive development approach to attaining self-sufficiency. Instead, it functions as one of several alternative strategies intended to improve the effectiveness of community development and livelihoods (Hayehama, 2023).

Nong Sarai community members have participated in a range of initiatives aimed at tackling the diverse obstacles encountered by their locality. As an illustration, after recognising the substantial financial burden associated with procuring potable water, they resolved this concern by instituting a community-based water generation system utilising the adjacent Chaloem Phra Kiat Canal. This enabled them to purchase and distribute water at a reasonable cost. The adherence of the water production to predetermined criteria was assured by the community via inspections carried out by local government agencies. It is crucial to emphasize that the Nong Sarai community has conducted its activities collectively and for the benefit of the entire community, in accordance with the sufficiency economy philosophy and the principles of community participation.

3. Community Enterprises and Self-reliance

Community enterprises in Nong Sarai maintain their strength and resilience in the face of a world that is undergoing rapid change by relying on the residents' self-reliance, which is ingrained in the collaborative process of participating in community activities. Moreover, community self-reliance is an additional critical element of the development of community enterprises that facilitates independence. Three components comprise this community self-

sufficiency: transparency, local knowledge, and natural resources. Community self-reliance is a pivotal factor in the Nong Sarai community enterprise as it contributes significantly to the enterprise's robustness and empowers its members to financially sustain themselves. The concept of community self-reliance can be deconstructed as follows: *Natural Resources*- The self-sufficiency of the community is predicated on its natural resources. This includes meeting their requirements through the efficient and sustainable utilization of local resources. *Local Knowledge*-The community capitalizes on its profoundly ingrained traditions and practices, which constitute its local wisdom and knowledge. In order to develop sustainable solutions to local challenges, this information is vital. Mutual reliance requires that which the community be conducted in a transparent manner. Meilya et al. (2021) discovered that in a transparent and accountable environment where all participants contribute and benefit, community members who unite, collaborate harmoniously, and pursue shared objectives foster an atmosphere of accountability. These findings align with those of Santipolvut (2020) who discovered that the achievement of success in the operations of a community enterprise does not result from the desires of a single member, but rather from the collective dedication and labor of all its members who share the same objectives. Nonetheless, the establishment of prosperous community enterprises necessitates the collaboration of various elements in order to attain sustainable development objectives and enhance the well-being of community members. By doing so, it has achieved the status of an exemplary, self-sufficient community enterprise.

The journey of the Nong Sarai community enterprise is a paradigmatic illustration of community autonomy and development led by the people. This serves as evidence of how communities can fortify themselves and decrease their dependence on external assistance by means of collaborative and participatory procedures as outlined as follows:1) The improvement of apparatus and equipment to increase production capacity and product quality constitutes production development. 2) In order to increase market share, marketing development entails the creation of new products with packaging designed for an extended shelf life. 3) The procurement of financial capital and business management concentrate on enhancing the structure and internal financial logistics of community enterprises. 4) Sustainable development underscores the importance of conducting business in a sustainable manner and involving the community in financing diverse facets of its progress and 5) The engagement of individuals across diverse spheres of society in propelling the community towards its objective of self-sufficiency.

Recommendations

Recommendations for Implementing Research Findings

1) Community Engagement: Facilitate the active participation of members of the community in the application of research outcomes. This may entail organizing conferences, seminars, or focus groups to deliberate and generate ideas regarding the efficient implementation of the research findings.

2) Capacity Development: Offer community members training and capacity-building initiatives aimed at augmenting their comprehension of the research outcomes and furnishing them with the requisite competencies to effectively apply them.

3) Collaborative Efforts: Encourage the cooperation of community members, local organizations, government agencies, and other relevant stakeholders in order to capitalize on their respective resources and specialized knowledge for the effective execution of the initiative.

Recommendations for Future Research

1) Analysis of Government Partnerships: Examine the capacity of governmental entities to facilitate and advocate for community enterprises. This analysis should encompass an examination of the funding mechanisms, policies, and programs that are accessible for the development of community enterprises.

2) Impact Assessment: Conduct an evaluation of the environmental, social, and economic ramifications that community enterprises have on the Nong Sa-rai community. Changes in income levels, employment opportunities, access to resources, and environmental sustainability should all be quantified as part of this evaluation.

3) Market Development Strategies: Analyze efficacious approaches to product promotion and market development that are applicable to community enterprises. This may entail conducting research on consumer preferences, market trends, competitive analysis, and community-specific marketing strategies.

References

Anggun, A., Rachmi, I. S., Adi, S. A., & Purna, I. (2023). The role of the community empowerment program through CSR of PT Kilang Pertamina international refinery unit 3 plaju in encouraging community self-reliance and welfare in frontier, outermost and least developed region. *Eurasia: Economics & Business*, *9*(75), 3-13.

Bauwens, T., Vaskelainen, T., & Frenken, K. (2022). Conceptualising institutional complexity in the upscaling of community enterprises: Lessons from renewable energy and carsharing. *Environmental Innovation and Societal Transitions*, *42*, 138-151.

Boonpok, T., Dhammasaccakarn, W., & Jiaramat, A.- on. (2023). Strengthening community's financial organization network in Rattaphum district, Songkhla province. *Journal of Liberal Arts Prince of Songkla University*, *15*(2), 258804.

Buratti, N., Sillig, C., & Albanese, M. (2022). Community enterprise, community entrepreneurship and local development: A literature review on three decades of empirical studies and theorizations. *Entrepreneurship & Regional Development*, *34*(5-6), 376-401.

Cavite, H. J. M., Kerdsriserm, C., & Suwanmaneepong, S. (2021). Strategic guidelines for community enterprise development: a case in rural Thailand. *Journal of Enterprising Communities: People and Places in the Global Economy*, Emerald Group Publishing Limited, *17*(2), 284-304.

Chantarasombat, C., & Prasertphorn, V. (2022). Knowledge management of learning resources leader on producing and transforming Phak wan Pah for self-reliance. *Multicultural Education*, *8*(3), 105-120.

Eder, J. (2023). Self-reliance and autonomous development. In F. Obeng-Odoom (Ed.), *Handbook on Alternative Global Development* (pp. 250-272). Edward Elgar Publishing.

Eijk, A. V. (2020). *The essence of community enterprises*. [Master's thesis, Radboud Universiteit]. https://theses.ubn.ru.nl

Hayehama, N. (2023). The development of processed coconut products by Bungasire savings community enterprise, Tha Klong Village, Pattani Province. *Journal of Liberal Arts Prince of Songkla University*, *15*(2), 265-454.

Jangjarat, K., Kraiwanit, T., Satityapong, N., Sonsuphap, R., & Phaksipaeng, I. (2023). The social economy in the digital era: A perspective on community enterprises in a developing economy. *Journal of Social Economics Research*, *10*(1), 13-21.

Jeronen, E. (2020). Sustainable development. In S. Idowu, R. Schmidpeter, N. Capaldi, L. Zu, M. Del Baldo, R. Abreu (Eds.), *Encyclopedia of sustainable management* (pp. 1-7). Springer, Cham.

Jirojkul, S., Pongsakornrungsilp, S., Pianroj, N., Chaiyakot, P., Shahin, M., Masst, T., & Techato, K. (2021). The effect of mindset on tourist behaviour and mindful consumption in a Community Enterprise in Krabi, Thailand. *TEM Journal*, *10*(3), 10-82.

Meilya, I. R., Siregar, H., & Fauzi, A. (2021). Quality improvement and self-reliance strategies community learning center (CLC). *Journal of Education and Community Empowerment*, *8*(1), 87-94.

Mettathamrong, J., Promket, C., & Vichasilp, K. (2022). How community enterprises of Thailand managed to become Thailand 4.0. *International Journal of Operations and Quantitative Management*, *28*(1), 121-133.

Mndebele, M. L. (2021). *Communication for social change: Communal development and self-reliance in Naledi village*. [Doctoral dissertation, University of Johannesburg]. https://www.proquest.com

Petchprasert, N., & Wongkul, P. (2021). *Community enterprises: The grassroots economic mechanism.* Bangkok: Addison Press.

Romprasert, S., & Trivedi, A. (2021). Sustainable economy on community enterprise and digital marketing. *ABAC Journal*, *41*(1), 62-80.

Santipolvut, S. (2020). Developing a sustainable community via community enterprise: approaches and case studies in Thailand. *Asian Social Science*, *11*(4), 1-50.

Singh, M. K. (2022). History and concept of community participation. In M. K. Singh (Ed.), *Community participation and civic engagement in the digital era* (pp. 1-17). Emerald Publishing Limited.

A Comparison of the Performance of Google Translate
in 2018 and 2023

การเปรียบเทียบประสิทธิภาพการแปลของโปรแกรม Google Translate
ระหว่างปี ค.ศ.2018 และค.ศ.2023

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พักตร์พิมล ปัญญาคำ

Abstract

Google Translate has evolved into an indispensable tool for Thai readers seeking to comprehend English texts. While it may not be flawless, it offers remarkable features that facilitate readers in grasping the overall meaning. Furthermore, its continuous annual progress necessitates ongoing studies. Therefore, this article sets out to compare Google Translate's machine translation errors in two online news articles retrieved from both 2018 and 2023, from an English-to-Thai perspective. One example from beginner-level reading comprehension materials was also included in the analysis. These texts underwent meticulous qualitative and quantitative analyses to identify errors introduced by Google Translate. The findings of this study unveiled the inevitability of errors in Google Translate's translations. These errors predominantly fell into three major categories: lexical, syntactic, and discourse. Notably, Google Translate exhibited a penchant for making lexical errors in the translated texts in both 2018 and 2023. The frequency of errors in Google Translate was 87% in 2018 and decreased to 39% in 2023. From the total errors, Google Translate made lexical errors in 2018 for 55%, syntactic errors for 30%, and discourse errors for 20%. In contrast, the error rate improved in 2023: lexical errors decreased to 25%, syntactical errors to 10%, and discourse errors to 10%, indicating advancements over the past half-decade. Despite the prevalence of errors, this study

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aims to provide explanations and practical implications to enhance future use. While Google Translate's errors may occasionally hinder a reader's comprehension, the software still holds the potential to offer a general understanding of a text. Recognizing the reliance on translation tools and understanding the types of errors are critical steps for readers to employ these tools more effectively.

บทคัดย่อ

Google Translate ได้พัฒนามาเป็นเครื่องมือสำหรับผู้อ่านที่ต้องการทำความเข้าใจภาษาอังกฤษ การแปลของตัวเครื่องมือแม้ไม่ได้สมบูรณ์นักแต่มีคุณสมบัติที่เป็นประโยชน์ที่ช่วยให้ผู้อ่านเข้าใจความหมายโดยภาพรวมได้ นอกจากนี้เครื่องมือยังได้รับการพัฒนาและยังมีการศึกษาเพื่อพัฒนาระบบอย่างต่อเนื่อง บทความวิจัยนี้มีวัตถุประสงค์ เพื่อเปรียบเทียบข้อผิดพลาดในการแปลด้วยเครื่องของ Google Translate ในบทความข่าวออนไลน์ สองบทความซึ่งนำมาจากหนังสือพิมพ์ในปี 2018 และ 2023 และบทอ่านระดับเริ่มต้น 1 บทความ ที่แปลจากภาษาอังกฤษเป็นภาษาไทย การวิเคราะห์ข้อมูลใช้วิธีการเชิงคุณภาพและเชิงปริมาณเพื่อระบุข้อผิดพลาดที่เกิดจากการแปลของ Google Translate ผลจากการศึกษาครั้งนี้ชี้ให้เห็นข้อผิดพลาดในการแปลของระบบการแปล Google Translate โดยแบ่งออกได้เป็นสามประเภทหลักได้แก่ คำศัพท์ วากยสัมพันธ์ และวาทกรรม ในข้อความที่แปลทั้งในปี 2018 และ 2023 โดย ในปี 2018 ความถี่ของข้อผิดพลาดทั้งหมด คือ 87% และลดลงเป็น 39% ในปี 2023 จากข้อผิดพลาดทั้งหมด Google Translate มีข้อผิดพลาดด้านคำศัพท์ในปี 2018 คิดเป็น 55% ข้อผิดพลาดทางวากยสัมพันธ์ 30% และข้อผิดพลาดในด้านวาทกรรม 20% ในปี 2023 ได้มีการปรับปรุงอัตราข้อผิดพลาด โดยข้อผิดพลาดด้านคำศัพท์ลดลงเหลือ 25% ข้อผิดพลาดทางวากยสัมพันธ์เหลือ 10% และข้อผิดพลาดวาทกรรมเหลือ 10% ซึ่งชี้ให้เห็นถึงผลการพัฒนาระบบในระหว่างช่วงครึ่งทศวรรษที่ผ่านมา แม้จะมีข้อผิดพลาดเกิดขึ้นในหลายจุด แต่การศึกษานี้มุ่งที่จะให้คำอธิบายและแนวทางปฏิบัติเพื่อปรับปรุงการใช้งานในอนาคต แม้ว่าการแปลของ Google Translate จะทำให้ผู้อ่านเข้าใจยากในบางครั้ง แต่ระบบยังคงมีศักยภาพในสร้างความเข้าใจการอ่านโดยทั่วไป โดยเฉพาะในระดับเบื้องต้น ความเชื่อมั่นในระบบการแปล และการทำความเข้าใจประเภทของข้อผิดพลาดนับว่าเป็นสิ่งสำคัญสำหรับผู้อ่านในการใช้เครื่องมือเหล่านี้อย่างมีประสิทธิภาพมากขึ้น

Introduction

It is undeniable that Google Translate (GT) plays a crucial role among Thai readers, especially for those who have little background in English. This is also true in education in the ESL classroom. Studies suggest that students find MT (machine translation) tools beneficial for their L2 (second language) writing, mainly due to their quick and convenient access. Students use these tools for various aspects of L2 writing, including vocabulary searches, grammar checking, and writing revisions. However, the concerns regarding the outputs are related to the accuracy, the effectiveness of MT for language learning, and academic integrity. In Thailand, according to Lyons (2016), a significant percentage (74.5%) of Thai students in Chiang Mai use their phones for Thai-English translation, with the majority (72.5%) preferring Google Translate. This indicates that Google Translate is the most popular choice for Thai readers, particularly those studying English texts or articles.

Benites et al. (2021) and Kok Wei (2021) also reported that a large proportion (over 90%) of language students, on average, use machine translation, with more than half of them utilizing it regularly (more than once a week). Despite the common occurrence of grammatical issues in machine translations, the question arises whether these issues hinder comprehension, as has long been believed. Nonetheless, Grace (1998) highlights that readers typically seek equivalence between their native language (L1) and the second language (L2) when reading translated texts. This suggests that despite encountering syntactical problems, readers can still achieve comprehension.

It is important to acknowledge that using Google Translate might not be appropriate for every circumstance. However, readers can employ it to enhance their reading comprehension or translate certain texts in their daily lives, such as news articles, emails, website information, novels, or short stories. Bavendiek (2022) found that imperfect machine translations can motivate language students to engage with literary works in terms of both form and meaning. By drawing upon their familiar language and culture to make comparisons with the target language, students can boost their confidence and develop a creative, inspired approach to engaging with literary texts. This suggests that machine translation can have positive effects on language learning outcomes.

The results of aforementioned various studies indicate that machine translation, particularly through Google Translate, plays a significant role in aiding language learning and

enhancing reading comprehension for Thai readers. Despite potential grammatical issues, readers can still understand the text and achieve their goals. However, it is essential to use machine translation judiciously and understand its limitations, particularly in formal academic contexts, to ensure academic integrity.

As the performance of machine translation is often questionable and limited, there is a need to investigate its limitations for more efficient usage. Google Translate, in particular, falls short in various aspects like vocabulary, grammar, and sentence structure, demonstrating an inability to match advanced translators. Despite the time-consuming process of becoming proficient in a language, some Thai readers resort to using Google Translate to at least grasp the basic meaning of texts. The motivation for this study was understanding how the translation rendering results may have evolved over a five-year period. Consequently, the primary goal of this paper is to analyze the comparative errors made by Google Translate in the years 2018 and 2023, aiming to assist Thai readers in understanding the translation process better and utilizing it effectively to enhance their comprehension and facilitate more efficient English language learning.

Over the past decade, machine translation has made significant progress. Lee's (2021) study examined the quality of machine translation (MT) outputs, specifically focusing on Google Translate's performance in translating from Korean to English. This evaluation was conducted by comparing the MT outputs with English-translated texts created by intermediate English as a foreign language student. The study not only assessed the translation quality but also analyzed the source text factors that contributed to this quality.

Interestingly, both sets of texts translated by the students and machine were found to be equally comprehensible. But in most of the aspects under investigation, the MT outputs demonstrated superior performance compared to the students' translations. The research revealed that the quality of MT outputs was influenced by two specific factors within the source texts: punctuation and sentence complexity. On the other hand, factors like lexical and grammatical accuracy, lexical diversity, and contextual understanding did not impact the quality of MT outputs. This research article also seeks to compare the quality of machine translation, specifically Google Translate, in the years 2018 and 2023. Focusing on translation tools like Google Translate is crucial to determine their efficiency, as this knowledge can be leveraged by Thai readers to identify its weaknesses and capitalize on its strengths, leading to improved reading comprehension and other language translation tasks.

Research Question

How well did Google Translate perform in 2018 in comparison to 2023?

Literature Review

1. Error Analysis

Error analysis is an essential approach for understanding the origins, types, causes, and consequences of linguistic mistakes (James, 1998). This academic discipline holds significant implications, particularly in fields like language acquisition and second language instruction (Corder, 1967). It serves as a valuable tool for educators to assess their teaching effectiveness and identify areas for improvement, as noted by Richards (1974). In recent years, error analysis has gained prominence in the field of Machine Translation (MT), with some studies focusing on creating taxonomies (Llitj´os et al., 2005; Vilar et al., 2006; Bojar, 2011) and others dedicated to error identification (Popovi´c & Ney, 2006). For instance, languages with unclear word boundaries, such as Thai, Japanese, and Chinese, face significant challenges in word segmentation (Modhiran et al., 2005). In the context of English-Thai translation, Chimsuk (2010) identified issues related to machine translation, including lexical and structural ambiguities, disparities in lexical and structural elements, and difficulties posed by multiword units like idioms and collocations. The error categorization developed by Elliott et al. (2004) underwent an iterative refinement process during the analysis of approximately 20,000 words of machine-translated output from French to English. This analysis encompassed output generated by four systems: Systran7, Reverso Promt8, Comprendium9, and SDL's online Free Translation10. Notably, this classification system differs slightly, as the annotations were based on aspects that a post-editor would need to address when revising the texts for publication-quality standards. Additionally, Costa et al. (2015) introduced an error taxonomy that served as a structured framework for classifying specific errors encountered in the translation process. They proposed a taxonomy that involved an analysis of errors within four machine translation (MT) systems. Their investigation included aspects like orthography, lexis, grammar, semantics, and discourse, with a particular focus on translating from English to European Portuguese. The results of their study revealed errors stemming from a failure to identify suitable alternatives. The framework devised by Costa et al. (2015) provided valuable insights into MT performance through error analysis. This feedback has the potential to assist

developers in enhancing the efficacy of translating health-related information, especially during critical periods like the COVID-19 pandemic.

2. Machine Translation

Nowadays, various software tools are utilized for teaching and learning English, including online dictionaries, applications, and online courses, offering great benefits to users due to their accessibility and convenience. Online dictionaries automatically translate vocabulary, applications facilitate learning new concepts, and online courses can be accessed from anywhere. Among these tools, Google Translate stands out as a free multilingual machine translation service developed by Google. Its capabilities include translating text, documents, and websites from one language to another, available through both a website interface and a mobile application. Google Translate employs a unique approach to translation, utilizing vast collections of phrases and words in target languages. This methodology ensures rapid translations compared to processes solely reliant on rules and form (Stymne, 2011).

Nevertheless, research in the field of machine translation remains limited, despite its significant role in the learning process. Thus, enhancing the study of machine translation could greatly benefit ESL classrooms. Google Translate (GT) is one of the most well-known machine translators, with over one billion users since its launch in 2006. Originally, GT operated as a statistical machine translation (SMT) service, but in November 2016, it transitioned to the Google Neural Machine Translation Engine (GNMT), enabling it to translate entire sentences at once instead of piece by piece. Presently, GT supports 133 languages at various proficiency levels, providing translations for 37 languages using photos, 32 languages through voice in conversation mode, and 27 languages via live video imagery in augmented reality mode. Moreover, it can now translate pictures and scan signboards (Schuster et al.,2016).

Recent studies have shown the effectiveness of GT's machine translation. In a study by Stapleton and Kim (2019), 12 teachers evaluated MT outputs and students' outputs (from Chinese to English) in terms of comprehensibility, vocabulary, and grammar, with the MT outputs achieving higher scores. GT has also improved in handling lexical problems thanks to its extensive databases, enabling it to translate less commonly used words, idioms, misspelled words, and colloquial language quite effectively (Ducar & Schocket, 2018). As a result, O'Brien, Simard, and Goulet (2018) recommended that L2 learners write in their native language first, use GT, and then edit the output to reduce cognitive load and maximize

efficiency. Overall, Google Translate has become an indispensable tool for language learners and teachers, offering substantial benefits in overcoming language barriers and enhancing language learning experiences.

3. Limitations of Machine Translation

One of the problems of machine translation is the language structure, such as tense, structure, and word choice. Fem (2011) highlighted problems with translation efficiency, particularly in complex and ambiguous contexts and grammar. This issue tends to occur when translating multiple sentences consecutively. In a study by Balk et al. (2012), machine translation accuracy was investigated for eight languages translated into English: Chinese, French, German, Italian, Japanese, Korean, Portuguese, and Spanish. The program showed fair translation results for German and Portuguese, but faced challenges when translating from Eastern languages, especially with Chinese, which proved incompatible with the original version. Balk et al. (2013) conducted comparative research and found that Google Translate has the potential to reduce language prejudice, but it still carries the risk of errors. The problem with GT is not limited to translating from other languages into English; errors have also been identified when translating from English to other languages.

The studies by Correa (2014) and Goulet et al. (2017) suggest that translations between languages with different syntax may lead to more syntactical errors. Shadiev et al. (2019) conducted a recent study that confirmed the impact of language pair similarities or differences on translation intelligibility and accuracy. Despite its limitations in cultural translation, we can still learn from and adapt machine translation. White & Heidrich (2013) observed that machine translation produced more flawed outputs when dealing with texts containing polysemous lexical items, pragmatic information, and requiring a high level of cultural understanding. Similarly, Park (2017) and Kim (2019) pointed out that lengthy and complex sentences, as well as culture-specific expressions, can lead to inadequate translations by machine translation. One reason for this is that words may have various contextual meanings, leading to ambiguous translations (Hutchins, 2003).

Google Translate can also produce inaccurate or incomprehensible sentences, along with word choice errors. Additionally, inconsistencies in grammar and vocabulary levels, with more advanced words appearing in poorly structured sentences, can undermine the authenticity of

the texts and impact the overall perception of MT's quality. This is because language is subjective and cannot be unequivocally defined as right or wrong.

Nonetheless, a study by Bowker & Ciro (2019) revealed that the quality of machine translation (MT) output was not notably affected by the accuracy, vocabulary diversity, or level of Korean contextual information in source texts. This outcome can be attributed to MT's ability to leverage extensive corpus data to match words and expressions from source texts with suitable English equivalents in the given context. Despite the effectiveness of MT software, it still cannot replace the skill of a professional translator. This raises the question of why machines cannot match human abilities in translation. Unlike older MT systems that struggled with mistakes like typos and ended up keeping those mistakes in the translation, Google Neural Machine Translation (GNMT) does not merely fix words; instead, learns from a constantly growing collection of texts and can translate words that are not employed very often, as well as phrases and casual language. The accuracy of machine translation relies on GNMT's methods to reduce ambiguity and interpret words directly. GNMT uses advanced deep learning to translate entire sentences at once, making the translation results more accurate. It is also trained by means of using examples of translated sentences and documents, sourced from the public web (Caswell & Liang, 2020). This was a huge turning point in Machine Translation (MT). However, errors still persist with this approach, making it challenging in practical terms.

Machine translation also falls short in capturing behaviorally nuanced language, including emotional expressions, classroom activity demonstrations, humorous tales, unfriendly moods, anger, and friendly expressions. On top of that, machine translation cannot fully grasp the nuances of intentional and unintentional communication, including the objectives of concealing or implying information and the associated mood. Intercultural communication and language are complex and lack a structured format, as culture can be conveyed in various contexts and transmitted from different sources. Despite calculations in mathematical theory and the speed of processing, a computer is incapable of achieving 100% accurate translation due to the complexities of linguistics. Matching a large number of words and phrases from each language in the system proves to be very difficult. Even if linguists attempt to improve the method of translation, they may not find an appropriate solution for exact accuracy, since correctness can be subjective and challenging to quantify with numbers.

Although machine translation can produce accurate translations, errors can still be found in every single line of the text, especially in high-value literature translations. Previous studies

(Abraham, 2009; Fredholm, 2015; White & Heidrich, 2013) have shown that MT is prone to inaccuracies and may generate lexical and grammatical errors. Despite advancements in artificial intelligence and machine learning that have led to improvements in MT's quality and accuracy, concerns about its ethics, overdependence, and reliability persist, as pointed out by Briggs (2018). Therefore, it is recognized that despite these advancements, MT is not flawless and has its limitations.

In Thailand, Vidhayasai et al. (2015) investigated Google Translate by analyzing a budget airline's official website to translate its official and legal documents. They specifically concentrated on the translation of the "Terms and Conditions" section due to its significant influence on both the airline itself and its passengers. The outcomes of the study indicate the occurrence of errors across three primary dimensions: lexical, syntactical, and discursive. These errors inevitably lead to a lack of intelligibility. This suggests that human translation is needed to maintain the standard of translation and leads to questions about whether machine translation is truly cost-effective when considering the expenses of software maintenance and human improvements. While machine translation assists in speeding up the translation process, it is expected to be more efficient and accurate than human translation in the near future.

4. Translation Theories

Nida (1991) stated that the goal of translation is to transmit meaning from one language to another while maintaining the form of the original text. What we transmit is not the language itself, but rather its meaning to the receiver. The most crucial parts of translation are the message, the implied meaning, and how it is transmitted as a language naturally (Seleskovitch & Lederer, 1989). From Newmark's (1988) perspective, human translation occurs at two levels: semantic equivalence and communicative equivalence.

Semantic translation, centered around the source language, leverages techniques such as literal translation and faithful translation. In contrast, communicative translation operates from the perspective of the target language and employs free translation techniques. Semantic translation prioritizes the original form and the author's intent, focusing less on the context and expression within the target language. On the other hand, communicative translation emphasizes conveying information effectively in the target language rather than mimicking the original text.

Typically, communicative translation yields a context that is smooth, natural, and clear. In contrast, semantic translation often presents a more intricate context, potentially challenging in pronunciation due to its foreign accent (Newmark, 2001). Communicative translators enjoy greater creative freedom, enabling them to modify or refine the original context. In contrast, semantic translation adheres rigorously to rules, resulting in a relatively lower degree of flexibility. Practically, many translators tend to adopt the communicative translation approach. However, when both the specific language used by the author and the expression of content are equally significant, the semantic translation approach is more appropriate. Lively novel metaphors are best suited for semantic translation. Conversely, for translating commonly used language, the communicative translation method is the more suitable choice. Communicative translation endeavors to elicit a reader response closely aligned with the effect the original text has on its readers.

In contrast, free translation does not strictly adhere to the original text's structure or meaning. The translator has more flexibility to reorganize, expand, or condense the text, along with adjusting the words and grammar. This approach is suitable when maintaining the structure of the original text is not necessary. Free translation is often employed in various forms of media for entertainment purposes. The translator reads the entire paragraph, comprehends its content, main idea, and the writer's intentions, and then conveys them in their own style. This type of translation is commonly used in novels, short stories, and radio and TV scripts.

It is essential for translators to be proficient in both types of translation to adjust sentences appropriately. A translation is not considered perfect if the text is translated incorrectly. For instance, novel translations may utilize idioms to convey figurative language, whereas legal or medical translations may require technical terms or a concise writing style without extravagance. Simple sentences and related ideas that correspond to the original text are employed, with a crucial requirement for the translation to be logical in its own language, matching the original text's level of logic. However, Google Translate tends to follow the first type of literal translation, word-by-word, in an attempt to retain the structure of the original text. On the contrary, it is challenging for GT to achieve the second type of free translation, as this requires understanding mood, tone, and complex cultural implications for translating literature, figurative language, or novels.

Research Methodology

The methodology employed in this study is a mixed-method approach, incorporating both qualitative and quantitative methods. Firstly, the qualitative method was used to address the research question: "How well did Google Translate perform in 2018 in comparison to 2023?" To achieve this, data was gathered from articles published in the Bangkok Post, online newspapers, and online passages, translated by Google Translate in the years of 2018 and 2023.

These articles were selected because they reflect language commonly used in general news publications. The data collected from these sources included opinions and general facts presented by the authors. In this qualitative research, a comprehensive analysis was undertaken on the content translated from English to Thai by Google Translate across various articles. The aim was to discern discrepancies between the translations produced in 2018 and those from 2023. This investigation was prompted by the likelihood that Google Translate has undergone significant system changes over the past five years.

Secondly, the quantitative research method was employed. Quantitative methods involve research techniques used to gather information that can be measured and expressed in numerical form (Nunan, 2001). In this study, the frequency of errors in the translated content retrieved from Google Translate in the years 2018 and 2023 was counted and analyzed using quantitative analysis techniques. By combining both qualitative and quantitative methods, this study aims to provide a comprehensive and in-depth analysis of the errors found in Google Translate's translations of news articles from English to Thai, while also quantifying the frequency of these errors over the specified time periods.

Procedures

The research was conducted following the procedures outlined below:

Compilation of online articles at a basic level and news articles: English news articles were gathered from the official news websites of the Bangkok Post and organized into Word documents.

Pairing English and Thai texts: To facilitate the analysis, the English news articles were paired with their corresponding Thai translations. This pairing allowed for a direct comparison of the translations.

Identification of translation errors: During the analysis process, crucial examples of translation errors were identified. These examples were used to illustrate and demonstrate the types of errors found in Google Translate's translations.

Frequency count and percentage calculation: The frequency of the identified errors was then counted to determine how often each type of error occurred. Based on the frequency count, the percentage of each error type was calculated to provide a quantitative understanding of the prevalence of errors in the translations.

By following these procedures, the research aimed to gain insights into the common errors made by Google Translate when translating articles from English to Thai. The combination of qualitative analysis through error identification and quantitative analysis through frequency count and percentage calculation allowed for a comprehensive evaluation of the translation quality.

Data Collection

The research data was sourced from three articles: two from the Bangkok Post, titled "Students to get sex education" and another titled "Ministry downplays Zika fears," which published in year 2016, along with an example from beginner-level reading comprehension materials, titled "My favourite Place" from website "Grammar Bank".

The Google Translate rendering results for all instances were initially documented in my own unpublished research report and published research paper in 2018 (Kumnoed, 2018a; Kumnoed, 2018b) (See in appendix). These articles contained various sentence structures, including simple, compound, and complex sentences. In this qualitative study, the news articles were subjected to an in-depth analysis, primarily because of their diverse sentence structures, often featuring sentences that represent general language usage, which might pose challenges for readers with a limited proficiency in Thai.

Recent advancements in Google Translate, particularly its "Web crawl" methodology, have significantly impacted its translation capabilities. "Web crawl" refers to the automated process of searching and gathering information from the internet. These improvements have made it possible to effectively use vast amounts of data collected from the web, even if the data is not perfect. These techniques involve enhancing the translation model and implementing more intelligent training methods, improving error handling in data, and adopting an advanced

multilingual learning approach known as M4 modeling (Caswell & Liang, 2020). The GNMT method, which is better at translation than older approaches, has also evolved. It can be likened to a sensitive tool that requires high-quality data for optimal performance. Consequently, the data collection process for training the GNMT model has been overhauled, with a sharper focus on obtaining accurate information rather than sheer volume (Caswell & Liang, 2020).

Therefore, when comparing translations produced by Google Translate over the span of five years to the original source text, it is highly likely that there have been significant changes attributable to the evolution of the GT system. This research seeks to quantify the extent of these changes in Google Translate over the past five years.

Data Analysis

The data were carefully analyzed to identify errors, and the analysis was conducted sequentially following the order of the text. Each individual sentence was thoroughly examined to observe how and where errors occurred, specifically focusing on lexical, syntactic, and discourse errors. Subsequently, each type of error was categorized according to an error taxonomy adapted from Costa et al. (2015) and Vidhayasai et al. (2015). The error taxonomy served as a framework to classify and understand the specific types of errors encountered during the translation process. A taxonomy was introduced by Costa et al. (2015). They conducted a comprehensive analysis to examine MT errors in four MT systems: Google Translate, Systran, and two in-house MT systems. Their analysis covered orthography, lexis, grammar, semantics, and discourse, with a particular focus on the challenges of English to European Portuguese translation. The study revealed recurrent errors arising from wrong choices and an inability to find suitable alternatives. To sum up, the framework introduced by Costa et al. (2015) provides a way to offer valuable feedback on the performance of the two studied systems through error analysis.

On the contrary, quantitative methods were utilized for data analysis. Descriptive analysis was employed to uncover general data patterns and assess the statistical significance of translation results between 2018 and 2023. Subsequently, we conducted a frequency analysis to quantify the occurrence of identified errors. This allowed us to determine the frequency of each error type. Based on these frequency counts, we calculated the percentage representation of each error type, providing a quantitative insight into the prevalence of errors in the translations.

Figure 1: *Error Taxonomy; Adapted from Costa et al., (2015) and Vidhayasai et al. (2015)*
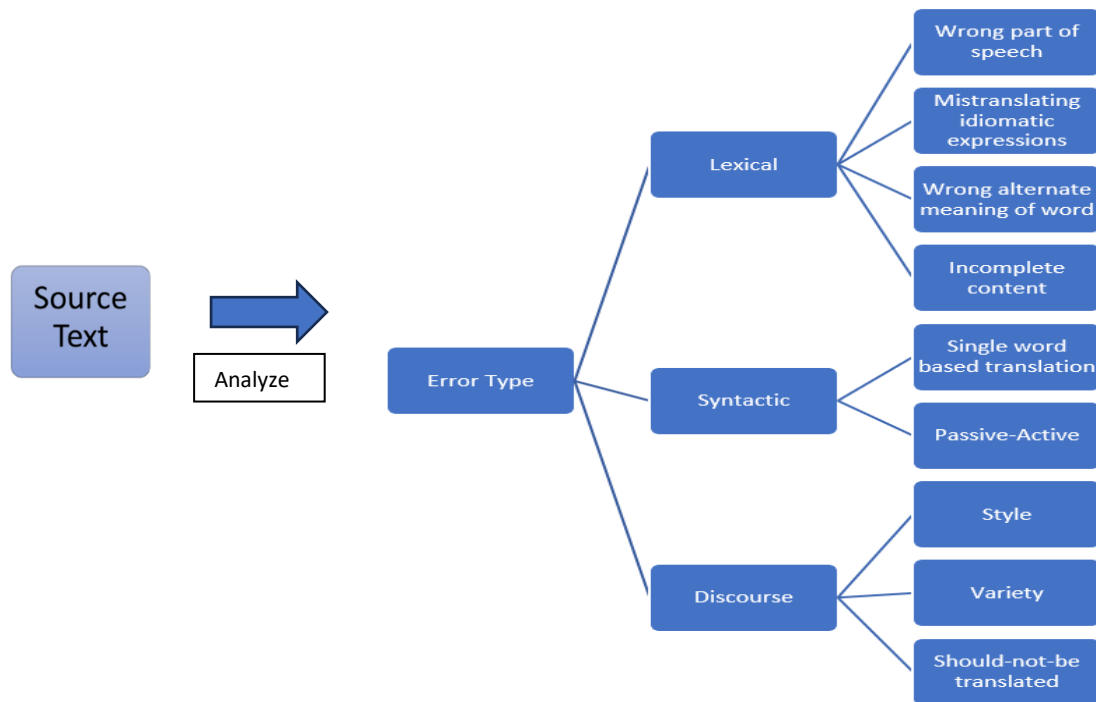
Error Taxonomy

According to the taxonomy provided above, the first category of error is lexical translation errors, which occur at the level of individual words and can be discerned by their distinct characteristics. These errors may affect the specific meaning of a word but do not necessarily render the entire phrase or sentence incomprehensible. To elaborate, the following subtypes of lexical translation errors were identified. Firstly, an incorrect alternate meaning of a word appears when a word with multiple meanings is translated using an inappropriate definition. Similarly, an incorrect part of speech translation involves using an incorrect grammatical form, such as rendering an adjective as a noun. Moreover, the misinterpretation of idiomatic expressions occurs when translating through a word-by-word pattern without taking the word's idiomatic meaning into account. Finally, the error of omitting words involves avoiding the translation of certain words or phrases, leading to incomplete content translation (Vidhayasai et al., 2015).

Example: He said the programme will educate teachers and executives about the rights of pregnant and <u>parenting students</u> and their educational opportunities.

GT translation: เขากล่าวว่าโปรแกรมนี้จะให้ความรู้แก่ครูและผู้บริหารเกี่ยวกับสิทธิของนักเรียนที่ตั้งครรภ์ และ<u>ผู้ปกครอง</u> และโอกาสทางการศึกษาของพวกเขา (khao klao wa pro kraem ni cha hai khwam ru kae kru lae phuborihan kiao kap sit thi kong nakrian thi tang khan lae phu pokkhrong lae okat thang kan sueksa kong phuak khao.).

      Secondly, we have syntactic translation errors. A syntactic error occurs when a phrase or sentence exhibits structural issues, rendering it grammatically incorrect in the target language. These errors result in grammatical discrepancies that affect the structure and meaning of the target text. While these errors may impact the interpretation of a specific phrase or segment, they often allow for the overall meaning of the sentence to be inferred or guessed. Syntactic translation errors can be further categorized as follows: Single word-based translation: This type of error entails a word-for-word translation without considering the context, leading to syntactical disarray. Passive to active transformation: this error involves using a passive sentence structure when an active one is more suitable, especially within a Thai linguistic context: Ambiguity in passive voice translation: Errors in this category pertain to the ambiguous translation of sentences in the passive voice, which can obscure the intended meaning.

Example: <u>The woman is believed</u> to have contracted the virus from someone who had recently travelled overseas.

GT translation: <u>ผู้หญิงเชื่อว่า</u>ได้ติดต่อไวรัสจากคนที่พึ่งจะเดินทางไปต่างประเทศ (phu ying chuea wa dai tit to wairat chak khon thi phueng cha doen thang pai tang prathet.).

      Finally, at the discourse level, we delve into choices concerning how ideas are expressed, which may not necessarily constitute typical errors but do affect the overall quality of translation. Within this context, we address three specific situations: style, variety, and cases where translation may not be appropriate. Style errors manifest when there is a suboptimal stylistic choice of words during translation. For example, unnecessarily repeating a word when a synonym would have been more appropriate can be considered a style error. In such instances,

the translated phrase or sentence may become incoherent and perplexing to Thai readers due to a lack of stylistic cohesion. These errors undermine the overall comprehensibility of the text.

Example: Dr Opart's comment came after 22 new cases of Zika, including a pregnant woman, were reported in the Sathon district this week.

GT translation: ความเห็นของดร. โอพาร์ทมีขึ้นหลังจากมีรายงานผู้ติดเชื้อไวรัสซิการายใหม่ 22 ราย รวมทั้งสตรีมีครรภ์ในเขตสาทรในสัปดาห์ (khwam hen khong don Ophat mi khuen lang chak mi rai ngan phu tit chuea wairat Sika rai mai yi sip song rai ruam thang satri mi khan nai khet Sathon nai sapda.).

Findings

Table 1: *Analysis of Google Translate Errors from English to Thai in Articles from 2018 and 2023*

Type of Error: Lexical

Original Text	**Translation into Thai by GT (GNMT2018) (Kumnoed, 2018a & Kumnoed, 2018b)**	**Translation into Thai by GT (GNMT 2023)**	**Revised Thai Translation (Translated by the author)**
1. He said the programme will educate teachers and executives about the rights of pregnant and **parenting students** and their educational opportunities.	เขากล่าวว่าโครงการจะให้ความรู้แก่ครูและผู้บริหารเกี่ยวกับสิทธิของนักเรียนที่ตั้งครรภ์และ**การเลี้ยงดู**และโอกาสทางการศึกษาของพวกเขา (Khao klao wa khrongkan cha hai khwam ru kae kru lae phu borihan kiao kap sitthi khong nakrian thi tang khan lae kan **liang du** lae okat thang	เขากล่าวว่าโปรแกรมนี้จะให้ความรู้แก่ครูและผู้บริหารเกี่ยวกับสิทธิของนักเรียนที่ตั้งครรภ์และ**ผู้ปกครอง**และโอกาสทางการศึกษาของพวกเขา (Khao klao wa pro kraem ni cha hai khwam ru kae kru lae phu borihan kiao kap sit thi kong nakrian thi tang khan	เขากล่าวว่าโปรแกรมนี้จะให้ความรู้แก่ครูและผู้บริหารเกี่ยวกับสิทธิของนักเรียนที่ตั้งครรภ์และ**พ่อแม่ในวัยเรียน**และโอกาสทางการศึกษาของพวกเขา (Khao klao wa pro kraem ni cha hai khwam ru kae kru lae phu borihan kiao kap sit thi khong nakrian thi tang khan lae **pho mae nai wai rian**

Original Text	Translation into Thai by GT (GNMT2018) (Kumnoed, 2018a & Kumnoed, 2018b)	Translation into Thai by GT (GNMT 2023)	Revised Thai Translation (Translated by the author)
	kan sueksa khong phuak khao.). Type of error: Lexical Wrong type of part of speech: **Parenting students** is translated as "bring up" instead of students who are also parents or who have the responsibilities of being a parent.	lae **phu pokkhrong** lae okat thang kan sueksa kong phuak khao.). Type of error: Lexical Wrong type of part of speech: **Parenting students** is translated as "guardian" instead of students who have the responsibilities of being a parent.	lae okat thang kan sueksa khong phuak khao.).
2.**The move** follows the prevention and solution of the adolescent pregnancy problem act coming into force last month.	**การย้าย**ดังกล่าวเป็นการป้องกันและแก้ไขปัญหาของปัญหาการตั้งครรภ์ในวัยรุ่นที่มีผลใช้บังคับเมื่อเดือนที่แล้ว (**Kan yai** dang klao pen kan pong kan lae kae khai panha kong panha kan tang khan nai wai run thi mi phon chai bangkhap muea duean thi laeo).	**ความเคลื่อนไหว**ดังกล่าวเป็นไปตามพระราชบัญญัติการป้องกันและแก้ไขปัญหาการตั้งครรภ์ในวัยรุ่นที่มีผลบังคับใช้เมื่อเดือนที่แล้ว (**Khwam khluean wai** dang klao pen pai tam	**การเคลื่อนไหว**ดังกล่าวเป็นไปตามพระราชบัญญัติการป้องกันและแก้ไขปัญหาการตั้งครรภ์ในวัยรุ่นที่มีผลบังคับใช้เมื่อเดือนที่แล้ว (**Kan khluean wai** dang klao pen pai tam phraratbanyat kan pongkan lae kae khai panha kan tang khan

Original Text	Translation into Thai by GT (GNMT2018) (**Kumnoed, 2018a & Kumnoed, 2018b**)	Translation into Thai by GT (**GNMT 2023**)	Revised Thai Translation (Translated by the author)
	Type of error: Lexical Choosing the wrong definition of a word that has multiple meanings The move is translated as "to change position" instead of "to make progress."	phraratbanyat kan pong kan lae kae khai panha kan tang khan nai wai run thi mi phon bangkhap chai muea duean thi laeo). Type of error: -	nai wai run thi mi phon bangkhap chai muea duean thi laeo).
3."Many teachers still perceive sex as a taboo subject and believe that teaching sexuality will lead young students **to engage** in more sex".	ครูหลายคนยังมองว่าเรื่องเพศเป็นเรื่องต้องห้าม และเชื่อว่าการสอนเรื่องเพศจะทำให้เด็กนักเรียนจะ**นำไปสู่การมีเพศสัมพันธ์**มากขึ้น (Khru lai khon yang mong wa rueang phet pen rueang tong ham lae chuea wa kan son rueang phet cha tham hai dek nakrian **cha nam pai su kan mi phet sam phan** mak khuen). Type of error: Lexical	ครูหลายคนยังมองว่าเรื่องเพศเป็นเรื่องต้องห้าม และเชื่อว่าการสอนเรื่องเพศจะทำให้เด็กนักเรียน**สนใจเรื่องเพศ**มากขึ้น (Khru lai khon yang mong wa rueang phet pen rueang tong ham lae chuea wa kan son rueang phet cha tham hai dek nak rian **son chai rueang phet** mak khuen). Type of error: -	ครูหลายคนมียังเข้าใจว่าเรื่องเพศเป็นเรื่องต้องห้าม และเชื่อว่าการสอนเรื่องเพศทำให้เด็กนักเรียน**หมกหมุ่นกับเรื่องเพศ**มากขึ้น (Khru lai khon mi yang khao chai wa rueang phet pen rueang tongham lae chuea wa kan son rueang phet tham hai dek nakrian **mok mun kap rueang phet** mak khuen).

Original Text	Translation into Thai by GT (GNMT2018) (Kumnoed, 2018a & Kumnoed, 2018b)	Translation into Thai by GT (GNMT 2023)	Revised Thai Translation (Translated by the author)
	Non-equivalence between source (English) and target language (Thai); wrong alternate meaning of a word; choosing the wrong definition of a word that has multiple meanings.		
4. The Public Health Ministry has **played down** fears of a Zika virus outbreak in Thailand, saying the disease is already common in the country.	กระทรวงสาธารณสุขได้**ให้ความสำคัญ**กับการระบาดของโรค Zika ในประเทศไทยกล่าวว่าโรคดังกล่าวเป็นเรื่องปกติในประเทศแล้ว (Krasuang satharanasuk **dai hai khwam sam khan** kap kan rabat khong rok sika nai prathet thai klao wa rok dang klao pen rueang pokati nai prathet laeo). Type of error: Lexical Mistranslating idiomatic expressions	กระทรวงสาธารณสุขได้**แสดงความกลัว**ต่อการระบาดของไวรัสซิกาในประเทศไทย โดยกล่าวว่าโรคนี้พบได้ทั่วไปในประเทศแล้ว (Krasuang satharanasuk dai **sadang kwam klua** to kan rabat khong wairat sika nai prathet thai doi klao wa rok ni phop dai thua pai nai prathet laeo).	กระทรวงสาธารณสุข**ไม่กังวลกับ**การระบาดของไวรัสซิก้าในไทยมากนักโดยกล่าวว่าโรคนี้ได้กลายเป็นเรื่องธรรมดาในประเทศ (Krasuang satharanasuk **mai kang won** kap kan rabat khong wairat sika nai thai mak nak doi klao wa rok ni dai klai pen rueang thammada nai prathet).

Original Text	Translation into Thai by GT (GNMT2018) (Kumnoed, 2018a & Kumnoed, 2018b)	Translation into Thai by GT (GNMT 2023)	Revised Thai Translation (Translated by the author)
		Type of error: Lexical and mistranslating idiomatic expressions	
5. Opart Karnkawinpong, deputy director-general of the Disease Control Department, insisted Sunday the mosquito-borne Zika virus has **become widespread** since the infection was first recorded in Thailand in 2012.	Opart Karnkawinpong รองอธิบดีกรมควบคุมโรค ยืนยันว่าเมื่อวันอาทิตย์ที่ผ่านมาไวรัส **Zika ของยุง**ได้**แพร่ระบาด**อย่างรวดเร็วนับตั้งแต่มีการติดเชื้อครั้งแรกในประเทศไทยในปี พ. ศ. 2555 (Opart Karnkawinpong rongathipbodi krom krom khuap khum rok yuen yan wa muea wan athit thi phan ma wairat **sika khong yung** dai **phrae rabat** yang ruat reo nap tang tae mi kan tit chuea krang raek nai prathet thai nai pi pho so song phan ha roi ha sip ha.).	นายโอภาต การกวินพงศ์ รองอธิบดีกรมควบคุมโรค ยืนยันเมื่อวันอาทิตย์ว่า ไวรัสซิกาที่มียุงเป็นพาหะได้**แพร่หลาย**นับตั้งแต่มีการบันทึกการติดเชื้อครั้งแรกในประเทศไทยในปี 2555 (Nai Ophat kankawinphong rongathipbodi krom khuap khum rok yuen yan muea wan athit wa wairat sika thi mi yung pen phaha dai **phrae lai** nap tang tae mi kan banthuek kan tit chuea krang raek nai prathet thai nai pi	นายแพทย์โอภาส การย์กวินพงศ์ รองอธิบดีกรมควบคุมโรค ยืนยันเมื่อวันอาทิตย์ว่า ไวรัสซิกาที่มียุงเป็นพาหะ**ได้แพร่ระบาดเป็นวงกว้าง**นับตั้งแต่มีการบันทึกรายงานการติดเชื้อครั้งแรกในประเทศไทยในปี 2555 (Nai Ophat kankawinphong rongathipbodi krom khuap khum rok yuen yan muea wan athit wa wairat sika thi mi yung pen phaha **dai phrae rabat pen wong kwang** nap tang tae mi kan banthuek raingan kan tit chuea

Original Text	Translation into Thai by GT (GNMT2018) (Kumnoed, 2018a & Kumnoed, 2018b)	Translation into Thai by GT (GNMT 2023)	Revised Thai Translation (Translated by the author)
	Type of error: Lexical error Wrong alternate meaning of a word	song phan ha roi ha sip ha.). Type of error: Lexical error Wrong alternate meaning of a word	krang raek nai prathet thai nai pi song phan ha roi ha sip ha.).
6. **He asked** the public not to panic as Zika was not deadly or severely contagious.	**เขาถาม**ประชาชนว่าไม่ต้องตื่นตระหนกเพราะ Zika ไม่ได้เป็นโรคติดต่อร้ายแรงหรือรุนแรง (**Khao tham** prachachon wa mai tong tuen tranok phro sika mai dai pen rok tit to rairaeng rue runraeng.). Type of error: Lexical error Non-equivalence between source (English) and target language (Thai); wrong alternate meaning of a word by choosing the wrong definition of a	**เขาขอ**ให้ประชาชนอย่าตื่นตระหนกเนื่องจาก Zika ไม่เป็นอันตรายถึงชีวิตหรือเป็นโรคติดต่อร้ายแรง (**Khao kho** hai prachachon ya tuen tranok nueang chak sika mai pen antarai thueng chiwit rue pen rok tit to rairaeng.). Type of error: -	**เขาขอ**ไม่ให้ประชาชนตื่นตระหนกเนื่องจากไข้ซิก้าไม่ใช่โรคติดต่อร้ายแรงที่มีอันตรายถึงแก่ชีวิต (**Khao kho** mai hai prachachon tuen tranok nueang chak khai sika mai chai rok tit to rairaeng thi mi antarai thueng kae chiwit.).

Original Text	Translation into Thai by GT (GNMT2018) (Kumnoed, 2018a & Kumnoed, 2018b)	Translation into Thai by GT (GNMT 2023)	Revised Thai Translation (Translated by the author)
	word that has multiple meanings		
7. Dr Opart said all pregnant women and their unborn babies **were being** closely **monitored** by 10 medical teams and public health officials. Of them, six have given birth to healthy babies.	Opart กล่าวว่าหญิงตั้งครรภ์และทารกในครรภ์ของพวกเขา**ได้รับการตรวจสอบ**อย่างใกล้ชิดโดยทีมแพทย์และเจ้าหน้าที่สาธารณสุข ของพวกเขาหกได้ให้กำเนิดทารกที่มีสุขภาพดี (Opart klao wa ying tang khan lae tharok nai khan khong phuak khao **dai rap kan truatsop** yang klai chit doi thim phaet lae chaonathi satharanasuk khong phuak khao hok dai hai kamnoet tharok thi mi sukkha phap di.). Type of error: Lexical error Wrong alternate meaning of a word by choosing the wrong definition of a word that has multiple meanings.	นพ.โอพาร์ท กล่าวว่า หญิงมีครรภ์และทารกในครรภ์ทั้งหมด**ได้รับการดูแล**อย่างใกล้ชิดโดยทีมแพทย์และเจ้าหน้าที่สาธารณสุข ในจำนวนนี้หกคนได้ให้กำเนิดทารกที่แข็งแรง (Nai phaet Ophat ying mi khan lae tharok nai khan thangmot **dai rap kan dulae** yang klai chit doi thim phaet lae chaonathi satharanasuk nai chamnuan ni hok khon dai hai kamnoet tharok thi khaengraeng.). Type of error: -	นายแพทย์โอภาสกล่าวว่าหญิงตั้งครรภ์และทารกในครรภ์นั้นได้รับการดูแลอย่างใกล้ชิดจากทีมแพทย์และเจ้าหน้าที่สาธารณสุขและปัจจุบันมีคุณแม่ที่คลอดแล้วจำนวน 6 ราย พบว่าทารกมีสุขภาพแข็งแรงดี (Nai phaet Ophat klao wa ying tang khan lae tharok nai khan nan dai rap kan du lae yang klai chit chak thim phaet lae chaonathi satharanasuk lae patchuban mi khun mae thi khlot laeo chamnuan hok rai phop wa tharok mi sukkha phap khaengraeng di.).

Original Text	Translation into Thai by GT (GNMT2018) (Kumnoed, 2018a & Kumnoed, 2018b)	Translation into Thai by GT (GNMT 2023)	Revised Thai Translation (Translated by the author)
8. I really like the weather there because it **never gets cold**.	ผมชอบสภาพอากาศที่นั่นเพราะมัน**ไม่เคยได้รับเย็น** (Phom chob saphap akat thi nan phro man **mai khoei dai rap yen.**). Type of error: Lexical Mistranslating idiomatic expressions	ฉันชอบอากาศที่นั่นมากเพราะ**ไม่หนาวเลย** (Chan chop akat thi nan mak **phro mai nao loei**). Type of error: -	ฉันชอบอากาศที่นั่นมากเพราะอากาศไม่เคยหนาวเลย (Chan chop akat thi nan mak phro akat mai khoei nao loei).
9. The people are **very nice too**.	คนที่มี **(1) ความดี** (Khon thi mi (1) **khwam di.**). (2) มากเกินไป ((2) mâ:k kɤ:n paj). (1) Type of error: Lexical Wrong part of speech (2) Type of error: Wrong alternate meaning of word	ผู้คนก็ดีมาก**เช่นกัน** (Phu khon **ko di** mak **chen kan**.). Type of error: -	ผู้คน**ก็ดี**มาก**เช่นกัน** (Phu khon **ko di** mak **chen kan**.).
10. Mexico City is a very interesting place to **visit.**	เม็กซิโกซิตี้เป็นสถานที่น่าสนใจมากที่จะ**เยี่ยมชม** (Meksiko siti pen sathanthi na son chai	เม็กซิโกซิตี้เป็นสถานที่ที่น่าสนใจมากในการ**เยี่ยมชม**	เม็กซิโกซิตี้เป็นสถานที่น่าสนใจในการไป**ท่องเที่ยว** (Meksiko siti pen sathanthi na son chai nai kan pai thongthiao).

Original Text	Translation into Thai by GT (GNMT2018) (Kumnoed, 2018a & Kumnoed, 2018b)	Translation into Thai by GT (GNMT 2023)	Revised Thai Translation (Translated by the author)
	mak thi cha **yiam chom**). Type of error: Lexical Word choice is too specific	(Meksiko siti pen sathanthi thi na son chai mak nai kan **yiam chom.**). Type of error: Lexical Word choice is too specific	
11. It has **some great museums** and **lots of fascinating old buildings.**	มันมี (1) **พิพิธภัณฑ์ที่ดีบางอย่าง** และ (2) **จำนวนมากของอาคาร**เก่าแก่ที่น่าสนใจ (Manmi (1) **phiphitthaphan thi di bang yang** lae (2) **chamnuan mak khong akhan** kao kae thi na son chai.). (1) Type of error: Lexical Wrong alternate meaning of word (2) Type of error: Syntactic Single-word based translation (word-for-word	มีพิพิธภัณฑ์ที่ยอดเยี่ยมและอาคารเก่าแก่ที่น่าสนใจมากมาย (Mi **phiphitthaphan** thi yot yiam lae akhan kao kae thi **na son chai mak mai**). Type of error: Lexical Mistranslating idiomatic expressions	มีพิพิธภัณฑ์ที่โอ่อ่าอยู่บ้างและอาคารเก่าแก่ที่น่าสนใจมากมาย (Mi **phiphitthaphan** thi **oaa** yu bang lae **akhan kao kae thi na son chai mak mai**).

Original Text	Translation into Thai by GT (GNMT2018) (Kumnoed, 2018a & Kumnoed, 2018b)	Translation into Thai by GT (GNMT 2023)	Revised Thai Translation (Translated by the author)
	translation without contextual consideration)		

Table 2: *Analysis of Google Translate Errors from English to Thai in Articles from 2018 and 2023*

Type of Error: Syntactic

Original Text	Translation into Thai by GT (GNMT2018) (Kumnoed, 2018a & Kumnoed, 2018b)	Translation into Thai by GT (GNMT 2023)	Revised Thai Translation (Translated by the author)
1.With guidance from the Education Ministry, teachers and school administrators **will be given** lessons in sex education and an appropriate attitude towards sex education by specialists.	ด้วยคำแนะนำจากกระทรวงการศึกษาครูและผู้บริหารโรงเรียนจะ**ได้รับบทเรียน**เรื่องเพศศึกษาและทัศนคติที่เหมาะสมต่อการศึกษาเรื่องเพศโดยผู้เชี่ยวชาญ (Duai kham naenam chak krasuang kansueksa kru lae phuborihan rongrian cha **dai rap bot rian** rueang phetsueksa lae thatsanakhati mo som	ด้วยคำแนะนำจากกระทรวงศึกษาธิการ ครูและผู้บริหารโรงเรียนจะ**ได้รับบทเรียน**เรื่องเพศศึกษาและทัศนคติที่เหมาะสมต่อเพศศึกษาโดยผู้เชี่ยวชาญ (Duai kham naenam chak krasuang sueksathikan kru lae phuborihan rongrian cha **dai rap bot rian** rueang phetsueksa lae thatsanakhati mo	จากการชี้แนะของกระทรวงศึกษาธิการจะมีผู้เชี่ยวชาญแนะนำคุณครูและผู้บริหาร**เกี่ยวกับบทเรียน**และการมีทัศนคติที่เหมาะสมในเรื่องเพศศึกษา (Chak kan chi nae khong krasuang sueksathikan cha mi phuchiaochan naenam khunkhru lae phuborihan **kiao kap** bot rian lae kan mi thatsanakhati thi mo som nai rueang phet sueksa).

Original Text	Translation into Thai by GT (GNMT2018) (Kumnoed, 2018a & Kumnoed, 2018b)	Translation into Thai by GT (GNMT 2023)	Revised Thai Translation (Translated by the author)
	to kan sueksa rueang phet doi phuchiaochan.).	som to kan sueksa rueang phet doi phuchiaochan.).	
	Type of error**:** Syntactic The passive form affects the meaning of the lexical translation.	Type of error: Syntactic The passive form affects the meaning of the lexical translation.	
2. We need to change their attitude to reduce the problems, said **education permanent secretary** Kamchorn Tatiyakawee	เราจำเป็นต้องเปลี่ยนทัศนคติเพื่อลดปัญหา กล่าวโดย **ถาวรเลขานุการ** Kamchorn Tatiyawawee (Rao cham pen tong plian thatsanakhati phuea lot panha klao doi **thawon le kha nukan** Kamchorn Tatiyawawee). Type of error**:** Syntactic Single word-based translation: a word-for-	เราต้องเปลี่ยนทัศนคติเพื่อลดปัญหา นายกำจร ตติยกวี **ปลัดกระทรวงศึกษาธิการ** กล่าว (Rao tong plian thatsanakhati phuea lot panha nai Kamchon Tatiyakawi **palat krasuang sueksathikan** klao.). Type of error: -	เราจำเป็นต้องเปลี่ยนทัศนคติเพื่อลดปัญหา นายกำจร ตติยกวี **ปลัดกระทรวงศึกษาธิการ** กล่าว (Rao cham pen tong plian thatsanakhati phuea lot panha nai Kamchon Tatiyakawi Tatiyakawi **palat krasuang sueksathikan** klao).

Original Text	Translation into Thai by GT (GNMT2018) (**Kumnoed, 2018a & Kumnoed, 2018b**)	Translation into Thai by GT (GNMT 2023)	Revised Thai Translation (Translated by the author)
	word translation without any contextual consideration, causing syntactical disorder		
3. The woman **is believed** to have contracted the virus from someone who had recently travelled overseas.	**ผู้หญิงเชื่อว่า**ได้ติดต่อไวรัสจากคนที่เพิ่งเดินทางไปต่างประเทศ (**Phu ying chuea wa** dai tit to wairat chak khon thi phoeng doen thang pai tang prathet). Type of error**:** Syntactic Passive - Active: Using passive structure when active structure is preferable	**เชื่อว่า**ผู้หญิงคนนี้ติดต่อไวรัสจากคนที่เพิ่งเดินทางไปต่างประเทศ (**Chuea wa** phu ying khon ni tit to wairat chak khon thi phoeng doen thang pai tang prathet). Type of error: **-**	**เชื่อกันว่า**ผู้หญิงรายดังกล่าวติดเชื้อไวรัสจากผู้ที่เพิ่งเดินทางกลับจากต่างประเทศ (**Chuea kan** wa phu ying rai dang klao tit chuea wairat chak phu thi phoeng doen thang klap chak tang prathet).
4. The food **is really good**.	อาหาร**เป็นสิ่งที่ดีจริง ๆ** (Ahan **pen sing thi di ching ching**). Type of error: Syntactic Single-word based translation (word-for-word translation)	อาหาร**เป็นสิ่งที่ดีจริง ๆ** (Ahan **pen sing thi di ching ching**). Type of error: Syntactic Single-word based translation (word-for-word	อาหาร**อร่อยจริง ๆ** (Ahan **aroi ching ching**).

Original Text	Translation into Thai by GT (GNMT2018) (Kumnoed, 2018a & Kumnoed, 2018b)	Translation into Thai by GT (GNMT 2023)	Revised Thai Translation (Translated by the author)
		translation)	
5. If you are planning to visit Mexico, you **should definitely see** the Mayan temples near Merida.	หากคุณกำลังวางแผนที่จะไปเมกซิโก คุณ**แน่นอนควรจะ**เห็นวัดของชาวมายันที่อยู่ใกล้ Merida (Hak khun kam lang wang phaen thi cha pai Meksiko khun **nae non khuan cha** hen wat khong chao Mayan thi yu klai Merida.) Type of error: Syntactic Single-word based translation It is a word-for-word translation without contextual consideration	หากคุณกำลังวางแผนที่จะไปเม็กซิโก คุณ**ควรเห็น**วัดของชาวมายันใกล้กับ Merida **อย่างแน่นอน** (Hak khun kam lang wang phaen thi cha pai Meksiko khun **khuan hen** wat khong chao Mayan klai kap Merida yang nae non.). Type of error: -	ถ้าคุณวางแผนที่จะมาเที่ยวเม็กซิโกคุณ**ควรจะต้อง**ไปดูวัดชาวมายันที่อยู่ใกล้กับ Merida (Tha khun wang phaen thi cha ma thiao Meksiko khun khuan cha tong pai du wat chao Mayan thi yu klai kap Merida.).

Table 3: *Analysis of Google Translate Errors from English to Thai in Articles from 2018 and 2023*

Type of Error: Discourse

Original Text	Translation into Thai by GT (GNMT2018) (Kumnoed, 2018a & Kumnoed, 2018b)	Translation into Thai by GT (GNMT 2023)	Revised Thai Translation (Translated by the author)
1.Ministry **downplays Zika** fears, says no need to panic	กระทรวง **downplays Zika** กลัว จำเป็นต้อง **ตื่นตระหนก** (**Krasuang downplays Zika klua cham pen tong tuen tranok**). Type of error: Discourse Omission of words and mistranslation, making it difficult for Thai readers to understand	กระทรวง**ไม่แสดงความ กลัว** Zika กล่าวว่าไม่ จำเป็นต้องตื่นตระหนก (Krasuang **mai sa dang kwam klua Zika** klao wa mai cham pen tong tuen tranok). Type of error: Discourse Style of word choice "Downplay" should be translated as "to try to make something seem less important than it really is"	กระทรวง**ลดระดับข้อ กังวล**เรื่องโรคไข้ซิกา **โดย**กล่าวว่าไม่มีความ จำเป็นที่ต้องตื่น ตระหนก (Krasuang **lot ra dap kho kang won** rueang rok khai Zika **doi** klao wa mai mi kwam cham pen thi tong tuen tranok.).
2. Dr Opart's comment came after 22 new cases of Zika, including a pregnant woman,	ความเห็นของดร. Opart เกิดขึ้นหลังจากพบว่ามี ผู้ป่วยใหม่จำนวน 22 ราย รวมทั้งสตรีมีครรภ์	ความเห็นของ ดร. โอพาร์ท มีขึ้น หลังจากมีรายงานผู้ติด เชื้อไวรัสซิการายใหม่ 22	นายแพทย์โอภาสให้ ความเห็นหลังจากมี รายงานตัวเลขผู้ป่วย ใหม่จำนวน 22 ราย ใน

Original Text	Translation into Thai by GT (GNMT2018) (Kumnoed, 2018a & Kumnoed, 2018b)	Translation into Thai by GT (GNMT 2023)	Revised Thai Translation (Translated by the author)
were reported in the Sathon district this week.	รายงานในเขตอำเภอสาทรในสัปดาห์นี้ (Khwam hen khong doctor **Opart** koet khuen lang chak phop wa mi phu puai mai chamnuan yi sip song rai ruam thang satri mi khan rai ngan nai khet amphoe Sathon nai sapda ni.). Type of error: Discourse Style of translating is awkward and difficult to understand	ราย รวมทั้งสตรีมีครรภ์ในเขตสาทรในสัปดาห์นี้ (Khwam hen khong doctor Opart mi khuen lang chak mi rai ngan phu tit chuea wairat sika rai mai yi sip song rai ruam thang satri mi khan nai khet Sathon nai sapda ni.).	เขตสาธรโดยหนึ่งในนั้นเป็นสตรีมีครรภ์ (Nai phaet Opart hai khwam hen lang chak mi rai ngan tua lek phu puai mai chamnuan yi sip song rai nai khet Sathon doi nueng nai nan pen satri mi khan.).
3. They never laugh at my bad Spanish.	พวกเขาไม่เคยหัวเราะเยาะ**สเปนไม่ดี**ของฉัน (Phuak khao mai khoei hua ro yo **Sapen mai di** kong chan). Type of error: Discourse	พวกเขาไม่เคยหัวเราะเยาะ**ภาษาสเปนที่ไม่ดี**ของฉัน (Phuak khao mai khoei hua ro yo **pha sa Sapen thi mai di** khongchan.). Type of error: Discourse	พวกเขาไม่เคยหัวเราะเยาะ**ภาษาสเปนที่แย่**ของฉัน (Phuak khao mai khoei hua ro **pha sa Sapen thi yae** khong chan.).

Original Text	Translation into Thai by GT (GNMT2018) (Kumnoed, 2018a & Kumnoed, 2018b)	Translation into Thai by GT (GNMT 2023)	Revised Thai Translation (Translated by the author)
	Style of translating is awkward and difficult to understand	Style of translating is awkward and difficult to understand	
4. The hotels are **too expensive to stay** but there are more affordable options.	โรงแรมมีราคาแพงมากเกินไป**ที่จะอยู่**แต่มีตัวเลือกราคาไม่แพงมาก (Rongraem mi ra kha phaeng mak koen pai **thi cha yu** tae mi tua lueak ra kha mai phaeng mak.). Type of error: Discourse Style of translating is awkward	โรงแรมมีราคาแพงเกินไปที่**จะเข้าพัก** แต่มีตัวเลือกที่ถูกกว่า (Rongraem mi ra kha phaeng koen pai **thi cha khao phak** tae mi tua lueak thi thuk kwa.). Type of error: -	โรงแรมราคาแพงเกินไปที่จะ**เข้าพัก**แต่ก็มีตัวเลือกที่ราคาถูกกว่า (Rongraem ra kha phaeng koen pai thi cha **khao phak** tae ko mi tua lueak thi ra kha thuk kwa.).

Table 4: *Analysis of Google Translate Errors from English to Thai in Articles from 2018 and 2023*

Type of Error: No Errors Found

Original Text	Translation into Thai by GT (GNMT2018) (Kumnoed, 2018a & Kumnoed, 2018b)	Translation into Thai by GT (GNMT 2023)	Revised Thai Translation (Translated by the author)
1.Teachers and school administrators **are gearing up** to launch a nationwide programme to better educate young students on sexual health as part of efforts to **bring down** the high number of teenage mothers.	ครูและผู้บริหารโรงเรียน**กำลังเตรียมที่จะเปิดตัว**โครงการทั่วประเทศเพื่อให้ความรู้แก่นักเรียนหญิงที่มีต่อสุขภาพทางเพศเป็นส่วนหนึ่งของความพยายามที่จะลดจำนวนของสตรีวัยรุ่น (Khru lae phuborihan rongrian **kam lang triam thi cha poet tua** khrong kan thua prathet phuea hai khwam ru kae nakrian ying thi mi to sukkhaphap thang phet pen suan nueng khong khwam phayayam thi cha lot chamnuan khong satri wairun.).	ครูและผู้บริหารโรงเรียน**กำลังเตรียมพร้อมที่จะเปิดตัว**โครงการทั่วประเทศเพื่อให้ความรู้แก่เด็กนักเรียนเกี่ยวกับสุขภาพทางเพศที่ดีขึ้นซึ่งเป็นส่วนหนึ่งของความพยายามในการลดจำนวนแม่วัยรุ่นที่มีจำนวนมากลง (Khru lae phuborihan rongrian **kam lang triam phrom thi cha poet tua** khrong kan thua prathet phuea hai khwam ru kae dek nakrian kiao kap sukkhaphap thang phet thi di khuen sueng pen suan nueng khong khwam	คณะครูและผู้บริหารโรงเรียน**เตรียมความพร้อมในการริเริ่ม**โครงการในทั้งประเทศเพื่อให้ความรู้กับนักเรียนในวัยรุ่นเกี่ยวกับสุขภาวะทางเพศ โดยส่วนหนึ่งที่เป็นความพยายามในการลดจำนวนแม่วัยใส (Kha na khru lae phuborihan rongrian **triam phrom naik an riroem** khrong kan nai thang prathet phuea hai khwam ru kap nakrian nai wairun kaio kap sukphawa thang phet doi suan nueng thi pen khwam phayayam

Original Text	Translation into Thai by GT (GNMT2018) (Kumnoed, 2018a & Kumnoed, 2018b)	Translation into Thai by GT (GNMT 2023)	Revised Thai Translation (Translated by the author)
	Type of error: -	phayayam naik an lot chamnuan mae wairun thi mi cham nuan mak long.). Type of error: -	naik an lot chamnuan mae wai sai.).
2. One of my favorite vacation places is Mexico.	หนึ่งในสถานที่พักผ่อนที่ชื่นชอบของฉันคือเม็กซิโก (Nueng nai sathanthi phak phon thi chuen chop khong chan khue Meksiko.). Type of error: -	หนึ่งในสถานที่พักผ่อนที่ฉันชื่นชอบคือเม็กซิโก Type of error: - (Nueng nai sathanthi phak phon thi chan chuen chop khue Meksiko.).	หนึ่งในสถานที่พักร้อนสุดโปรดของฉันคือเม็กซิโก (Nueng nai sathanthi phak ron sutprot khong chan khue Meksiko.).
3. For example, you can stay at one of the beach resorts like Acapulco.	ตัวอย่างเช่นคุณสามารถเข้าพักที่แห่งหนึ่งในรีสอร์ทริมชายหาดเช่น Acapulco (Tua yang chen khun samat khao phak thi haeng nueng nai risot rim chai hat chen Acapulco.).	ตัวอย่างเช่นคุณสามารถเข้าพักที่หนึ่งในรีสอร์ทริมชายหาด เช่น Acapulco (Tua yang chen khun samat khao phak thi nueng nai risot rim chai hat chen Acapulco.).	ตัวอย่างเช่นคุณสามารถเข้าพักหนึ่งในรีสอร์ทริมหาด เช่น Acapulco (Tua yang chen khun samat khao phak nueng nai risot rim hat chen Acapulco.).

Original Text	Translation into Thai by GT (GNMT2018) (Kumnoed, 2018a & Kumnoed, 2018b)	Translation into Thai by GT (GNMT 2023)	Revised Thai Translation (Translated by the author)
	Type of error: -	Type of error: -	

Table 5: *Comparison of Google Translate of Errors in the Selected Articles in 2018 Versus 2023 (Data from 23 of Studied Sentences)*

Errors in GT (Year)	Frequency of Errors	Frequency of Errors (Percentage)
2018	20	87%
2023	9	39%

In 2018, Google Translate exhibited an error rate of 87% when translating English news articles and general articles at a basic level into Thai. However, in 2023, there was a significant improvement, with the error rate dropping to 39%.

Table 6: *Comparison of Google Translate of Errors in 20 Sentences from Selected Articles in 2018 versus 2023 (Data from 20 sentences with errors)*

Type of Error	Frequency		Frequency (Percentage)	
	2018	**2023**	**2018**	**2023**
Lexical	11	5	55%	25%
Syntactic	6	2	30%	10%
Discourse	4	2	20%	10%

When categorizing the types of errors, Google Translate made the most frequent lexical errors in 2018, accounting for 55% of all identified errors. In contrast, the lexical error rate saw a substantial improvement in 2023, decreasing to 25%. Conversely, discourse errors represented the lowest proportion of errors, constituting only 20% of the total errors in 2018. This percentage further decreased to 10% in 2023, indicating an enhancement in this aspect of translation quality. The total frequency of errors in 2018 was bigger than the sum of errors (20) because one sentences had two errors.

Discussion

When comparing the two years, it becomes evident that Google Translate has undergone significant advancements and rapid changes over the last half-decade. In 2018, a higher number of errors were identified in the translations compared to those in 2023. The results of this study revealed that most of Google Translate's errors in both 2018 and 2023 occurred at the lexical level, especially in 2018. These errors included mistranslations of idiomatic expressions and the selection of the wrong definitions for words with multiple meanings, although these errors were notably reduced in 2023. However, even when using Google Translate to translate news articles, readers can still obtain a basic understanding of the content. The overall meaning of the words can be inferred or guessed, and the main idea can be perceived as the translation often resembles that of an English-Thai dictionary. As Perfetti (1988) emphasized, understanding words at a basic level is crucial for reading comprehension, and unfamiliar vocabulary can hinder a positive reading experience. A literal translation allows readers to comprehend the main points and grasp the general meaning of the text, even with only a basic level of English proficiency.

Thai readers often use Google Translate as a dictionary due to its vast language database, and it primarily made lexical errors in the translated texts during both years. However, it cannot match the effectiveness of proficient human translators, since culture and emotions within language must be taken into consideration, and interpretations may vary based on the context. Based on the findings, while Google Translator generally performs well in various contexts, it faces challenges when translating individual phrasal verbs, as demonstrated by the inaccurate translations of phrases like "gear up" and "bring down" when translated without context. These issues persisted in both the 2018 and 2023 translations. In summary, Google Translate has undergone noticeable improvements over time and can offer a basic understanding of news articles to readers. Still, it's important to recognize its limitations, particularly when dealing with cultural nuances and phrasal verbs. These challenges with translating phrasal verbs without context persisted in both 2018 and 2023.

Example 1: Phrasal verb: gear up

GT translation 2018 and 2023: The gear is moving up "เกียร์ขึ้น" (kia khuen)

The correct translation: to prepare something for an activity or event

Source:

https://translate.google.co.th/?hl=th&sl=en&tl=th&text=gear%20up%0A&op=translate

Example 2: Phrasal verb: bring down

GT translation 2018 and 2023: bring something "นำลงมา" (nam long ma).

The correct translation: to reduce something "ลดจำนวน" (lot chamnuan).

Source:

https://translate.google.co.th/?hl=th&sl=en&tl=th&text=bring%20down%0A&op=translate

    The phrasal verb mentioned above was translated incorrectly in both 2018 and 2023 when rendered without context. This study's findings highlight that Google Translate's most common errors occur at the lexical level, particularly when it is employed as a dictionary substitute without contextual information, especially for phrasal verbs and idiomatic expressions. Therefore, it is evident that GT is still considered reliable, particularly when translating in context, as this is one of the program's strengths. Bowker and Ciro (2019) emphasized that the program's performance is satisfactory when extensive corpus data are available to match words and expressions from the source texts with suitable English equivalents in the given context. However, one area where GT faces challenges is in translating phrasal verbs out of context. The meaning of phrasal verbs cannot always be translated literally, leading to potential misunderstandings, especially for learners who do not have English as their mother tongue. Coady and Huckin (1997) highlighted the complexities of phrasal verbs, making their meanings unpredictable and difficult to guess, particularly when they have multiple idiomatic interpretations. For learners, phrasal verbs can be obstacles to comprehension, and often they rely on the words surrounding the phrasal verb to infer its meaning.

    In specific instances, GT demonstrated errors in lexical choice, which led to incorrect translations by choosing the wrong choice of the word that has many definitions. For example, in sentence number 10 from table 1, the word "ask" was translated as "ถาม" (tham). or

"question," whereas the intended meaning was to request "ขอ" (kho). Such errors occur when GT selects the wrong choice of words during translation. However, these errors improve in the year 2023.

In another instance, Google Translate (GT) provided an incorrect translation that did not align with the context. For example, in the sentence "...teaching sexuality will lead young students to engage in more sex," GT rendered it as "การสอนเรื่องเพศจะทำให้เด็กนักเรียนจะนำไปสู่การมีเพศสัมพันธ์มากขึ้น," (Kan son rueang phet cha tham hai dek nakrian cha nam pai su kan mi phet samphan mak khuen). Which is an inaccurate translation. This issue highlights a lexical problem between the source language (English) and the target language (Thai) where there is a lack of equivalence, resulting in the selection of an incorrect definition for a word with multiple meanings. The primary challenge can be attributed to the varied meanings of the word "engage." When the word "engage" is input, its meaning can vary significantly, leading to translation errors. Despite these acknowledged challenges and occasional errors, Google Translate remains a valuable tool, particularly when used within a specific context. Nevertheless, users are encouraged to exercise caution and apply critical judgment when encountering potential translation discrepancies.

Translations of "engage"

หมั้น (man) engage, betroth, espouse, affiance

ว่าจ้าง (wa chang) employ, engage, commission, wage

จ้าง (chang) employ, engage, retain, line

ผูกมัด (phuk mat) commit, obligate, engage, enslave, swaddle, oblige

รับจ้าง (rap chang) engage

สัญญา (san ya) engage, affiance

เหมา (mao) charter, take for granted, rent, lease, presume, engage

มีธุระ (mi thu ra) engage

สู้รบ (su rop) engage, war

ข้องเกี่ยว (khong kiao) associate, concern, relate, involve, engage

จองที่ (chong thi) make a reservation, reserve, book, engage

ประมือ (pra mue) begin battle with, fight hand to hand, engage, assail, attack

ผูกเวร (phuk wen) hold grudge against, seek revenge, bear a grudge, start a feud with, enter into a feud

Source: https://translate.google.com/#en/th/engage

The word "engage" exemplifies the challenge of multiple meanings that are context-dependent. Machine translation, like Google Translate, cannot be compared to human translation because it lacks the ability to discern the correct meaning based on context. Hutchins and Somers (1992) noted that the system struggles with handling *homography* (words with the same spelling but different meanings) and structural complexities, such as complex sentences, connectors, incomplete sentences, punctuation, phrases, and complex noun phrases.

In the translations conducted in 2018 and 2023, another noteworthy aspect is the handling of syntactic structures, particularly the active-passive form. Passive voice is commonly employed in English sentences and texts, constituting a fundamental element of the language. It is used when the agent performing the action is unknown or intentionally omitted, or when the focus is on describing an experiment or process. Unlike English, Thai does not involve the reordering of sentence elements to create passive constructions. For instance, consider the sentence "Rot Chon Suk / Car hit Suk A car hit Suk." When changed to passive form, it becomes "Suk thuuk rot chon (Suk <+Pass> car hit)" or "Suk was hit by the car" (Filbeck, 1973). Thus, the use of the passive form invariably impacts the meaning of lexical translation, which aligns with Vidhayasai et al.'s (2015) findings that Google Translate struggles to distinguish between passive and active sentences, often leading to inaccuracies in the target language (Thai).

In Thai, an active sentence structure is typically preferred when constructing a sentence. In contrast, in English, the passive form may be utilized when emphasizing the action itself and omitting the agent performing the action. This linguistic difference underscores the challenges

Google Translate faces when handling passive constructions in translation between these languages. It's worth noting that this problem was more prevalent in the translated text of 2018 compared to 2023. For instance, the sentence, "The woman is believed to have contracted the virus from someone who had recently traveled overseas," was initially translated as "ผู้หญิงเชื่อว่าได้ติดต่อไวรัสจากคนที่เพิ่งเดินทางไปต่างประเทศ" (Phu ying chuea wa dai tit to wairat chak khon thi phoeng doen thang pai tang prathet.). This constitutes a syntactic error involving passive-to-active transformation. However, in 2023, this error was rectified, and the sentence was translated correctly as "เชื่อว่าผู้หญิงคนนี้ติดต่อไวรัสจากคนที่เพิ่งเดินทางไปต่างประเทศ" (Chuea wa phu ying khon ni tit to wairat chak khon thi phoeng doen thang pai tang prathet.). The correction of the passive form significantly impacted the lexical translation, enhancing the overall accuracy of the translation.

The issue of discourse is also prone to being a challenge due to factors such as grammar, sentence structure, style, and variety. These elements occasionally led to sentence translations, especially in 2018, which posed challenges but were notably improved in 2023. This issue, as Fem (2011) pointed out, pertains to translation efficiency, particularly in complex and ambiguous contexts, as well as grammatical variations that allow for multiple interpretations. It remained unclear in both the translated texts from 2018 and 2019. For instance, in sentence number 7, "Ministry downplays Zika fears, says no need to panic," the type of error observed was at the discourse level, involving several mistranslations that made it difficult for Thai readers to understand in 2023. The translation improved to "กระทรวงไม่แสดงความกลัว Zika กล่าวว่าไม่จำเป็นต้องตื่นตระหนก" (Krasuang mai sadang kwam klua sika klao wa mai cham pen tong tuen tranok.), which is more comprehensible. However, depending on the context and the author's intended implication, it can also be translated as "กระทรวงลดระดับข้อกังวลเรื่องไข้ซิก้า โดยกล่าวว่าไม่มีความจำเป็นที่ต้องตื่นตระหนก" (Krasuang lot ra dap kho kang won rueang khai sika doi klao wa mai mi kwam cham pen thi tong tuen tranok.). In this context, "downplay" should be translated as "to try to make something seem less important than it really is." In the next example, number 20, "It has some great museums and lots of fascinating old buildings" was translated as "มันมีพิพิธภัณฑ์ที่ดีบางอย่างและจำนวนมากของอาคารเก่าแก่ที่น่าสนใจ" (Man mi phi phiphitthaphan thi di bang yang lae cham nuan mak khong akhan kao kae thi na son chai.).

The error observed here is syntactic, involving single-word-based translation or a word-for-word translation.

Research by Clifford et al. (2013) raised concerns about the accuracy of MT, such as literal translation and lexical, syntactic, and discourse inaccuracies. The study thus concluded that MT was only somewhat useful or potentially not useful at all. However, with the advancements in Google's Neural Machine Translation (GNMT) since 2016, reports suggest that Google Translate's accuracy has seen significant improvement, achieving a higher level of fluency (Sun, 2017).

In the previous 2018 research of Kumnoed (2018a) involving Google Translate's translation of news articles, students demonstrated the ability to access lexical meanings and gain a basic-level understanding of the content. The comprehension level significantly increased after utilizing Google Translate, as indicated by a T-value of 7.765. The mean comprehension score before using Google Translate was 1.52, whereas after using it, the mean score rose to 3.52. The use of Google Translate also allowed students to comprehend the passages effectively (Kumnoed, 2018a). Over a five-year span, compared to the original source text, some changes were observed. However, Google Translate's limitations become evident in English-to-Thai translation, where it does not consistently function as a dictionary. Translating certain words as phrasal verbs necessitates context and complete sentences. Unlike other programs that rely on statistical information, Google Translate employs a GNMT (Google Neural Machine Translation) approach, enabling it to process sentences in various languages. This functionality allows Google Translate to produce translations that are more natural, moving away from strict literal translations. Furthermore, Google Translate's translation output is subject to continuous improvements and advancements in the future. Despite its progress and benefits, Google Translate still faces challenges in accurately capturing implications and nuances, areas where human translators often excel. As technology evolves, it is crucial to recognize the distinct roles of machine translation and human translation, each possessing its unique strengths and limitations.

Conclusion

The development of Google Translate (GT) systems has seen significant improvements. In 2018, the results of this study showed that Google Translate's error rate was 87%. However, by 2023, this error rate had notably decreased to 39%. Examining the types of errors, Google

Translate exhibited lexical errors in 2018, accounting for 48% of the entire texts. In comparison, the lexical error rate in 2023 improved considerably, dropping to 22%. The syntactic error rate was 26% in 2018 and fell to 9% in 2023. The lowest occurrence of errors was observed in discourse, representing 17% of the entire texts in 2018, and decreasing to 9% in 2023. The lexical aspect experienced significant improvement over the past decade, which underscores the crucial role of Google Translate in enhancing readers' comprehension through term lists, automatic translations, and sentence predictions.

Despite its usefulness, the current quality estimation systems of GT heavily rely on GNMT, which has shown improvement but may not consistently result in accurate translations. While some methods approach human quality and assist readers in grasping the main idea, errors persist, with nearly every line containing discrepancies, reflecting a somewhat robotic translation approach. Beyond translation errors, GT still falls short compared to expert translators due to various other issues in its output. However, by learning to identify and address these issues, readers can better understand and navigate the complexities of language using Google Translate. Recognizing GT's limitations and inaccuracies allows us to take steps toward resolving these challenges, ultimately facilitating more effective use of the tool in language learning and comprehension. In light of these findings, users of Google Translate should exercise caution when relying on the machine for critical translation needs.

This study has certain limitations. Since it focused on only one language pair, Thai and English, the results cannot be generalized to other language pairs. Furthermore, the evaluation of GT outputs was limited to three aspects: lexical, semantic, and discourse. Detailed analysis of grammatical errors was not conducted through error analysis, which is crucial for a systematic assessment of GT's grammatical accuracy and orthographic errors. In addition, the study had constraints in analyzing news and general articles, and the corpus was somewhat limited. Data collection was also restricted due to the ease of the articles selected.

Recommendations for Further Research

Recommendations for future research include conducting more extensive investigations into the usage of Google Translate on various types of formal and informal texts. Delving into the problems caused by mistranslations and their impact on Thai readers is essential for identifying effective preventive measures. Conducting separate studies that focus on conversational content and Google Translate errors is also advisable.

References

Abraham, L. B. (2009). Web-based translation for promoting language awareness: Evidence from Spanish. In Abraham, L. B. & Williams, L. (eds.), *Electronic discourse in language learning and language teaching.* Amsterdam: John Benjamins Publisher, (65–84). https://doi.org/10.1075/lllt.25.06abrl

Balk, M.E. et al. (2012). *Accuracy of data extraction of non-English language trials with Google Translate.* Agency for Healthcare Research and Quality, Rockville, Maryland, USA.

Balk, M.E. et al. (2013). Data extraction from machine-translated versus original language randomized trial reports: A comparative study. *Systematic Reviews*, 2, 97. https://pubmed.ncbi.nlm.nih.gov/24199894/

Bavendiek, U. (2022). Using machine translation as a parallel text to access literature for modern language learning. In C. Hampton & S. Salin (Eds), *Innovative language teaching and learning at university: facilitating transition from and to higher education* (pp. 57-67). Research-publishing.net. https://doi.org/10.14705/rpnet.2022.56.1373

Bojar, O. (2011). Analyzing error types in English-Czech machine translation. *The Prague Bulletin of Mathematical Linguistics*, 95, 63-76.

Bowker, L., & Ciro, J. B. (2019). *Machine translation and global research: Towards improved machine translation literacy in the scholarly community.* Bingley, UK: Emerald Publishing.

Briggs, N. (2018). Neural machine translation tools in the language learning classroom: Students' use, perceptions, and analyses. *The JALT CALL Journal*, *14*(1), 3–24. https://doi.org/10.29140/jaltcall.v14n1.221

Caswell, I., & Liang, B. (2020, June 8). *Recent advances in Google Translate*. Retrieved from https://blog.research.google/2020/06/recent-advances-in-google translate. html?m=1

Chimsuk, T. (2010). *A Framework for implementation of Thai to English machine translation systems.* [Doctoral Dissertation, School of Applied Statistics, National Institute of Development Administration]. Nida Wisdom Repository. http://repository.nida.ac.th/handle/662723737/273.

Clifford, J., Merschel, L., & Munné, J. (2013). Surveying the landscape: What is the role of machine translation in language learning? *The Acquisition of Second Languages and Innovative Pedagogies*, 10, 108-121. https://doi.org/10.7203/attic.10. 2228

Coady, J., & Huckin, T. (1997). *Second language vocabulary acquisition*. UK: Cambridge: Cambridge University Press.

Corder, S. P. (1967). The significance of learners' errors. *International Review of Applied Linguistics in Language Teaching*, 5, 161-170. http://dx.doi.org/10.1515/iral.1967.5.1-4.161

Correa, M. (2014). Leaving the "peer" out of peer-editing: Online translators as a pedagogical tool in the Spanish as a second language classroom. *Latin American Journal of Content and Language Integrated Learning*, *7*(1), 1–20. https://doi.org/10. 5294/laclil.2014.7.1.1

Costa, Â., Ling, W., Luís, T., Correia, R., & Coheur, L. (2015). A linguistically motivated taxonomy for Machine Translation error analysis. *Machine Translation*, *29*(2), 127-161.

Delorme Benites, A., Cotelli Kureth, S., Lehr, C., & Steele, E. (2021). Machine translation literacy: A panoramaof practices at Swiss universities and implications for language teaching. In A. Zoghlami, C. Brudermann, C. Sarré, M. Grosbois, L. Bradley, & S. Thoësny (Eds.*), CALL and professionalization: Short papers from EUROCALL 2021* (pp. 80–87). Research-publishing.net. https://doi.org/10.14705/rpnet.2021.54.1313

Ducar, C., & Schocket, D. H. (2018). Machine translation and the L2 classroom: Pedagogical solutions for making peace with Google translate. *Foreign Language Annals*, *51*(4), 779-795.

Elliott, D., Hartley, A., & Atwell, E. (2004). A fluency error categorization scheme to guide automated machine translation evaluation. In: Frederking, R.E., Taylor, K.B. (eds) *Machine Translation: From Real Users to Research. AMTA 2004. Lecture Notes in Computer Science.* (Vol. 3265, pp. 64-73). Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-540-30194-3_8

Fem, S. (2011). *An Analysis of the Translation from English Sentences to Indonesian Sentences by Using "Google Translate".* [Bachelor Degree Thesis, Soegirapranata Catholic University]. Unika Repository. *http://repository.unika.ac.id/19032.*

Filbeck, D. (1973). The passive in Thai. *Anthropological Linguistics*, *15*(1), 33–4.

Fredholm, K. (2015). Online translation use in Spanish as a foreign language essay writing: Effects on fluency, complexity and accuracy. *Revista Nebrija de Lingüística Aplicada a la Ensenanza de las Lenguas,* 18, 7–24.

Goulet, M.-J., Simard, M., Parra, E. C., & O'Brien, S. (2017). Using machine translation for academic writing in English as a second language: Results of an exploratory study on linguistic quality. *ASp: la revue du GERAS*, *72*, 5-28. https://doi.org/10.4000/asp.5045

Grammar Bank. (2018). *Beginners reading comprehension. grammar bank.* Retrieved January,2018, from https://www.grammarbank.com/reading-comprehension-test.html

Grace, C. A. (1998). Retention of word meanings inferred from context and sentence-level translations: Implications for the design of beginning-level CALL software. *The Modern Language Journal*, *82*(4), 533-544.

Hutchins, J. (2003). Machine translation: General overview. In R. Mitkov (Ed.), *The Oxford handbook of computational linguistics* (pp. 482-490). Oxford University Press.

Hutchins, W. J. & Somers, H. L. (1992). *An introduction to machine translation*. Cambridge: Cambridge University Press.

James, C. (1998). *Errors in language learning and use: Exploring error analysis*. London: Longman.

Kim, S. (2019) Playing with machine translation in language classroom: Affordances and constraints. *Multimedia-Assisted Language Learning*, *22*(2), 9-28.

Kok Wei, L. (2021). The use of Google Translate in English language learning: How students view it. *International Journal of Advanced Research in Education and Society*, *3*(1), 47-53.

Kumnoed, P. (2018a, April 27-29). *An analysis of English reading comprehension and reading strategies through Google Translator of Loei Rajabhat University students* [Paper Presentation]. The Asian Conference on Language Learning (ACLL 2018), Surviving and Thriving: Education in Times of Change, Kobe, Japan.

Kumnoed, P. (2018b). *An analysis of English reading comprehension and reading strategies through Google Translator Jof Loei Rajabhat University students* [*Unpublished Research Report*]. Loei Rajabhat University.

Lee, S.-M. (2022). An investigation of machine translation output quality and the influencing factors of source texts. *ReCALL, 34*(1), 81–94. doi:10.1017/S0958344021000124

Llitjós, A. F., Carbonell, J. G., & Lavie, A. (2005). *A framework for interactive and automatic refinement of transfer-based machine translation* [Conference session]. European Association for Machine Translation Conferences/Workshops, Budapest, Hungary.

Lyons, S. (2016). A survey of the use of mobile technology and translation tools by students at secondary school in Thailand. *Payap University Journal, 26*(1), 35-57.

Mala, D. (2016, August 7). *Students to get sex education.* Bangkok Post. Retrieved January, 2018, from https://www.bangkokpost. com/thailand/general/1055009/students-to-get-sex-education

Modhiran, T., Kosawat, K., Klaithin, S., Boriboon, M., & Supnithi, T. (2005, September 12-16). *Parasite: An online Thai-English machine translation* [Paper presentation]. The 10th Machine Translation Summit, Pathum Thani, Thailand. Newmark, P. (1988). *A Textbook of Translation*. Prentice Hall, New York, USA.

Newmark, P. (2001). *Approaches to translation.* Shanghai: Shanghai Foreign Language Education Press.

Nida, E. A. (1991). Theories of translation. *TTR: Traduction, Terminologie, Rédaction, 4*(1), 19-32.

Nunan, D. (2001). *Teaching English to speakers of other languages*. Cambridge: Cambridge University Press. http://dx.doi.org/10.1017/CBO9780511667206

O'Brien, S., Simard, M., & Goulet, M.-J. (2018) Machine translation and self-post-editing for Academic writing support: Quality explorations. In J. Moorkens, S. Castilho, F. Gaspari, & S. Doherty (eds.), *Translation quality assessment: From principles to practice*. Cham: Springer (237–262). https://doi.org/10.1007/978-3-319-91241-7_11

Park, J. (2017) Analysis of the types of translation errors by the Google Translator. *Studies on English Language & Literature*, *59*(4), 279-299.

Perfetti, C. A. (1988). Verbal efficiency in reading ability. In M. Daneman, G. E. Mackinnon, & T. G. Waller (Eds.), *Reading research: Advances in theory and practice* (pp. 109–143). New York: Academic Press.

Popovi´c, M., & Ney, H. (2006, June). *Error analysis of verb inflections in Spanish translation output* Paper presentation]. TC STAR Workshop on Speech-to-Speech Translation, Barcelona, Spain.

Post Reporter. (2016a). *Ministry downplays Zika fears, says no need to panic.* Retrieved January, 2018, from https://www. bangkokpost.com/thailand/ general /1083836 /ministry-downplays-zika-fears-says-no-need-to-panic

Richards, J.C. (1974). *Error analysis: Perspectives on second language acquisition*. London: Longman.

Schuster, M., Johnson, M., & Thorat, N. (2016). *Zero-Shot Translation with Google's Multilingual Neural Machine Translation System.* Retrieved July 10, 2023, from https://blog.research.google/2016/11/zero-shot-translation-with-googles.html

Seleskovitch, D., & Lederer, M. (1989). *A Systematic Approach to Teaching Interpretation.* Silver Spring, MD: The Registry of Interpreters for the Deaf.

Shadiev, R., Sun, A., & Huang, Y.-M. (2019). A study of the facilitation of cross-cultural understanding and intercultural sensitivity using speech-enabled language translation technology. *British Journal of Educational Technology, 50*(3), 1415-1433.

Stymne, S. (2011). *Pre- and Post-processing for statistical machine translation into Germanic Languages* [Paper presentation]. The ACL-HLT 2011 Student Session. Portland, Oregon, USA.

Stapleton, P., & Leung, B. K. K. (2019). Assessing the accuracy and teachers' impressions of Google Translate: A study of primary L2 writers in Hong Kong. *English for Specific Purposes*, *56*, 18-34.

Sun, D. (2017). Application of post-editing in foreign language teaching: Problems and challenges. *Canadian Social Science*, *13*(7), 1–5. https://doi.org/10.3968/9698

Vidhayasai, T., & Keyuravong, S., & Bunsom, T. (2015). Investigating the use of Google Translate in "Terms and Conditions" in an airline's official website: Errors and implications. *Journal of Language Teaching and Learning, 49*, 137-169.

Vilar, D., Xu, J., D'Haro, L. F., & Ney, H. (2006, August 4). *Error analysis of statistical machine translation output* [Paper presentation]. The Fifth International Conference on Language Resources and Evaluation (LREC'06), Genoa, Italy.

White, K. D., & Heidrich, E. (2013). Our policies, their text: German language students'
strategies with and beliefs about web-based machine translation. *Die Unterrichtspraxis/
Teaching German*, *46*(2), 230–250. https://doi.org/10.1111/tger.10143

Appendix

The Google Translate rendered results for three articles that appeared in both an unpublished research report and a published research paper in 2018 (Kumnoed, 2018a Kumnoed, 2018b):

Original Text	**Translation into Thai by GT**
1st Article *Students to get sex education* Teachers and school administrators are gearing up to launch a nationwide programme to better educate young students on sexual health as part of efforts to bring down the high number of teenage mothers. The move follows the Prevention and Solution of the Adolescent Pregnancy Problem Act coming into force last month. With guidance from the Education Ministry, teachers and school administrators will be given lessons in sex education and an appropriate attitude towards sex education by specialists. "Many teachers still perceive sex as a taboo subject and believe that teaching sexuality will lead young students to engage in more sex. We need to change their attitude to reduce the problems," said education permanent secretary Kamchorn Tatiyakawee. He said the programme will educate teachers and executives about the rights of pregnant and parenting students and their educational opportunities.	บทความที่ 1 (*bot khwam thi nueng*) *นักเรียนจะได้รับการศึกษาเรื่องเพศ* (*Nakrian cha dai rap kan sueksa rueang phet)* ครูและผู้บริหารโรงเรียนกำลังเตรียมที่จะเปิดตัวโครงการทั่ว ประเทศเพื่อให้ความรู้แก่นักเรียนหญิงที่มีต่อสุขภาพทาง เพศเป็นส่วนหนึ่งของความพยายามที่จะลดจำนวนของสตรี วัยรุ่น (Khru lae phuborihan rongrian kam lang triam thi cha poet tua khrongkan thua prathet phuea hai khwam ru kae nakrian ying thi mi to sukkha phap thang phet pen suan nueng khong khwam phayayam thi cha lot chamnuan khong satri wairun.) การย้ายดังกล่าวเป็นการป้องกันและแก้ไขปัญหาของปัญหา การตั้งครรภ์ในวัยรุ่นที่มีผลใช้บังคับเมื่อเดือนที่แล้ว (Kan yai dang klao pen kan pong kan lae kae khai panha kong panha kan tang khan nai wai run thi mi phon chai bang khap muea duean thi laeo.) ด้วยคำแนะนำจากกระทรวงการศึกษาครูและผู้บริหาร โรงเรียนจะได้รับบทเรียนเรื่องเพศศึกษาและทัศนคติที่ เหมาะสมต่อการศึกษาเรื่องเพศโดยผู้เชี่ยวชาญ (Duai kham nae nam chak krasuang kan sueksa kru lae phu borihan rongrian cha dai rap bot rian rueang phet suek sa lae thatsanakhati thi mo som to kan sueksa rueang phet doi phuchiaochan.) "ครูหลายคนยังมองว่าเรื่องเพศเป็นเรื่องต้องห้ามและเชื่อว่า การสอนเรื่องเพศจะทำให้เด็กนักเรียนจะนำไปสู่การมี เพศสัมพันธ์มากขึ้นเราจำเป็นต้องเปลี่ยนทัศนคติเพื่อลด

ปัญหา" กล่าวโดยถาวรเลขานุการ Kamchorn Tatiyawawee

(Khru lai khon yang mong wa rueang phet pen rueang tong ham lae chuea wa kan son rueang phet cha tham hai dek nakrian cha nam pai su kan mi phet samphan mak khuen rao cham pen tong plian thatsanakhati phuea lot panha klao doi tha won le kha nu kan Kamchorn Tatiyawawee.).

เขากล่าวว่าโครงการจะให้ความรู้แก่ครูและผู้บริหารเกี่ยวกับสิทธิของนักเรียนที่ตั้งครรภ์และการเลี้ยงดูและโอกาสทางการศึกษาของพวกเขา

(Khao klao wa khrong kan cha hai khwam ru kae kru lae phuborihan kiao kap sit thi khong nakrian thi tang khan lae kan liang du lae okat thang kan suek sa khong phuak khao.).

Original Text	Translation into Thai by GT
2nd Article *Ministry downplays Zika fears, says no need to panic* The Public Health Ministry has played down fears of a Zika virus outbreak in Thailand, saying the disease is already common in the country. Opart Karnkawinpong, deputy director-general of the Disease Control Department, insisted Sunday the mosquito-borne Zika virus has become widespread since the infection was first recorded in Thailand in 2012. He asked the public not to panic as Zika was not deadly or severely contagious. Dr Opart's comment came after 22 new cases of Zika, including a pregnant woman, were reported in Sathon district this week. The woman is believed to have contacted the virus from someone who had recently travelled overseas. Dr Opart said all pregnant women and their unborn babies were being closely monitored by medical teams and public health officials. Of them, six have given birth to healthy babies.	*บทความที่ 2 (bot khwam thi song)* *กระทรวง downplays Zika กลัวจำเป็นต้องตื่นตระหนก* *(Krasuang downplays Zika* klua *cham pen tong tuen tranok)* กระทรวงสาธารณสุขได้ให้ความสำคัญกับการระบาดของโรค Zika ในประเทศไทยกล่าวว่าโรคดังกล่าว เป็นเรื่องปกติในประเทศแล้ว (Krasuang satharanasuk dai hai khwam sam khan kap kan rabat khong rok sika nai prathet thai klao wa rok dang klao pen rueang pokkati nai prathet laeo.) ดร. Opart Karnkawinpong รองอธิบดีกรมควบคุมโรคยืนยันว่าเมื่อวันอาทิตย์ที่ผ่านมาไวรัส Zika ของยุงได้แพร่ระบาดอย่างรวดเร็วนับตั้งแต่มีการติดเชื้อครั้งแรกในประเทศไทยในปีพ. ศ. 2555 (Doctor Opart Karnkawinpong rong athipbodikrom rok yuen yan wa muea wan athit thi phan ma wairat sika khong yung dai phrae ra bat yang ruat reo nap tang tae mi kan tit chuea krang raek nai prathet thai nai pi pho so song phan ha roi ha sip ha.). เขาถามประชาชนว่าไม่ต้องตื่นตระหนกเพราะ Zika ไม่ได้เป็นโรคติดต่อร้ายแรงหรือรุนแรง

	(Khao tham prachachon wa mai tong tuen tranok phro sika mai dai pen rok tit to rairaeng rue runraeng.)
	ความเห็นของดร. Opart เกิดขึ้นหลังจากพบว่ามีผู้ป่วยใหม่จำนวน 22 รายรวมทั้งสตรีมีครรภ์รายงานในเขตอำเภอสาทรในสัปดาห์นี้
	(Khwam hen khong doctor Opart koet khuen lang chak phop wa mi phu puai mai chamnuan yi sip song rai ruam thang satri mi khan rai ngan nai khet amphoe Sathon nai sapda ni.)
	ผู้หญิงเชื่อว่าได้ติดต่อไวรัสจากคนที่เพิ่งเดินทางไปต่างประเทศ
	(Phu ying chuea wa dai tit to wairat chak khon thi phoeng doen thang pai tang prathet.)
	ดร. Opart กล่าวว่าหญิงตั้งครรภ์และทารกในครรภ์ของพวกเขาได้รับการตรวจสอบอย่างใกล้ชิดโดยทีมแพทย์และเจ้าหน้าที่สาธารณสุขของพวกเขาหกได้ให้กำเนิดทารกที่มีสุขภาพดี
	(Doctor Opart klao wa ying tang khan lae tharok nai khan khong phuak khao dai rap kan truat sop yang klai chit doi thim phaet lae chaonathi satharana suk khong phuak khao hok dai hai kam noet tharok thi mi sukkhaphap di.)

Original Text	**Translation into Thai by GT**
3rd *Reading for Beginner Level Passage* One of my favorite vacation places is Mexico. I really like the weather there because it never gets cold. The people are very nice too. They never laugh at my bad Spanish. The food is really good. Mexico City is a very interesting place to visit. It has some great museums and lots of fascinating old buildings. The hotels are too expensive to stay but there are more affordable options. For example, you can stay at one of the beach resorts like Acapulco. If you are planning to visit Mexico, you should definitely see the Mayan temples near Merida.	บทความที่ 3 (*bot khwam thi sam*) หนึ่งในสถานที่พักผ่อนที่ชื่นชอบของฉันคือเม็กซิโก (Nueng nai sathanthi phak phon thi chuen chop khong chan khue Meksiko.) ผมชอบสภาพอากาศที่นั่นเพราะมันไม่เคยได้รับเย็น (Phom chob saphap akat thi nan phro man mai khoei dai rap yen.) คนเท่ามีความดีมากเกินไป (Khon thao mi kwam di mak koen pai.) พวกเขาไม่เคยหัวเราะเยาะไม่ดีของฉัน (Phuak khao mai khoei hua ro yo mai di khong chan.) อาหารเป็นสิ่งที่ดีจริง ๆ (Ahan pen sing thi di ching ching.) เม็กซิโกซิตี้เป็นสถานที่ที่น่าสนใจมากที่จะเยี่ยมชม มันมีพิพิธภัณฑ์ที่ดีบางอย่างและจำนวนมากของอาคารเก่าแก่ที่น่าสนใจ (Meksiko siti pen sathanthi thi na son chai mak thi cha yiam chom man mi phiphitthaphan thi di bang yang lae cham nuan mak khong akhan kao kae thi na son chai.) โรงแรมที่มีราคาแพงเกินไปที่จะอยู่แต่มีตัวเลือกราคาไม่แพงมาก (Rongraem thi mi ra kha phaeng koen pai thi cha yu tae mi tua lueak rak ha mai phaeng mak.) ตัวอย่างเช่นคุณสามารถเข้าพักที่หนึ่งในรีสอร์ทริมชายหาด เช่น Acapulco (Tua yang chen khun samat khao phak thi nueng nai risot rim chai hat chen Acapulco.) หากคุณกำลังวางแผนที่จะไปเม็กซิโกคุณแน่นอนควรจะเห็นวัดของชาวมายันที่อยู่ใกล้ Merida (Hak khun kam lang wang phaen thi cha pai Meksiko khun nae non khuan cha hen wat khong chao Mayan thi yu klai Merida.)

Problem and Need Analysis for English–Chinese Manual Development for Service Providers in Healthcare Establishments in Khanom District, Nakhon Si Thammarat Province

การวิเคราะห์ปัญหาและความจำเป็นเพื่อพัฒนาคู่มือภาษาอังกฤษ-จีน
สำหรับผู้ให้บริการในสถานประกอบการเพื่อสุขภาพ
ในอำเภอขนอม จังหวัดนครศรีธรรมราช

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Abstract

Creating value in healthcare requires developing English and Chinese language skills among service providers. This research aimed to 1) investigate English and Chinese language problems and needs among service providers in Khanom District healthcare establishments; 2) develop an English-Chinese manual; and 3) assess the service providers' satisfaction with the manual. The study involved a purposive sampling of 60 service providers from healthcare establishments in Khanom District, Nakhon Si Thammarat. The research employed a questionnaire addressing problems and needs, a satisfaction assessment form, interview forms, and an English-Chinese communicative manual. Data analysis methods included percentages, means, standard deviations, and content analysis from interviews. The findings revealed that problems related to the English language among healthcare providers in Khanom District were notably high ($\bar{x}$ = 4.01), encompassing all language skills. Similarly, problems in using the Chinese language were at the highest level ($\bar{x}$ = 4.96). The sample group exhibited a significant need for English skill development, with speaking skills being the most problematic ($\bar{x}$ = 4.73). On the other hand, the overall demand for Chinese language proficiency was at a moderate level ($\bar{x}$ = 2.86), with the greatest need being for speaking skills ($\bar{x}$ = 3.60). The overall satisfaction assessment of the English-Chinese communicative manual was highly favorable

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หน่วยงาน: คณะวิทยาศาสตร์และเทคโนโลยี มหาวิทยาลัยเทคโนโลยีราชมงคลศรีวิชัย ประเทศไทย

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(x̄ = 4.05). The results of this research could be used as a guideline to develop English and Chinese language training programs for healthcare professionals in their workplace.

Keywords: Language Problem, Healthcare Establishments, Manual, Need Analysis,

Service Provider

บทคัดย่อ

การสร้างเสริมคุณค่างานบริการในสถานประกอบการเพื่อสุขภาพจำเป็นต้องพัฒนาความสามารถด้านทักษะภาษาอังกฤษและภาษาจีนของผู้ให้บริการในสถานประกอบการเพื่อสุขภาพควบคู่กันไปงานวิจัยนี้จึงมีจุดมุ่งหมายเพื่อ 1) ศึกษาปัญหาและความต้องการในการพัฒนาทักษะภาษาอังกฤษและภาษาจีนของผู้ให้บริการในสถานประกอบการเพื่อสุขภาพ ในอำเภอขนอม จังหวัดนครศรีธรรมราช 2) พัฒนาคู่มือสองภาษา (ภาษาอังกฤษ – จีน) เพื่อการสื่อสารสำหรับผู้ให้บริการในสถานประกอบการเพื่อสุขภาพและ 3) ประเมินความพึงพอใจต่อคู่มือสองภาษาสำหรับผู้ให้บริการในสถานประกอบการเพื่อสุขภาพ กลุ่มตัวอย่างในงานวิจัยคือ ผู้ให้บริการในสถานประกอบการเพื่อสุขภาพจำนวน 60 คน ใช้การสุ่มแบบเจาะจง เครื่องมือที่ใช้คือแบบสอบถามปัญหาและความต้องการ คู่มือสองภาษาภาษาอังกฤษและภาษาจีน แบบประเมินคู่มือสองภาษา แบบประเมินความพึงพอใจ และ แบบสัมภาษณ์ สถิติที่ใช้ในการวิจัย ได้แก่ ค่าร้อยละ ค่าเฉลี่ยและส่วนเบี่ยงเบนมาตรฐาน และการวิเคราะห์เนื้อหาที่ได้จากการสัมภาษณ์ ผลการวิจัยพบว่าปัญหาการใช้ภาษาอังกฤษของผู้ให้บริการในสถานประกอบการเพื่อสุขภาพ ในอำเภอขนอม จังหวัดนครศรีธรรมราชในทุกทักษะอยู่ในระดับมาก (x̄ = 4.01) ปัญหาการใช้ภาษาจีนในการทำงานโดยภาพรวมอยู่ในระดับมากที่สุด (x̄ = 4.96) กลุ่มตัวอย่างมีความต้องการในการพัฒนาทักษะภาษาอังกฤษอยู่ในระดับมากที่สุด (x̄ = 4.15) โดยทักษะการพูดเป็นความต้องการสูงสุด (x̄ = 4.73) ความต้องการในการพัฒนาทักษะภาษาจีนโดยภาพรวมอยู่ในระดับปานกลาง (x̄ = 2.86) โดยมีความต้องการในพัฒนาการพูดภาษาจีนมากที่สุด (x̄ = 3.60) ผลประเมินความพึงพอใจคู่มือสองภาษาในภาพรวมอยู่ในระดับมาก (x̄ = 4.05) ผลที่ได้จากการวิจัยนี้ยังสามารถนำไปประยุกต์ใช้สำหรับการจัดอบรมภาษาอังกฤษและภาษาจีนเพื่อใช้ในการทำงานในสถานประกอบการเพื่อสุขภาพได้

คำสำคัญ: ปัญหาการใช้ภาษา สถานประกอบการเพื่อสุขภาพ คู่มือ การวิเคราะห์ความจำเป็น ผู้ให้บริการ

Introduction

The tourism industry is pivotal to Thailand's economy, as it contributes significantly to national income and trade (Ministry of Tourism and Sports, 2021b; Tourism Authority of Thailand, 2021). Despite challenges like the COVID-19 pandemic's impact in 2020, fostering Thai tourism remains vital for economic development (Tourism Authority of Thailand, 2021). Thailand aims to bolster its workforce to boost competitiveness in tourism, which aligns with national priorities outlined in the 20-year national strategy (2023-2037) (Office of the National Economic and Social Development Council, 2024). Complementing this strategy is the

National Tourism Development Plan No. 2 (2017-2021). It aims to position Thailand as a leading quality tourist destination by 2036 and foster sustainable economic growth, societal well-being, and income distribution (Ministry of Tourism and Sports, 2021b). The key to these strategies is empowering tourism entrepreneurs to compete effectively in order to promote sustainable economic development and income distribution.

Thailand is also experiencing significant growth in health tourism. According to the Siam Commercial Bank Economic Intelligence Center (2021), there is a global rise in health tourism due to factors such as chronic diseases and work stress. In fact, Thailand is experiencing significant growth in health tourism, ranking 18th globally and 13th for healthcare quality in 2017 (Ministry of Tourism and Sports, 2021b). The National Statistical Office (2021) identified China as the top contributor to Asian health tourists in Thailand, with significant spending averaging 6,334.22 baht per day, while Russian tourists formed the largest European group, followed by those from the United Kingdom, France, and Germany.

Nakhon Si Thammarat Province is renowned for its diverse tourism potential. This is evident by its 19 Kinnari Awards (Tourism Awards) (Tourism Authority of Thailand, 2021). Tourism is recognized as crucial for the province's development, as it encompasses business, community, and people. Factors contributing to its success include its rich geography, historical sites, arts, culture, and unique agricultural products. When comparing the provinces in the southern group with Thai amulets, it is observed that Nakhon Si Thammarat Province has the third-highest number of tourists, followed by Songkhla Province and Surat Thani Province. Hence, there is a need to diversify tourism offerings to include sports, recreation, and health tourism (Nakhon Si Thammarat Provincial Tourism and Sports Office, 2021).

Based on the data from the Nakhon Si Thammarat Provincial Statistical Office (2022), it was observed that the number of foreign tourists increased steadily from 2016 to 2019. Specifically, in 2019, the number of foreign tourists amounted to 88,716 people. This indicates an increase from the previous year's figure of 81,526 people in 2018. Akrawong et al. (2018) have highlighted the suitability of Nakhon Si Thammarat Province for health tourism, emphasizing the physical characteristics, management, and services. Foreign tourists show a keen interest in health establishments, which signals high spending potential. Improving services and developing health tourism personnel, particularly in English and Chinese communication, is imperative. Community and entrepreneurial efforts focusing on skill development, marketing, and support in English and Chinese communication can effectively elevate tourism in Nakhon Si Thammarat Province to an international level. The trend of health

tourism is rising, with hotels and resorts adapting services and facilities to capitalize on the higher profitability of health establishments compared to accommodation and food services (Chaisuvan & Chantachon, 2018).

Khanom District in Nakhon Si Thammarat Province emerges as a significant center for health tourism in Nakhon Si Thammarat, particularly in hotels and resorts offering health-related services. Consequently, numerous organizations in Nakhon Si Thammarat collaborated to elevate wellness standards and enhance competitiveness on a global scale (Walailak University, 2019). In 2019, researchers at Walailak University focused on creating an identity and elevating the standard of Sriwichai spa services to increase competitiveness and gain international acceptance. Additionally, the Nakhon Si Thammarat Provincial Public Health Department made an effort to develop and upgrade the standard of spa services in the Khanom district of Nakhon Si Thammarat Province. This includes advocating for the registration of service establishments with the Ministry of Public Health, providing additional training to enhance knowledge about services and registration for freelance masseuses, promoting the use of quality products, and prioritizing the safety of service recipients.

Furthermore, the Department of Health Service Support (2021) reported a consistent increase in the number of health establishments seeking registration, with 18 currently applying, 13 already licensed, and 5 in the process. In 2021, 540 individuals applied as service providers. Out of the 540 individuals, a total of 427 were certified, with Khanom District leading in registered health service providers. Interviews with operators and providers in Khanom District revealed a growing demand from foreign tourists, especially English and Chinese speakers. This is reflected in the increased foreign tourist numbers from 2016 to 2019 (Nakhon Si Thammarat Provincial Statistical Office, 2022). Effective communication, particularly in foreign languages, is crucial. To bridge the gap, this study emphasizes the need for health service providers to enhance language skills to meet the needs of foreign tourists in order to align with national tourism development objectives. The researchers developed an English-Chinese communicative manual based on insights gathered by utilizing English for Specific Purposes (ESP) and needs analysis to address language challenges effectively, with the aim of supporting Thai health tourism and ongoing professional development for healthcare providers.

Objectives

1. To identify the problems and needs of English and Chinese communication among service providers in health establishments in Khanom District, Nakhon Si Thammarat.

2. To develop an English-Chinese communicative manual for service providers in health establishments in Khanom District, Nakhon Si Thammarat.

3. To evaluate the satisfaction of service providers in health establishments in Khanom district towards the English-Chinese communicative manual.

Literature Review

1. Health Tourism

The Global Wellness Institute (GWI, 2017) defined health tourism as travel that aims to nourish and promote better health for tourist groups. It categorized health tourism into three types: medical services, health services, and health products and herbs. Additionally, the Tourism Authority of Thailand (2020) classified health tourism into two main types, namely, health healing tourism and health promotion tourism.

Health healing tourism integrates the treatment of diseases or restoration of health with travel, such as individuals traveling for tourism purposes to receive dental services, cosmetic surgery, or gender reassignment surgery in hospitals or nursing homes. On the other hand, health promotion tourism involves visiting various tourist attractions, staying in resort hotels, or visiting health centers to engage in activities like traditional Thai massage, aromatherapy, and mineral baths with the aim of promoting well-being. This form of tourism emphasizes the conscious promotion of health and environmental preservation. It often incorporates organized travel programs for relaxation in nature.

In conclusion, health tourism encompasses travel to tourist destinations with a combination of medical and health services, sports fitness centers, or other activities that contribute to overall well-being. It is categorized into health-healing tourism for treatment or rehabilitation and health-promotion tourism for disease prevention through destination activities.

2. The Growth of Health Tourism in Thailand

Data from the Ministry of Tourism and Sports (2021b) highlighted the robust growth of health tourism in Thailand from 2014 to 2018, with a notable 11.45 percent average annual increase in foreign tourists by 2018, totaling 38,277,300 individuals. The health tourism sector has emerged as a significant revenue generator. In fact, it ranks among Thailand's top five

businesses in the tourist industry, following personal healthcare, beauty and anti-aging science, and healthy eating, nutrition, and weight loss (Global Wellness Institute, 2018).

In 2017, Thailand held the 18th position globally for health tourism, with key factors including environmental appeal, the strength of its health tourism industry, and service quality. Predictions from the World Health Research Center (IHRC) predicted a 14 percent annual growth rate for Thailand's health tourism market, which was consistent with observed trends. In 2018, 2.5 million foreign tourists visited Thailand specifically for health tourism, constituting 6-8% of total tourists (Ministry of Tourism and Sports, 2021a). The majority of health tourists originated from Asian countries, primarily China.

Despite positive growth, the COVID-19 pandemic in 2020 significantly impacted Thailand's tourism industry. Nevertheless, to maintain its status as a health tourism hub the language skills among health tourism personnel and aligning services with health tourists' needs were enhanced (Chusri & Lalitsasiwimon, 2020). Despite challenges, the outlook suggested continued growth in Thailand's health tourism sector.

3. Need Analysis

"Studying student needs involves systematically collecting and interpreting information to inform curriculum development and meet learners' requirements" (Graves, 2000, p. 98). This approach is widely applied in teaching English as a Foreign Language (EFL), particularly in English for Specific Purposes (ESP), where understanding learners' context-specific challenges and objectives guides curriculum design (Benesch, 1996). Rajan (2001) outlines four key steps for needs analysis: establishing overall objectives, assessing learner needs through interviews or questionnaires covering language, personal, and workplace requirements, utilizing findings to set curriculum objectives, and developing content accordingly. Various analytical models, such as Target Situation Analysis and Present Situation Analysis, aid in this process. Hutchinson and Waters' (1987) model centers on identifying necessities, shortages, and wants, reflecting learners' target situation requirements, skill gaps, and personal desires. Dudley-Evans and St. John's (1998) model further delineates learning needs by analyzing multiple elements.

Figure 1 *Dudley-Evans and St John's Needs Analysis Model.*
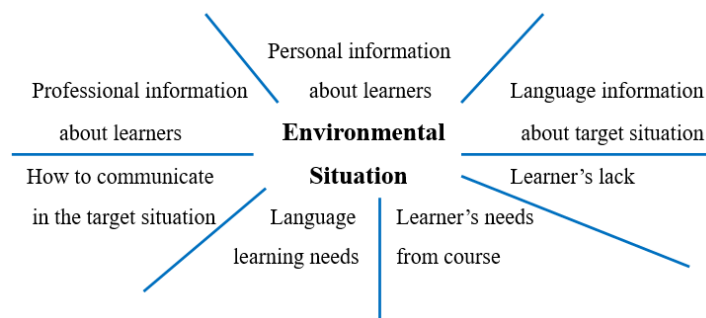
The Dudley-Evans and St. John's model guides the study of specialized English language learning needs by assessing environmental factors. This involves analyzing work-related tasks requiring English, learners' cultural background, attitudes, and language proficiency. The aim is to bridge learning gaps by identifying areas for improvement and tailoring learning approaches accordingly (Dudley & Evans & St John, 1998).

In assessing the needs for an English-Chinese communicative manual for healthcare providers in Khanom District, Nakhon Si Thammarat Province, both organizational and individual needs must be evaluated. Organizational assessments focus on policy and skill development needs. They identify departments that require language training and define proficiency levels. Individual assessments determine language requirements and proficiency levels, while also exploring suitable learning methods tailored to the work environment. This ensures the manual's content meets specific job requirements and organizational needs.

4. English for Specific Purposes

Hutchinson and Waters (1987) differentiated between general English instruction and teaching English for Specific Purposes (ESP). While both share theoretical foundations, ESP focuses on tailoring language instruction to specific contexts encountered by learners in their fields or professions, emphasizing vocabulary, sentence structures, and relevant lessons. In contrast, general language instruction covers broader linguistic elements with less emphasis on specific contexts.

Day and Krzanowski (2010) stressed the importance of conducting needs analysis surveys before teaching, especially in language instruction for specific purposes. These surveys help tailor teaching and learning arrangements effectively to meet students' needs. Teachers address essential questions regarding students' preferences, demographic and professional backgrounds, funding sources, level of involvement in course planning, language proficiency levels, preferred teaching styles, resource availability, class venue, and relevant workplace topics. Conducting such surveys ensures that teaching approaches are customized to suit the diverse requirements of students and their respective learning contexts.

Robinson (1991) emphasized the significance of English for Specific Purposes (ESP) in today's global context, highlighting its clear objective of facilitating success in various professional and educational roles by addressing learners' specific needs. ESP courses were tailored to develop language proficiency within relevant subject areas and situations. They encompass language functions crucial to learners' fields of interest. This perspective aligns with

the idea of Sukserm et al. (2017), who defined ESP as English customized to meet learners' career requirements and individual skills, which acknowledges its narrower focus compared to general English.

5. Chinese for Specific Purposes

Chinese Language for Specific Purposes (CLSP), also referred to as Chinese for Specific Purposes (CSP), originated as an adaptation of English for Specific Purposes (ESP), as Wang and Jiang (2019) pointed out that CSP has progressed from isolated instruction of Chinese for business to a wider range of various specific purposes and interdisciplinary content areas. Like teaching English for specific purposes, CSP focused on instructing Chinese tailored to specific disciplines or contexts, such as Chinese for medicine, engineering, business, tourism, or hospitality.

Since China's reform and opening in 1978, the demand for specialized Chinese language courses has risen, leading to the development of textbooks and proficiency exams. However, despite its inception in the 20th century, CSP still lacks comprehensive theories and teaching models, resulting in limited research and textbook production. However, it remains crucial to address the diverse needs of learners in various fields. Integrating linguistic and language teaching theories, such as sociolinguistics and applied linguistics, CSP aims to prepare learners with skills relevant to their specific career objectives. For instance, Zhai Naigang's study on teaching Chinese vocabulary for Traditional Chinese Medicine exemplifies the application of CLSP principles, emphasizing the importance of tailored vocabulary instruction and situational learning to meet learners' needs effectively.

In summary, ESP and CSP are crucial for tailoring language instruction to specific contexts and professions. ESP focuses on tailoring learning to career objectives, while CSP adapts Chinese instruction to fields like medicine and engineering. Day and Krzanowski (2010) emphasized the importance of needs analysis surveys to tailor teaching effectively, while Robinson (1991) highlighted ESP's role in addressing learners' specific needs. Despite needing further theoretical development, CSP is essential for meeting diverse linguistic requirements. Integrating linguistic theories ensures practical relevance and effectiveness in both ESP and CSP instruction.

6. Previous Research

Several relevant studies have examined needs analysis, ESP, and CSP in various job sectors, including hospitality, transportation, and healthcare. However, there is limited research specifically addressing the language needs of Thai healthcare providers in Nakhon Si Thammarat, a prominent tourist destination in Thailand. Chiablaem (2020) focused on Thai massage workers in Pattaya City District, Chonburi Province, identifying speaking and listening skills as crucial areas for improvement, particularly in vocabulary related to massage. Khakhai (2014) examined similar problems among Thai massage therapists on Khaosarn Road, Bangkok. The results showed that participants required improvement in all language skills, with listening and speaking being the most necessary.

Patanasorn et al. (2018) investigated English language needs in spa and massage establishments. They emphasized the essential communication functions such as inquiring

about customers' pain and greeting customers. Additionally, Sriyawong et al. (2016) explored the enhancement of English-speaking skills among Thai massage staff in Ubon Ratchathani Province, noting no significant difference in speaking abilities before and after training. Waowaew (2021), on the other hand, investigated the use of the Chinese language among Thai massage staff in Lampang Province. He developed a Chinese manual and found high satisfaction and improved scores after training. Furthermore, Sukpatcharaporn (2018) developed English-speaking skill lessons for Thai massage staff in Chiang Mai Province. He reported a notable increase in speaking ability post-study and high satisfaction with the lessons.

These studies collectively highlight the diverse language needs and problems faced by Thai massage workers across different regions of Thailand. They emphasize the importance of tailored language training programs to enhance their communication skills and overall service quality.

Research Methodology

1. Participants

The participants were selected based on purposive sampling method. The study included 60 service providers employed in healthcare establishments in Khanom District, Nakhon Si Thammarat Province. The inclusion criteria include being managers of health establishments or service providers in health establishments in Khanom District, Nakhon Si Thammarat Province, holding a certificate as a healthcare provider, being proficient in speaking, reading, listening, and writing Thai, and consenting to participate in the research throughout the entire process. Additionally, 20 participants were selected for interviews using selective sampling method.

2. Research Instruments

In this study, the researchers employed a mixed-method approach by integrating both quantitative and qualitative methodologies with five instruments. Quantitative data collection involved creating questionnaires to address English and Chinese language issues and needs among service providers in Khanom district, along with suggestions for inclusion in communicative manuals. The obtained results were analyzed using percentage, mean, and standard deviation calculations to tailor the manual. A manual evaluation form and satisfaction questionnaire were then administered to participants for further evaluation. Qualitative data was gathered through semi-structured interviews. The five research instruments that were utilized for data collection are as follows:

2.1 The questionnaire utilized in this study encompassed five distinct sections. Firstly, it gathered personal information from participating service providers with eight questions. Subsequently, it employed a five-point scale to delve into English and Chinese language problems and needs by asking 16 questions. Participants were also invited to rate their needs on 10 topics provided for inclusion in English-Chinese communicative manuals. Additionally, they were asked to provide input on the given format of such manuals. Lastly, participants had the opportunity to offer general comments and suggestions regarding the questionnaire and the study.

2.2. Semi-structured interviews were conducted with healthcare service providers in Khanom District, Nakhon Si Thammarat Province, to explore their problems and needs in English and Chinese. The six interview questions delved into specific inquiries, including problems encountered in workplace communication, interest in language practice tailored to their job, preferred topics for interacting with foreign customers, desire for an English-Chinese communicative manual, specific features or content they would prefer in such a manual, and interest in participating in training courses aimed at enhancing their language skills.

2.3. An English–Chinese communicative manual was developed for service providers in healthcare establishments in Khanom District, Nakhon Si Thammarat Province. Before implementation, the manual underwent three expert evaluations.

2.4. A manual evaluation form was conducted to assess the manual before its implementation. Three experts, including an English lecturer, a Chinese lecturer, and a healthcare officer, were asked to evaluate the manual with 12 questions. After receiving feedback from the experts, the researchers employed the manual with the participants.

2.5. A satisfaction questionnaire was administered to evaluate the English–Chinese communicative manuals used by service providers in healthcare establishments in Khanom District, Nakhon Si Thammarat Province. The questionnaire included 10 questions in three sections: Part 1: General information about the participants; Part 2: Questions employing a five-point scale to assess satisfaction in two areas: the manual's format and content, and Part 3: Open-ended questions for additional opinions or suggestions.

3. Data Collection

The research began with obtaining official permission to investigate the problems and needs of the English and Chinese languages among healthcare service providers in Khanom District, Nakhon Si Thammarat Province. Questionnaires were administered to 60 service providers in healthcare establishments, and semi-structured interviews were conducted with a purposive sample of 20 participants. The purpose and significance of the research were clearly communicated to ensure informed participation. Upon completion, data analysis was performed to develop a tailored English-Chinese manual. Following the expert feedback and revisions, the manual was distributed to the sample group for utilization, and their satisfaction feedback was collected. Subsequently, the gathered data underwent analysis, leading to the reporting and discussion of research findings.

To verify the reliability and validity of the research instruments, including questionnaires, evaluation forms, and interview questions, they were assessed by three experts: an English lecturer, a Chinese lecturer, and a healthcare manager in a spa business. The experts evaluated the questions using the Index of Item-Objective Congruence (IOC), which ranges from 0.50 to 1.00, indicating alignment with research objectives and suitability for use. None of the questions had IOC values below 0.5, resulting in an overall IOC validity value of 0.94, indicating their acceptability. Following validation, a pilot study was conducted with 20 service providers not included in the main study, using a questionnaire. The analysis of pilot study data, using Cronbach's coefficient, yielded a coefficient of 0.97, confirming the reliability and validity of the research instruments.

4. Data Analysis

Data from the participants were analyzed quantitatively and qualitatively as follows:

The first research objective aimed to identify problems and needs in English and Chinese among healthcare service providers in Khanom District, Nakhon Si Thammarat. Descriptive statistics, including percentages, means, and standard deviations, were utilized to analyze sections 1-4 of the questionnaire. Scores were interpreted based on predefined categories: highest level (4.51-5.00), high level (3.51-4.50), moderate level (2.51-3.50), low level (1.51-2.50), and lowest level (1.00-1.50) of needs and problems (Likert, 1967). Additionally, part 5 of the analysis categorized opinions into various aspects by arranging them according to frequency and presenting them in a table format.

To address the second research objective, which involves developing an English-Chinese communicative manual for service providers in healthcare establishments in Khanom District, Nakhon Si Thammarat, the researchers utilized the analyzed data from the questionnaire regarding the needs of service providers in healthcare establishments in the district. Related research and additional data collected were used to inform manual development. Subsequently, the researchers sought evaluation from three experts in English, Chinese, and healthcare services. Incorporating feedback from these experts, the researchers edited and revised the manual before distributing it to the participants.

The third research objective aimed to assess service providers' satisfaction with the English-Chinese communicative manual in Khanom district. A satisfaction questionnaire was utilized to gather data, which was then analyzed using descriptive statistics. Part 1 of the analysis focused on percentages, while part 2 employed means and standard deviations. Scores were interpreted based on criteria, ranging from the highest level of satisfaction (4.51-5.00) to the lowest level (1.00-1.50). Additionally, part 3 involved analyzing the content and categorizing opinions by frequency, presented descriptively. Data from interviews was also analyzed using open and axial coding, as described in essay format.

Findings

Research Objective 1: To identify the problems and needs of English and Chinese communication among service providers in health establishments in Khanom District, Nakhon Si Thammarat.

The study aimed to address the first research objective by investigating the problems and needs of healthcare service providers in Khanom District, Nakhon Si Thammarat Province, concerning English and Chinese languages. Sixty questionnaires were distributed across healthcare facilities in the district, achieving a 100 percent response rate and ensuring comprehensive data collection. The collected data were organized into four sections: Personal information of participants, Problems Encountered in English and Chinese Communication Among Service Providers in Health Facilities, Needs for Improving English and Chinese Language Proficiency Among Healthcare Providers, and Preferences for Topics and Format in English-Chinese Communicative Manuals.

1. Personal information of the participants

In part one of the questionnaires, eight questions were used to collect data about participants' personal information, with 60 respondents answering the questionnaires. The findings are represented in the given figure in terms of percentage.

Figure 2 *Personal information of the participants*

Gender	Age	Education level	Working Experience	Opportunity to communicate in English Per week	Opportunity to communicate in Chinese Per week	Level of English Ability	Level of Chinese Ability
Females: 88.33%	20-30 years old: 1.67%	Under Bachelor's degree: 60%	Less than 1 year: 16.66%	Everyday: 1.67%	1-2 days per week: 11.67%	Excellent: 1.67%	Fair: 1.67%
Males: 11.67%	31-40 years old: 28.33%	Bachelor's degree: 15%	1-2 year: 33.33%	3-4 days per week: 15%	Never: 88.33%	Good: 21.67%	Communicable: 98.33%
	41-50 years old: 56.67%	Above Bachelor's degree: 1.67%	3-5 year: 41.66%	1-2 days per week: 75%		Fair: 50%	
	50 years above: 13.33%	Unspecified: 23.33%	More than 5 year: 8.33%	Never: 8.33%		Communicable: 26.66%	

2. Problems Encountered in Using English and Chinese Language and Needs for Development English and Chinese Language Skill Among Providers in Health Establishments in Khanom District, Nakhon Si Thammarat Province

In the second part, the participants were asked to rate their problems and needs for using English and Chinese for communication with closed-ended questions ranked on a five-point Likert-scale (1 = Very Low, 2 = Low, 3 = Moderate, 4= High, and 5 = Very High). The participants' problems in each statement were analyzed by mean, S.D., and ranked as follows:

Table 1 *English Problem Communication Among Service Providers in Health Establishments in Khanom District, Nakhon Si Thammarat Province*

English Communication Problems	$\bar{\text{X}}$	S.D.	Rank
Listening Skills	3.70	1.09	High
Speaking Skills	3.58	1.10	High
Reading Skills	4.17	1.02	High
Writing Skills	4.58	0.82	Very High
Total	4.01	1.01	High

The results presented in Table 1 indicate that among service providers in health establishments in Khanom District, Nakhon Si Thammarat Province, the problem of using English is observed. Writing skills were found to pose the greatest problem ($\bar{x}$ = 4.58), followed

by reading skills ($\bar{x}$ = 4.17), and listening skills ($\bar{x}$ = 3.70). Conversely, speaking skills exhibited the least problem compared to other skills ($\bar{x}$ = 3.58).

Table 2 *Chinese Language Problem Among Service Providers in Health Establishments in Khanom District, Nakhon Si Thammarat Province*

Chinese Language Problem	$\bar{X}$	S.D.	Rank
Listening Skills	4.91	0.13	Very high
Speaking Skills	4.97	0.26	Very high
Reading Skills	4.97	0.26	Very high
Writing Skills	4.98	0.13	Very high
Total	4.96	0.20	Very high

The findings outlined in Table 2 demonstrate that there were problems with the Chinese language among service providers in health establishments in Khanom District, Nakhon Si Thammarat Province. On average, these problems were at very high ($\bar{x}$ = 4.96). Particularly, writing skills proved to be the most problematic ($\bar{x}$ = 4.98, closely followed by reading and speaking skills ($\bar{x}$ = 4.97). Listening skills in Chinese showed fewer problems compared to other areas of language skill ($\bar{x}$ = 4.91).

3. Needs for English and Chinese Language Development Among Service Providers in Health Establishments in Khanom District, Nakhon Si Thammarat Province

In the third part, the participants were asked to rate their needs for English and Chinese language development using closed-ended questions ranked on a five-point Likert scale (1 = Very Low, 2 = Low, 3 = Moderate, 4 = High, and 5 = Very High). The participants' needs in each statement were analyzed by mean, S.D., and ranked as follows:

Table 3 *Need for English Language Development Among Service Providers in Health Establishments in Khanom District, Nakhon Si Thammarat Province*

Need for English Language Development	$\bar{X}$	S.D.	Rank
Listening Skills	4.55	0.75	Very high
Speaking Skills	4.73	0.61	Very high
Reading Skills	4.00	1.07	Very high
Writing Skills	3.32	1.47	Moderate
Total	4.15	0.98	Very high

The findings revealed in Table 3 highlight the participants' needs for enhancing the English language in the roles of service providers within health establishments in Khanom District, Nakhon Si Thammarat Province. Across all skills considered, the overall average score was the highest ($\bar{x}$ = 4.15). Among these skills, participants expressed the strongest need to

improve speaking skills ($\bar{x}$ = 4.73), followed by listening skills ($\bar{x}$ = 4.55), and reading skills ($\bar{x}$ = 4.00), respectively. Conversely, writing skills ranked lowest among the needed skills for development among service providers in health establishments in Khanom District, Nakhon Si Thammarat Province ($\bar{x}$ = 3.32).

Table 4 *Need for Chinese Language Development Among Service Providers in Health Establishments in Khanom District, Nakhon Si Thammarat Province*

Need for Chinese Language Development	$\overline{X}$	S.D.	Rank
Listening Skills	3.42	1.49	Moderate
Speaking Skills	3.60	1.48	High
Reading Skills	2.50	1.44	Low
Writing Skills	1.93	1.34	Low
Total	2.86	1.44	Moderate

Based on Table 4, the needs for enhancing Chinese language among service providers in health establishments in Khanom District, Nakhon Si Thammarat Province were generally at a moderate level ($\bar{x}$ = 2.86) across all skills. In descending order of priority, the participants expressed the strongest need to develop speaking skills ($\bar{x}$ = 3.60), followed by listening skills ($\bar{x}$ = 3.42), and reading skills ($\bar{x}$ = 2.50). Writing skills were identified as the least need ($\bar{x}$ = 1.93) for language improvement among service providers in health establishments in Khanom District, Nakhon Si Thammarat Province.

4. Need for an English and Chinese Manual for Communication Among Providers in Health Establishments in Khanom District, Nakhon Si Thammarat Province

In the fourth part, the participants were asked to rate their needs on the topics and format of the English and Chinese Manual for Communication using closed-ended questions ranked on a five-point Likert scale, and ranked as follow:

Table 5 *Needs for Topics in English and Chinese Manual for Communication Among Service Providers in Health Establishments in Khanom District, Nakhon Si Thammarat Province*

Contents / Topics in the Manual	$\overline{X}$	S.D.	Rank
Greeting and Welcoming	4.88	0.42	Very high
Giving Suggestions and Service Information	4.88	0.32	Very high
Telling Benefits of Each Healthcare Service	4.65	0.71	Very high
Inquiring about Health Information	4.85	0.40	Very high
Encouraging Customer Engagement	4.77	0.56	Very high
Negotiating Service Prices	4.83	0.46	Very high
Making Appointments	4.65	0.66	Very high

Expressing Apologies	4.83	0.49	Very high
Expressing Gratitude and Farewells	4.92	0.33	Very high
Well-Wishes and Building Relationships	4.93	0.31	Very high
Total	4.81	0.57	Very high

From Table 5, needs in overall topics in English and Chinese Manual for Communication Among Service Providers in Health Establishments in Khanom District, Nakhon Si Thammarat Province were very high ($\bar{x}$ = 4.81). In descending order of priority, the participants prioritized topics such as Well-Wishes and Building Relationships ($\bar{x}$ = 4.93), Expressing Gratitude and Farewells ($\bar{x}$ = 4.92), Greeting and Welcoming, and Giving Suggestions and Service Information ($\bar{x}$ = 4.88). Similarly, topics like Inquiring about Health Information ($\bar{x}$ = 4.85), Negotiating Service Prices, and Expressing Apologies ($\bar{x}$ = 4.83) were also highly valued. Topics regarding Encouraging Customer Engagement and Inquiring about Health Information ($\bar{x}$ = 4.77), Telling Benefits of Each Healthcare Service, and Making Appointments ($\bar{x}$ = 4.65) were also significant.

Table 6 *Needs for English and Chinese Manual Format for Service Providers in Health Establishments in Khanom District, Nakhon Si Thammarat Province*

English-Chinese Manual Format	$\bar{X}$	S.D.	Rank
Pronunciations and Thai Translations	4.88	0.32	Very high
Pictures	4.88	0.32	Very high
Compact size and Portability	4.85	0.36	Very high
Online Access	4.47	1.02	Very high
Total	4.77	0.50	Very high

From Table 6, the overall format requirements for the English-Chinese communicative manual among service providers in health establishments in Khanom District, Nakhon Si Thammarat Province, were very high ($\bar{x}$ = 4.77). Specifically, participants prioritized a manual with pronunciation and Thai translation, along with pictures, were the most prominent ($\bar{x}$ = 4.88). Additionally, they expressed a need for a compact-size manual that is easy to use and carry ($\bar{x}$ = 4.85), and the ability to download online documents ($\bar{x}$ = 4.47).

Research objective 2: To develop an English-Chinese communicative manual for service providers in health establishments in Khanom District, Nakhon Si Thammarat.

Through an investigation into the needs for an English-Chinese communicative manual among health service providers in Khanom District, Nakhon Si Thammarat, coupled with semi-structured interviews, it became evident that proficiency in speaking skills in both languages is crucial, closely followed by listening skills. Participants highlighted the importance of all topics provided in the manual, particularly emphasizing the significance of accurate pronunciation and Thai translation. To effectively develop the manual, a thorough

need analysis was imperative to determine participant needs. Consequently, the researchers employed need analysis theory, participants' language concerns, as well as ESP and CSP theories to develop the final draft, encompassing essential topics as follows:

1. Vocabulary Pertaining to Services Offered in Health Establishments

2. Greetings and Welcoming

3. Providing Advice and Information on Various Service Offerings

4. Describing the Benefits of Different Services

5. Handling Health Inquiries and Providing Information

6. Directing Commands for Service Provision and Soliciting Customer Feedback

7. Negotiating Prices and Handling Appointment Charges, Both In-Person and Over the Phone

8. Offering Apologies and Expressing Regret

9. Extending Gratitude and Farewells

10. Wishing Well and Fostering Positive Relationships

The researchers developed an English-Chinese communicative manual for healthcare service providers in Khanom District, Nakhon Si Thammarat Province. This manual included pronunciation guides and Thai translations to enhance understanding. Responding to participant suggestions from interviews, the manual also integrates illustrations and a QR code for convenient access to downloadable documents, as shown in figure 3.

Figure 3 *English and Chinese Communicative Manual*

Before contributing the English-Chinese communicative manual for service providers in health establishments, the researchers asked three experts who were specialized in the fields of English, Chinese, and healthcare services to evaluate the manual. The three experts were an English lecturer, a Chinese lecturer, and a healthcare manager in a massage and spa business. The evaluation results are shown in Table 7.

Table 7 *Evaluation of English-Chinese Communicative Manual*

Evaluation List	$\overline{X}$	Rank
1. Format		
The manual's compact size, interesting cover design, appropriate font size, and style enhance its portability and readability.	4.42	High
2. Content		
The manual uses suitable language and healthcare-related vocabulary, making it easy to understand. It is well-organized and meets the needs of healthcare service providers.	4.40	High
3. Usage		
The manual's vocabulary and expressions are suitable for use in healthcare settings, aiding service providers. It facilitates better communication in English and Chinese with foreign individuals.	4.44	High
Total	4.42	High

Table 7 presents the evaluation results of the manual by the three experts. Overall, the manual received high ratings across all aspects ($\overline{x} = 4.42$). Usability scored the highest among the three aspects ($\overline{x} = 4.44$), followed closely by manual format ($\overline{x} = 4.42$), and content ($\overline{x} = 4.40$).

Additional feedback indicated areas for improvement, particularly in addressing spelling errors in Chinese words and incorporating vocabulary and images related to health establishments equipment. Experts were also advised to enhance the manual's appeal and effectiveness by including more sample conversations with accompanying illustrations.

Research Objective 3: To evaluate the satisfaction of service providers in health establishments in Khanom district towards the English-Chinese communicative manual.

To address the third objective of evaluating the satisfaction of service providers in health establishments in Khanom district regarding the English-Chinese communicative manual, the researchers distributed 60 questionnaires to healthcare establishments in Khanom district. All questionnaires were returned, resulting in a 100 percent response rate. Additionally, 20 service providers were purposively selected to participate in interviews. The collected data were organized into two parts: satisfaction with the manual format and satisfaction with the usefulness and implications of the manual. The findings are as follows:

Table 8 *Satisfaction toward the manual's format*

Evaluation List	$\bar{\text{X}}$	S.D.	Rank
The manual's size is suitable and compact, enhancing portability.	3.52	0.65	High
The color and design of the cover of the interesting guide.	3.90	0.62	High
The contents of the manual meet users' needs.	4.38	0.50	High
The contents are groups systematically and easy to understand.	4.42	0.50	High
The contents are organized, relevant and linked to each other.	4.08	0.53	High
The illustrations provided are suitable.	3.97	0.45	High
Total	4.05	0.54	High

Table 8 shows that overall satisfaction with the English-Chinese bilingual manual for communication in health establishments was high ($\bar{\text{x}}$ = 4.05). Specifically, respondents were most satisfied with the organization of content into categories and its clarity ($\bar{\text{x}}$ = 4.42). Satisfaction was also high with the manual meeting content needs ($\bar{\text{x}}$ = 4.38), choice of illustrations ($\bar{\text{x}}$ = 3.97), attractiveness of color and cover design ($\bar{\text{x}}$ = 3.90), and compactness and portability ($\bar{\text{x}}$ = 3.52).

Table 9 *Satisfaction toward the usability of the manual*

Evaluation List	$\bar{\text{X}}$	S.D.	Rank
The manual facilitates communication with foreign customers.	4.63	0.49	Very high
The manual is applicable for serving foreign customers.	4.12	0.58	High
The manual is suitable for practicing communication skills after work.	3.90	0.54	High
The manual is indispensable in your line of work.	4.67	0.51	Very high
Total	4.33	0.53	High

Table 9 shows that the manual's facilitation of communication with foreign customers contributed to the high overall satisfaction with its usability among service providers in health establishments in Khanom District, Nakhon Si Thammarat Province ($\bar{\text{x}}$ = 4.33). Satisfaction levels varied across different aspects, with the highest being the manual's utility for work ($\bar{\text{x}}$ = 4.67), followed by its effectiveness in communicating with foreign customers ($\bar{\text{x}}$ = 4.38), its

applicability for serving foreigners ($\bar{x}$ = 3.97), and its support for practicing communication skills after work ($\bar{x}$ = 3.52).

Discussion

The study's findings reveal three primary topics that align with the research objectives. These topics can be further explored as follows:

1. English and Chinese language problems among healthcare providers in Khanom District, Nakhon Si Thammarat Province

The research findings suggested that healthcare service providers in Khanom district, Nakhon Si Thammarat Province, encountered significant problems in English across various skills. This aligns with Sriyawong et al.'s (2016) study, which found that Thai massage practitioners lacked proficiency in English communication. However, this study also uncovered that speaking and listening skills among service providers in Khanom district are relatively problematic, echoing Sriyawong et al.'s (2016) study regarding the primary language problems faced by massage staff in Thailand. For instance, difficulties arose when staff could not understand or respond to questions posed by foreign customers. These problems may be attributed to factors such as educational background, work experience, and the frequency of English usage. The interviews conducted in this study supported this notion, revealing that many service providers in Khanom District had educational backgrounds unrelated to healthcare and below bachelor's degrees. This suggested a lack of prior interest in healthcare, resulting in limited exposure to English in their daily lives and a failure to recognize its importance. Additionally, they had few opportunities to engage in English communication with foreign customers at their workplaces. This aligns with Robinson's (1991) argument that learners are most motivated to learn when they have specific goals, particularly those related to their profession. Many participants in this study lacked such objectives and consequently struggled with English and Chinese communication. Surprisingly, when faced with the need to communicate with foreign customers, they expressed a strong desire to improve their language skills. While English communication was deemed more crucial due to greater exposure, participants also expressed a keen interest in learning Chinese if given the opportunity.

2. Needs for English and Chinese Communication Development

The results indicated a high need for English communication development among healthcare service providers in Khanom district, Nakhon Si Thammarat Province, particularly in speaking and listening skills, aligning with Brown's theory (2001), emphasizing the importance of these skills as foundational for communication. However, the need for Chinese communication development was moderate, reflecting the lower frequency of Chinese usage compared to English. This corresponded with Dudley-Evans and St. John's (1998) model, which suggested that learners' objectives were influenced by various factors, including language use patterns and real-life situations. Despite limited opportunities to speak Chinese, participants expressed a strong desire to improve their Chinese speaking and listening skills, recognizing the potential benefits for serving Chinese tourists and enhancing Nakhon Si Thammarat's tourism industry, consistent with Akkrawong et al.'s (2018) findings on the importance of language proficiency in tourism-related services.

3. Examining Content, Themes, and Manual Design

To develop an English-Chinese manual for healthcare service providers in Khanom district, Nakhon Si Thammarat, it was found that participants prioritized learning topics on Well-Wishes and Building Relationships, followed by Expressing Apologies, Greetings, and Expressing Gratitude and Farewells. This aligns with Chiablaem's (2020) study, which identified similar needs among massage staff in Pattaya, Chonburi. These topics are crucial for customer satisfaction as they are frequently used in services. Additionally, there was high demand for topics such as Giving Suggestions, Asking for Health Problems, Negotiating Prices, and Encouraging Customer Engagement, consistent with Wawwaew's (2021) findings on commonly used conversation sentences in the massage service industry. Similarly, in line with Akrawong et al.'s (2018) study, foreign tourists expected healthcare personnel to handle basic English inquiries and service-related matters rather than engage in extensive conversations. Regarding format preferences for English-Chinese manuals, the sample expressed a desire for manuals with pronunciation guides, Thai translations, and visual aids. This preference for simplicity and visual aids aligns with Chiablaem's (2020) recommendation to use simple language and images to aid communication with foreign customers. Furthermore, healthcare service providers in Khanom district expressed a need for downloadable bilingual manuals for convenient self-study outside of work hours, consistent with Chiablaem's (2020) findings highlighting a preference for online manuals for easier access to information, flexible timing, and free of charge.

Conclusion

The research findings highlight significant problems in English and Chinese communication faced by service providers in health establishments in Khanom District, Nakhon Si Thammarat Province. Both English and Chinese present notable problems, particularly in writing skills, while speaking skills pose comparatively fewer problems. Service providers express a strong need to improve their English proficiency, that is by prioritizing speaking and listening skills over reading and writing. Conversely, the need for Chinese language development is moderate, with a focus on enhancing speaking and listening skills. Furthermore, the study revealed a substantial demand for a bilingual manual tailored to the communication needs of service providers, emphasizing the importance of comprehensive content covering various communication aspects in both languages. Service providers emphasized the necessity of pronunciation guides, Thai translations, and user-friendly designs in the manual, indicating high levels of satisfaction with its organization and usability. Overall, the findings underscored the importance of addressing language problems in healthcare settings and the effectiveness of tailored communication resources in meeting the needs of service providers.

Implications

This study provides insights into the problems and needs faced by healthcare service providers in Khanom District, Nakhon Si Thammarat. The findings serve as valuable resources for relevant organizations, educators, and curriculum developers, facilitating the design of courses, innovative lessons, and other educational materials tailored to meet the specific needs of learners. Additionally, the results of this study are beneficial for healthcare organizations in Nakhon Si Thammarat, aiding in the preparation of personnel to cater to the growing number of foreign tourists who communicate in English and Chinese. This enhances the province's healthcare industry and its appeal to international visitors.

Limitations and Recommendations for Future Research:

The study's limitations include the impact of the COVID-19 pandemic, which significantly reduced the number of foreign tourists during the initial data collection phase. This decline affected healthcare service providers in Khanom District, Nakhon Si Thammarat Province, leading to career transitions and relocations for many individuals, thereby impacting service delivery in healthcare establishments. While there was some improvement towards the end of the previous year due to the gradual reopening of the country and an uptick in foreign tourists, particularly from China, insufficient promotion hindered the development of health tourism in Nakhon Si Thammarat Province. Future research could involve a larger participant size and broader settings. Additionally, alternative data collection methods, such as observation, could be explored to gain deeper insights into the gathered information.

Acknowledgements

References

Akrawong, S., Kingkaew, R., Petchkit, C., & Jinphon, P. (2018). *Developing health tourism of Nakhon Si Thammarat province to be a health tourism center of the southern region*. [Research report]. Thailand Research Fund.

Benesch, S. (1996). Needs analysis and curriculum development in EAP: An Example of a critical approach. *TESOL Quarterly, 30*(4), 723-738.

Chaisuvan, C., & Chantachon, S. (2018). Service provider development model in healthservice of the union of Thai traditional medicine society. *Journal of MCU Peace Studies*, *6*(1), 188-199.

Chiablaem, P. (2020). A need analysis of Thai massage employees' (Thai massage therapists, receptionists, and managers) English communication skills in the city of Pattaya, Chonburi. *rEFLections*, *27*(2), 274- 292.

Chusri, W., & Lalitsasiwimon, W. (2020). Health tourism: Thailand's competitiveness. *Narathiwat Rajanagarindra University Journal Humanities and Social Sciences*, *7*(2), 205-226.

Day, J., & Krzanowski, M. (2010). *English for specific purposes: An introduction*. Cambridge University Press.

Department of Health Service Support. (2021, April 12). *Report on the number of establishments in the area*. http://spa.hss.moph.go.th/report_spa/report_shop_1. php?z=111&fbclid=IwAR0nS7W_V_C9I6isV2GSm_oAy0Ry81Biv5AmkO5MyEy amHIGnIfv7kTGQKc

Dudley-Evans, T., & St. John, M. J. (1998). *Developments in ESP: A multidisciplinary approach*. Cambridge University Press.

Global wellness institute. (2017). *The global wellness tourism economy 2017*. http://www.globalwellnesssummit.com.

Global wellness institute. (2018, November). *Global wellness tourism economy: Asia-Pacific*. https://globalwellnessinstitute.org/industry-research/asia-pacific-wellness-tourism/

Graves, K. (2000). *Designing language courses: A guide for teachers*. Heinle & Heinle, Thomson Learning.

Hutchinson, T., & Waters, A. (1987). *English for specific purposes: A learning centered approach*. Cambridge University Press.

Khakhai, K. (2014). *English language needs analysis of Thai massage therapists at spas on Khaosarn Road, Bangkok*. Thammasat University.

Likert, R. (1967). *Attitude theory and measurement*. John Wiley & Son.

Ministry of Tourism and Sports. (2021a, April 12). *Statistics of foreign tourists traveling to Thailand*. https://www.mots.go.th/old/more_news.php

Ministry of Tourism and Sports. (2021b, April 12). *World business and ASEAN health tourism*. https://millionaire-academy.com/health tourism

Nakhon Si Thammarat Provincial Statistical Office. (2022). *Statistics of foreign tourists traveling to Nakhon Si Thammarat*. https://gdcatalog.go.th/dataset/?organization= 58784344-1f3b-4290-b9b7-9df342d3dac2

Nakhon Si Thammarat Provincial Tourism and Sports Office. (2021, April 12). *Number of tourists and income from tourism*. https://nakhonsi.mots.go.th/more_graph.php

Office of the National Economic and Social Development Council. (January, 2024*). Master plan under the national strategy*. http://nscr.nesdc.go.th/master-plans/

Patanasorn, C., Patanasorn, A., Kosittakun, S., & Porewanna, S. (2018). English needs in spa and massage shops: perspectives of customers, therapists, and receptionists. *Eurasian Journal of Analytical Chemistry*, *13*(3), 349-356.

Rajan, B. R. S. (2001). Designing and teaching an ESP course for officials from the finance sector in Cambodia, Lao PDR, and Vietnam. in. [Paper presentation]. The English language teaching and learning at the tertiary level: From past to present and future trends, Chulalongkorn University, Language Institute.

Robinson, P. (1991). *ESP Today: A Practitioner's Guide*. Prentice Hall.

SCB Economic Intelligence Center. (2021, April 10). *Wellness tourism: opportunities for the tourism business*. https://marketeeronline.co/archives/21776.

Sriyawong, J., Saiduang, P., & Pitikornpuangpetch, C. (2016). A development of activity package promoting communicative English skill for traditional Thai massseurs in Ubon Ratchathani province. *Humanities and Social Sciences Journal, Ubon Ratchathani Rajabhat University, 7*(2), 227- 241.

Sukpatcharaporn, N. (2018). *The development of English lessons to promote English speaking skill of traditional Thai masseurs in Doi Saket district, Chiang Mai province*. [Research report]. Chiang Mai Rajabhat University.

Sukserm, T., Suwanbubpha, S., & Kunto, S. (2017). The need for English in the work of medical personnel in hospitals in Kalasin Province. [Research report]. Kalasin University.

Tourism Authority of Thailand. (2021, April 12). *Health tourism*. http://www.elfhs.ssru.ac.th/alisa_ri/file.php/1/1._N.pdf

Walailak University. (2019, August 8). *Mowalailak wichai sang atta lak lae yok radap mattrathan borikan sapa si wichai.* (in Thai) [Walailak university researches creating identity and raising the standard of Sriwichai spa services]. https://www.wu.ac.th/en/news/16458

Wang, H., & Jiang, S. (2019). Chinese for specific purposes: A broader perspective. In C. R. Huang, Z. Jing-Schmidt, & B. Meisterernst (Eds.), *The Routledge handbook of Chinese applied linguistics* (pp. 407–421). Routledge. https://doi.org/10.4324/9781315625157

Waowaew, S. (2021). Chinese language skill development in working as Thai traditional masseuses. *Journal of SaengKhomKham Buddhist Studies, 6*(2). 269-286.

Influences of the Séance Ceremony on Politics in Southeast Asia[1]

อิทธิพลของพิธีกรรมร่างทรง ต่อการเมืองในเอเชียตะวันออกเฉียงใต้

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Abstract

This research aims to discuss how séance ceremonies have influenced politics in Southeast Asia. Four case studies of the séance ceremony from Thailand, Vietnam, Indonesia, and Myanmar were reviewed. Data from documentary studies from various sources, including AnthroSource, ASSIA, Wilson Web, CSA, Sociological Abstracts, and social media during 2000-2023, were examined. Schema Theory was utilized to explore the impact of ghosts on particular political actions. The researchers posited that schemata should be considered a fundamental framework for understanding the cognitive processes and behaviors of individuals. These cognitive structures shape individuals' interpretations and social interactions within their environment. In the construction of knowledge units, individuals incorporate common elements and characteristics to categorize surrounding objects and phenomena.

Three major findings are: 1) the rationality of alternative modernity is considerably integrated within the séance ceremony, thereby increasing the involvement in political activities; 2) rulers adopted the séance ceremony as a strategy for political benefits; and 3) the schema of rulers-ghosts-deities relates to changes in national policy of the four case studies.

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บทคัดย่อ

การวิจัยนี้มีวัตถุประสงค์เพื่ออภิปรายถึงอิทธิพลของพิธีกรรมเข้าทรงที่มีต่อการเมืองในเอเชีย ตะวันออกเฉียงใต้ ผ่านการวิเคราะห์พิธีกรรมร่างทรงกรณีศึกษาประเทศไทย เวียดนาม อินโดนีเซีย และเมียน มา เก็บข้อมูลเอกสารจากแหล่งข้อมูล ได้แก่ AnthroSource, ASSIA, Wilson Web, CSA, Sociological Abstracts และสื่อสังคมออนไลน์ ระหว่างปี พ.ศ. 2543-2566 และประยุกต์ใช้กรอบอ้างอิงคน-ผี-เทพ เพื่อ อธิบายอิทธิพลของพิธีกรรมร่างทรงต่อปฏิบัติการทางการเมืองบางประการ ผู้วิจัยเปิดประเด็นถกแถลงว่า กรอบอ้างอิงดังกล่าว มุ่งทำความเข้าใจถึงกระบวนการทางปัญญา และพฤติกรรมของบุคคล รวมทั้งโครงสร้าง ของจิตที่มีผลต่อการตีความและปฏิสัมพันธ์ทางสังคมของผู้คนกับโลก ในการพัฒนาหน่วยความรู้ บุคคลมักนำ ส่วนประกอบและลักษณะที่รู้จักมาจัดหมวดหมู่ให้กับวัตถุและปรากฏการณ์แวดล้อมตนเอง

ผลการวิจัย 3 ประการ ได้แก่ 1) ความเป็นเหตุเป็นผลจากภาวะสมัยใหม่ เปิดโอกาสให้พิธีกรรมร่าง ทรงเกี่ยวพันกับกิจกรรมทางการเมืองเพิ่มขึ้น 2) ผู้ปกครองใช้พิธีกรรมร่างทรงเป็นกลยุทธ์เพื่อผลประโยชน์ทาง การเมือง และ 3) กรอบอ้างอิงคน-ผี-เทพ ของผู้ปกครองเกี่ยวข้องกับการเปลี่ยนแปลงนโยบายในระดับชาติ ของทั้งสี่กรณีศึกษา

คำสำคัญ: พิธีกรรมร่างทรง กรอบอ้างอิงคน-ผี-เทพ การเมือง

Introduction

Animism is one of the oldest ontologies and has long played a crucial role in Southeast Asia (Arhem & Sprenger, 2015). Rooted in animism and matriarchy, the séance ceremony encompasses the belief that everything possesses a distinct spiritual essence. Maintaining the matrilineal way of life, women hold the primary power positions in the séance ceremony (Guthrie, 2004; Bénédicte, 2002).

The common socio-cultural challenges in contemporary Southeast Asia include poverty, inequality, and a highly unequal gender division of labor (Cook & Pincus, 2014). The increasing prominence of uncertainty and social disruption in the beginning of the 21st century allowed the séance ceremony to become one of the most accessible and affordable psychological self-healing events for the poor as well as an effective political strategy portal for the rulers.

Today, the popularity of the séance ceremony has become part of an economically driven strategy for state governments as well as a religious practice across Southeast Asia. Chan (2014) states that the *tangki* worship (the Nine Emperor Gods Festival) is a popular séance ceremony celebrated annually in Southeast Asia, including in Singapore and Phuket, Thailand.

Bubandt (2009) studies the relationships among spirit possession, politics, and subjectivity in Indonesia. His findings support the idea that spirits could be treated as informants to reveal how possession rituals construct and make relationships among experiences, politics, and emerging democracy intelligible. Kertzer (1988) highlights the importance of ritual ceremonies in politics and re-ordering or dis-ordering society. Sennett (2012) supports the idea that the ceremonies enable expressive cooperation of the four counterparts of religion, workplace, politics, and community life.

Transgender medium emergence and popularity in Southeast Asia during 2000–2023 related to the phenomenon studied display the crucial turning point of interconnection forms of rulers' subjugation policy about séance ceremonies and create political solutions for the rulers concerning sustainable development. By establishing socio-cultural spaces regardless of class and gender discrimination, séance ceremonies become a perfect political strategy for the rulers to display their support of international development values. Along the lines of Judith Butler's suggestion during her interview by Gleeson (2021), gender could become a negotiation, a struggle, and a way of making new realities.

The researchers argue that the following four ceremonies are examples of how séance ceremonies influence politics: the *Nat* ceremonies in Myanmar, the *Bissu* ceremony in Indonesia, the worship ceremony of *Thờ Mẫu* in Vietnam, and the *Faun Phii* ceremony in Thailand. Several studies have identified rulers using the séance ceremonies, sacrifices, and worshiping objects as tools to achieve power (Bénédicte & Jackson, 2022; Jackson & Baumann, 2021; Davies, 2007; Nguyen T. B. V., 2012; Hayashi, 2003; Foxeus, 2013). Understanding the upsurge of spirit possession cults, roles of séance ceremonies in politics, and the emergence of new forms of supernatural rituals of the séance ceremony reveals a diverse socio-cultural stratum, across classes and social systems (Chauvet, 2012; Endres, 2011).

Aim

This article aims to discuss how séance ceremonies have influenced politics in Southeast Asia.

Question

How do séance ceremonies manifest in Southeast Asian political practice?

Séance Ceremony and Schemata Theory

The séance ceremony brings together the material world with the world beyond in a kind of spiritual combination. To understand the dynamic function of the rulers' learning perception based on this interconnection of new narratives, experiences, the self, the theory of schemata, or unconscious mental structures, was applied. This research highlights the power relation between séance ceremonies and politics in Southeast Asia by describing connections between schemas and gender influenced by memories and experiences surrounding socio-cultural environments, and narratives.

The crucial relation between the declarative ("what") and the procedural ("how") information reveals characteristics and values of dominant power (Morris, 1994). Understanding schemas provides a distinct explanation of differentiation between the declarative and procedural memory as well as displaying how narratives play the most crucial role in guiding political actions in certain societies (Bartlett, 1932; Anderson, 2000).

Schemata theorists believe that human recollections are not always authentic and involve the replacement of unfamiliar information with the more familiar and inferences that may go beyond the information given in the original situation. Therefore, human recollections may well be represented not only by the generic knowledge about the world, but also new information received from several sources. In everyday living, the dynamic of narratives leads to sequences of changes in individual mindset and action. According to schemata theorists, three factors cause cognitive development: biological development which progresses in stages, interaction with the world of nature and objects, and social interaction with others (Brewer, 2000b; Johnson-Laird, 1983).

However, during this time a kind of cognitive dissonance can result as new narratives are experienced and the traditional values of the viewer are challenged and questioned. The dynamic of schemas allows human recollections to alter or to accommodate new information. Although some studies reveal the limitations of the schema concept when used in a broader aspect for all complex forms of knowledge (Rumelhart, 1980; Alexander et al., 1991), several studies disagree. Anderson (1977; 1978; 1984) and Anderson & Pearson (1984), for instance, state that schemas help in understanding the relation between initial information and human recollections of it and so too in the construction of a meaningful representation of the content. For example, gender studies scholars apply schemas in searching for the relation between past experiences and the gender attributes of their culture. Bern (1983) states that while learning about the contents of their society's gender schema, individuals choose the linkage between attributes and their own sex. Therefore, individuals' self-schema is not a standalone situation but integrated with other schemas such as a culturally determined schema that can lead to the creation of a new aspect of gender about the world. As mentioned by Renstch et al. (2009), the usage of a schema for cultural understanding could expand to a wider perspective because of its complexity and flexibility.

Considering the above discussion, the researchers of the present study expected that a greater understanding of the schema of rulers-ghosts-deities and the schema foundations of embodied knowledge related to the emergence of transgender mediums could help in better policy designation concerning gender equality rooted in the complex connections of socio-cultural perspectives, political strategies, and actions.

Research Methodology

This documentary research utilized a netnography approach as a methodology to investigate influences of the séance ceremonies in Southeast Asian politics. Digital academic source references included AnthroSource, ASSIA, Wilson Web, CSA, Sociological Abstracts,

academic literature, research reports, songs, folk dramas, and video clips published during 2000–2023.

Netnography data collection and analysis was based on a non-linear and holistic approach. First, archival data was collected from the selected sites. Second, elicited data including both synchronous (online interview, video clips, songs, etc.) and asynchronous (online forums and microblogging sites) were investigated to develop a co-created communicative environment between researchers and digital participants (Kozinets, 2010). The data collection ended when theoretical saturation was reached.

The researchers adopted a grounded theory for ritual analytical processes. By sampling a selected set of digital texts from the population of texts for ritual analysis, three coding techniques including open, axial, and selective were adopted (Strauss & Cobin, 1998). First, open coding was applied to identify key ideas, incidents, social interaction, and political involvement that were related to the séance ceremonies. Categorization was done by combining concepts into subcategories and higher order categories, respectively. Second, axial coding was assembled into casual relationships. Last, select coding was systematically identified until theoretical saturation. These sources were examined for the following: 1) vivid evidence of the séance ceremonies' influences in politics during the last two decades, 2) rulers' schemas on gender and the use of the séance ceremonies as political strategies, and 3) political involvement in the relations between the rulers or the state government that uses séance ceremonies as political strategies.

By using keywords in search engines including authors, researchers, the séance ceremonies, queer or transgender mediums, gender identity, and politics in Southeast Asia, four case studies of séance ceremonies were selected as being pertinent. These included the *Mod Meng* ghost dancing ceremony, Thailand; the worship of the mother goddesses, Vietnam; the *Bissu* rituals, Indonesia; and *Nats*, the spiritual worship, Myanmar.

Findings

The research indicated several notable findings. These included the presence of rhetorical appeals to socio-cultural politics, transformative cultural knowledge to the gender political movement, and the extensive use of narratives as the mechanical drive of political forces revealed in the interpretations of the séances. The existence of an afterlife and manifestations of the agents as a universal schema among rulers in Thailand, Vietnam, Indonesia, and Myanmar was evident and displayed in the close interconnections of animism, modernity, and social practices. The power of the "agents" went beyond the physical and socio-cultural boundaries and varied by an origin of death which was commonly demonstrated in the forms of an interplay of place, space, gender, objects, and temporality within the modernity. Evidence was found in every case study of social interaction and ritual practices of transgender mediums in both public and private places and digital spaces. For example, mother goddess worship in Vietnam was organized in a joss house (a small altar for worship located inside the house), through a live exhibition in the Women's Museum, and in a digital narrative story called Spirit of Asia (Thai PBS, 2023; Tengakson, 2021).

Like humans, roles and the status of ghosts varied by their social class. Ghosts with the lowest class were known as "bad ghosts" or demons who once lived badly due to questionable

ethical failures, performing bad deeds, and suffered negative death experiences like suicide, violent death away from home, or brutal killings. These low-class ghosts often harassed, harmed, or possessed the people they haunted. None of them were invited into the séance ceremony because of being unable to eat and drink or having mutilated and distorted appearances. Having lost the character of humanity, they were not able to receive objects of worship nor to give blessing wishes to appellants. These bad ghosts were considered troubled ghosts who must be excluded from the séance ceremony (Ongsakul, 2005; Bénédicte, 2002).

The séance ceremony reflected the rulers' symbolic self-healing based on a common belief in the power of the "agents" or in this research referred to as ghosts and deities. Although there were various forms of using the "agents" in politics, the most effective way was through the séance ceremony. The ceremony process consisted of worshiping, transcendence, séance, performing arts, and blessing. The powerful narration of the superpower agents was enhanced with the delicately designed procedures, exquisite material objects characteristic of mediums, and active appellants (Lewis, 1989). There were five key actors involved in every séance ceremony, but the medium was the most important change agent, followed by the medium-assistant, musicians, announcers, and appellants (Endres, 2011).

During the transcendence, mediums were appointed to communicate with the agents through their bodies. To convey messages to the appellants, the medium's modes of communication included incantation, dancing, performing arts, automatic writing or speaking ancient languages. Symbolic forms of communication such as colors of cloth, body shaking, mysterious chanting, and musical performances were the linkages between agents and mediums. The medium assistants who were standing by helped the medium with clothing, make up, preparing objects for worship, sending signs of transcendence and withdrawal of the agents. During the séance, a group of musicians played nonstop traditional music based on the medium's demand and local culture. The announcer greeted and informed all participants about the séance process. Successful mediumship involved a symbolic bodily communication of the mediums, gorgeous worshiping objects, and the satisfaction of the appellants. Common blessings included timely rainfall, abundant produce, success against enemies, longevity, good health and composure, wealth, fortune, love of virtue, and talent (Nguyen, T. B. V., 2012).

1. Ghost-deities in Politics

Four case studies demonstrated rhetorical appeals of ghosts and deities in politics. Changes of ghost-deities schema and the use of narratives as the mechanical drive through political strategies revealed the interconnections of the rulers' pattern of thinking, linked perceptions, and political actions. The organized unit of the rulers' schemas displayed their sense of the world and long-term memories based on narratives and the creation of continual ideas about the power relation. By storing both declarative (what) and procedural (how) constructed narratives, the ghost-deities schema displayed several adaptations of ghosts and deities as the mechanical drive of power.

The schema of rulers-ghosts-deities revealed the social relation between the rulers' cognitive thinking and the use of ghosts and deities. The dynamic change of schemas occurred continuously throughout the rulers' life span. This complexity of the schemas resulted from

internal factors such as perception of self and mindset as well as external factors such as new information, modernity, and engagement in the ceremony, and social interactions with surrounding environment and objects. The term *ruler's modernity* in this research refers to changes in the relations of power, especially in terms of the weakening of beliefs and practices associated with traditional culture as well as the acceptance of "modern" values and practices from external drives or the rulers' schema. Evidence was found in the case of the reformative belief policy of King Anawrahta Minsaw in 1587 C.E. (Bénédicte, 2002) and King Tilokkarat's import of Buddhism in 1443 to establish "*Lan Na*'s modern Buddhism," which led to socio-structural changes in peasant communities (Sakamoto, 2009).

Five common external mechanical drives of power included special characteristics of mediums, rituals, horrifying narratives, worshiping, and symbolic performances. The distinctive spiritual practices commonly found in the séance ceremony were related to the ruler's belief in animism and the need to maintain power. By introducing modernity, new forms of power relations were created based on a character of flexibility in times, spaces, and contexts. The flexibility of the séance ceremony allowed it to be organized in both personal space and in the public sphere, or in an open arena such as a national festival, museum, or on public television. This helped to make sure the exchange messages with ghosts and deities could be settled anywhere, anytime (Bénédicte & Jackson, 2022; Brewer, 2000a).

The rulers' complicated mindsets and statuses provided a unified collective system based on charismatic authority and the Janus-faced ritual with the cult of power worship displayed in the forms of the continuous action in the narrative construction of the sacred in the séance ceremony. The intrusive power of modernity is displayed in the complexity of the rulers' worldview and their fear of changes in the power relationship. The use of agents in politics provided the greatest changes at the structural level as evidenced in all four cases. These included changes in the power relationship between rulers and external forces and in the establishment of new perspectives for the rulers.

The common start of using ruler-deities schema in politics was the claim of necessity in modernity. The use of belief reform policy, oppressive political strategy, and implementations in forms of belief management were common political strategies. By adopting ideological reformative policy or goodwill to current beliefs based on modernity, rulers reestablished a new belief system. An examination of the following ceremonies provided evidence to support the researchers' main objective to show how the séance ceremony had been used in politics.

2. *Nat* Ceremony

The *Nat* ceremony is one of the most crucial séance ceremonies since the time of the first Burmese empire. To gather power after enthronement, King Anawrahta Minsaw imported the idea of modernity to launch a reformative belief policy in 1587 C.E. By overthrowing the most popular belief systems of animism and matriarchy, the king replaced them with imported Buddhism (Bénédicte, 2002; Guthrie, 2004; Foxeus, 2013). To achieve his goal, mediums were targeted and forced to resettle on Mount Popa, the sacred pilgrimage space. King Anawrahta

Minsaw then symbolically authorized the royal *Nats* to govern all the *Nats* who had later been degraded to be merely the stupas' guardians. Resistance to this royal command meant one's life would be threatened with brutally oppressive punishment. As a result, a complex and overlapping territorial claims area developed where the king was settled at the top of the symbiotic relationship in both physical and ideological arenas (Temple, 1906; Spiro, 1996).

Historically, only female mediums operated the *Nat* ceremony. The introduction of Buddhism led to the establishment of a new social hierarchy based on patriarchy. After the 1980s, most mediums became males who dressed up and were made up to look like females. However, the emergence of a variety of social media in Myanmar spread international information about the schema of alternative gender. Today, transgender mediums are increasingly performers in *Nat* ceremonies. The popularity of *Nat Kadaws* both at the national and international level is based on their talent in symbolic communication, ceremonial dance, blessing, and ritual shower. However, it should be noted that the ceremonies also create the place and opportunities for the people who seek fun to socialize, drink, and gamble. This situation led to the government's change of the schema of state-ghosts-deities relationship.

As a result, the *Nat* ceremony is accepted by the state government as a national festival attracting local and international tourists. The ceremony has become one of the six main state tourism attractions to preserve traditional heritage and customs of the local people in 2021 (Ministry of Hotels and Tourism, 2021). Due to public unrest, the Myanmar government allows only the shrine at Taung Byone village near Mandalay to present this ceremony where the most powerful members of Myanmar's pantheon of 37 *Nats* are located without applying a nightly curfew. This village held the largest *Nat* festival in mid-August since 2016 (Khaing, 2016).

Acting as key spiritual actors, *Nat Kadaws* used the ceremony to develop a new social space based on a cohesive rational social network regardless of class, gender, or social position. The state government used the ceremony as a tool to manipulate socio-economic resources for tourism and the concentrated focus of the public. Tens of thousands of elites, high ranking government officers, residents, and international tourists attend the *Nat* ceremony (Bénédicte, 2002; Guthrie, 2004; Foxeus, 2013).

3. *Mod Meng* Ghost-Dancing Ceremony

The *Faun Phii* or *Mod Meng* ghost-dancing ceremony is rooted in fear of an unknown, unexplainable natural phenomenon, and imbalance in life of the *Lan Na* people. Historically, the *Lan Na* people developed self-help in the form of psychological healing called *Faun Phii*. *Lan Na* ghosts included *Phii Mod*, *Phii Meng* and *Phii Jao Nai*. *Phii Mod* is a house ghost that protects the house and keeps happiness and peace for the owner. *Phii Meng* represents the ancient ancestral ghosts of the nation and members of the royal class. *Phii Jao Nai* are spirits of heroes, kings, and famous leaders. All of them are considered "good ghosts" (Sakamoto, 2009; Wyatt & Wichienkeeo, 1998).

Faun Phii was displayed through sound, dance, and ritual. The ceremony consisted of three days of activities. The first day was non-stop ghost dancing, with the dance style

mimicking the hand movements like in the *Karanas* Indian dance. On the second day, the medium acted as an intermediary and performed the séance. The rituals for worshiping took place on the last day. In the early times, *Lan Na* was a matriarchal society. Female mediums were the key actors who performed a healing ritual. To lead the ritual, the female mediums took on several stereotypical male behaviors including consuming alcohol, smoking tobacco, and lewd conversation during their trance state, acting as the ritual's leader. The introduction of modernity in the form of culture and religious practices and the import of Buddhism introduced a pre-modern political strategy in the construction of discourses in Lan Na since the reign of King Tilokkarat in 1443 (Sakamoto, 2009).

Lan Na's modern Buddhism provided structural changes in peasant communities in many ways. These included changes in the belief system, gender ideology, and spiritual practices within *Faun Phii*. This, followed by the emergence of a Western-dominated world economic system and of a socio-cultural system based on capitalism, modernity, rationality models of development, and cultural hegemony provided the transformation of the rulers' schema in the relations of power, mode of production, experiences of personhood, body, gender, space, and time (Hayashi, 2003; Wyatt & Wichienkeeo, 1998).

The practical roles of *Phii Meng* and *Phii Jao Nai* were not merely the royal ghosts who acted for social protection but often served as the change agents driving the political strategy for the prevention of external forces. For instance, Cao Ubonwanna, the upper-class woman in the Cao Cet Ton Dynasty, used *Faun Phii* to criticize the Siam monopoly tax policy in 1881 (Saksung, 1996; Ongsakul, 2005).

Several studies revealed that *Phii Jao Nai* was a royal ghost used to reflect the *Lan Na* political system of decentralization. Because Siam reigned over the region for more than a century, *Lan Na*'s belief system of animism has represented its ideological independence. The evidence of this was in the form of the establishment of ghost shrines in *Lan Na* community and the classification of *Lan Na*'s ghosts by making *Phii Jao Nai* the highest class of the pyramid (Ramitanon, 2002; Kamchan, 2001; Tengakson, 2021).

Faun Phii was used as a political challenge to rally against Siam's commercial monopoly policy resulting in many mediums being killed and the recalling of the aggressive Siamese representative in 1884. In 1888, during the period of Siamese suzerainty (1778–1893), King Rama V of Siam wanted to reorganize the political structure of *Lan Na* to allow Siam to gain more advantages from the new tax policy. Unhappy with this external force, *Inthawichayanon*, the 7th Ruler of *Lan Na*, again announced that the new Siamese tax policy exasperated *Phii Meng*, the ancient ancestral ghosts of *Lan Na* and those deities who protect *Lan Na* Kingdom. Although *Lan Na* was later occupied and became an administrative division of Siam, *Faun Phii* was recognized as the main way of communicating through the séance ceremony of *Lan Na*'s rulers to create a strong sense of localism to act against centralization policy based on nationalism in Siam (Strate, 2016).

4. *Bissu* Ceremony

The power of the *Bissus* came from their in-between gender status and their superpowers in communicating with ghosts and deities. During the 16th and 20th centuries, the *Bissus* were the key actors in various national activities with spiritual leaders in the *Bugis* army, the rulers' counselors, state commercial negotiators serving as the royal's medium, and spiritual patriarchs (Andaya, 2000).

Bissu rituals are a complexity of schema memory among the Bugis rulers (Davies, 2002). This ritual has played a significant role in *Bissu*'s history safeguarding and enhancing the sanctity of the rulers in séance ceremonies by providing nationalist and modernist political discourses. By emphasizing cultural rationalization, social differentiation, and gender pluralism, the *Bissu* displayed the nation's open mind about gender pluralism (Peletz, 2006). Although *Bissu* maintained their roles as transgender mediums in the 21st century, they have been stripped from the positive and central role in several political activities such as those in the royal court, state cults, and local politics.

Peletz (2002) argued that the *Bissu*'s presence of transgender mediums may not have resulted in politically neutral cultural formations nor served as an example of gender equilibrium. Today, *Bissu* may only be a scattered memory or a reference which is commonly found in social media. Nonetheless, Peltz agreed that there were no laws in the Indonesian archipelago that aim to institutionalize policies of heterosexism nor criminalized sexual activity of same sex lovers as in other Southeast Asian countries such as Malaysia and Singapore. Although the Jihad Paramilitary Force and the Laskar Pembela of Islam took steps against LGBTQ organizations in 1999 and the future development direction of national policy about this issue remains unclear, there is no state criminal policy nor public discrimination against transgender persons in contemporary Indonesia (Boellstorff, 2004).

5. Worship Ceremony of *Thờ Mẫu*

The *Thờ Mẫu*, or the mother goddesses, has long been an important Vietnamese séance ceremony since the 16th century. The ceremony is rooted in the appreciation of the power of women and belief in animism. There was a strong belief that the mother goddesses were deities who were brave warriors, heroines, philosophers, or spiritual leaders who did good deeds. After the incarnation, they became the female deities who protected skies, rivers, forests, and mountains. With their superpowers, the mother goddesses gave blessings to the appellants. The influence of the schema of Confucius, especially the respect of ancestors, good deeds, the belief in Karma, and the respect of deities were symbolically closely related with the belief structure of the worship of *Thờ Mẫu* (Vũ, 2015).

The ritual persisted through opposition during the first years of the Communist government, when the state saw the worship of *Thờ Mẫu* as a threat against the modernization policy. The ritual was prohibited and considered illegal (Nguyen, T. H., 2006). Although its practices were against religious practices of both Buddhism and Tao, the global concern about the role of women in development influenced the government's schema of gender. To show

the state's concern about women's equity, the Women's Museum was chosen as a public space to display the story of mother goddesses, rituals, and the process of the séance ceremony. In 2016, the Vietnamese government proposed to UNESCO in the eleventh conference of the Inter-governmental Committee for the Safeguarding of Intangible Cultural Heritage at Addis Ababa, Ethiopia, the request to register the worship of *Thờ Mẫu* as an Intangible Cultural Heritage of Humanity.

As a result, the Vietnamese government considers the worship ceremony of *Thờ Mẫu* as a symbol of national pride (Nguyen, T. B. V., 2012). Since 2017, there have been several significant changes in Vietnam's national politics related to transgender rights (IJsendijk, 2023). These included the right to serve in the Armed Forces regardless of sex or sexual orientation, the right to have gender-reassignment surgery, homosexuality declassified as an illness, transgender identity declassified as an illness, access to IVF (*in vitro* fertilization) provided to lesbians, MSM (males who have sex with males) allowed to donate blood (Knox, 2007).

Conclusion and Discussion

From a socio-political perspective, these four case studies of séance ceremonies provide examples of the dynamic influences of the schemas of ghosts, deities, and the agents of political actions.

First, the relationship between the schemas and the agents of the four ceremonies had a powerful influence in terms of the increasing the alternative genders presented. The study revealed the rulers' development of generic knowledge about the connectivity between the new world and the old one through the séance ceremony. The example is found in the case of Cao Ubonwanna's use of *Faun Phii* to criticize the Siam monopoly tax policy in 1881 (Saksung, 1996; Ongsakul, 2005).

This finding is supported by the work of Brewer (2000b) and Johnson-Laird (1983). The social interactions between animism and modernity provided opportunities for restructuring political strategy which the rulers took advantage of as a means to strengthen their political power. To establish a new power relationship over other humans, systems of belief, and other objects and things, the rulers created interconnections among understandings of self, roles, and a sense of the world using the mediums as key actors. This finding is supported by evidence from the four case studies examined and the work of Jackson and Bauman (2021) and Chonpairot (2016).

Significantly, the rulers' schema of a static, unified collective system based on charismatic authority, Janus-faced ritual, and cult of power worship influenced their actions. This finding is supported by the work of Piaget (1977) and Berger (2011). Evidence was found in the form of the integration of the modernization concept with an oppressive ideological strategy. The examples are found in the case of *Nat* ceremony in Myanmar (Guthrie, 2004; Foxeus, 2013) and worship of *Thờ Mẫu*, Vietnam (Nguyen, T. B. V., 2012).

Second, the role of the medium is another main source for influencing political change. Unintentionally, the achievement of modernization policy introduced new forms of schema power relations directly into the people's mindsets. *Bugis's* open mind about gender, for instance, established the public acceptance of five gender differences. This opened opportunities for alternative genders to become mediums and thus receive higher socio-cultural status in *Bugis* society (Thamrin, 2015).

For example, the case of *Faun Phii Lan Na* reflects a change in the political ideological system of decentralization by making *Phii Jao Nai* the highest class of the *Lan Na's* pyramid of power instead of the Siamese's power (Ramitanon, 2002; Tengakson, 2021). By acting as a medium, Cao Ubonwanna, the *Lan Na*'s princess, used the *Faun Phii* ceremony to integrate the ruler's power as a political negotiation based on the fundamental belief system of *Lan Na*. Although this political strategy failed to achieve its goal, it has established a strong sense of independence among *Lan Na* people. This conclusive finding was supported by Aksrondit (2009)

Lastly, changes in the social position of transgender mediums can be seen. The rising of transgender mediums in séance ceremonies provided socio-political connections of neoliberal capitalism demonstrating the power of visual media making future impacts possible with online networks, the politics of cultural heritage, and changes in schema of gender identity (Foxeus, 2013; Buijs, 2006; Jackson, 2003). The influences of social media platforms, which Gramsci (1971) might have called a new conception of the world, created interrelated core mechanisms that necessitated changes in gender identity. The neo-liberalization processes based on the predominant capitalist market economy in policy making, for instance, has used the séance ceremonies as merely an exploitation strategy to gain benefit from local belief and culture. For example, the use of *Nat* festival in Myanmar's national tourist policy provided a mystification of capitalism and neoliberalism to promote the séance ceremonies instead of highlighting inequality and gender unfairness. This conclusion is supported by several experimental studies (Choonara & Robinson, 2008; Maisuria, 2014).

The dynamic of schemas and gender flexibility so present in the séance presentations provided changes at both the micro and structural levels. At the micro level, changes in social position of transgender mediums led to the establishment of a new schema of genders. The change of three principles of becoming mediums included the overlooking of seniority, social class, and gender discrimination, and changing the successor culture from the mother clanship to the acceptance of transgender mediums. This change in abilities and skills in communication with the agents contributed to the presentation of outstanding aesthetic characters in dance performances, delicate arts like needlework, as well as in other crafts.

At the structural level, it was found that the relation between the rulers' schema of power and how they used the séance ceremony for political purposes can be studied. By introducing a new and modern concept into the ceremonies, the rulers had direct political influence in providing for the establishment of a new belief system. The rulers' static and oppressive system limited the development of new belief systems but also included opportunities for the audiences to accept different personas.

Policy Recommendations

The four case studies researched displayed rulers' use of the séance ceremonies through the reformative ideology of modernity. The performance of mediums in blessings and the new linkage of power in both symbolic and strategic forms should be studied as a socio-psychological self-healing strategy. The interrelated core mechanisms that necessitated changes in gender identity revealed inequality and gender unfairness which can be considered useful for future policy development.

References

Aksrondit, T. (2009). *Faun Phii*: *The reflection of negotiation of social power*. Tanpun-Ya Limited.

Alexander, P. A., Schallert, D. L., & Hare, V. C. (1991). Coming to terms: How researchers in learning and literacy talk about knowledge. *Review of Educational Research*, *61*(3), 315–343. https://doi.org/10.2307/1170635

Andaya, L. (2000). The Bissu: a study of a third gender in Indonesia. In B. W. Andaya (Ed.), *Other pasts: Women, gender, and history in early modern Southeast Asia* (27–46). Center for Southeast Asian Studies, University of Hawaii.

Anderson, J. R. (2000). *Cognitive psychology and its implications* (5th ed.). Worth Publishers.

Anderson, R. C. (1977). The notion of schemata and the educational enterprise: General discussion of the conference. In R. C. Anderson, R. J. Spiro, & W. E. Montague (Eds.), *Schooling and the acquisition of knowledge*. Erlbaum.

Anderson, R. C. (1978). Schema-directed processes in language comprehension. In A. M. Lesgold, J. W. Pellegrino, S. D. Fokkema, & R. Glaser (Eds.), *Cognitive psychology and instruction*. Plenum.

Anderson, R. C. (1984). Role of the reader's schema in comprehension, learning, and memory. In R. C. Anderson, J. Osborn, & R. J. Tierney (Eds.), *Learning to read in American schools: Basal readers and content texts*. Erlbaum.

Anderson, R. C., & Pearson, P. D. (1984). A schema-theoretic view of basic processes in reading comprehension. In P. D. Pearson (Ed.), *Handbook of reading research*. Longman.

Arhem, K., & Sprenger, G. (2015). *Animism in Southeast Asia*. Routledge.

Bartlett, F. C. (1932). *Remembering*. Cambridge University Press.

Bénédicte, B. P. (2002). Sibling relationships in the Nat stories of the Burmese cult to the "thirty-seven." *Moussons*, *5*, 31–48. https://doi.org/10.4000/moussons.2670

Bénédicte, B. P., & Jackson, P. A. (Eds.). (2022). *Spirit possession in Buddhist Southeast Asia: Worlds ever more enchanted*. NIAS Press.

Berger, K. S. (2011). *The developing person through the life span* (8th ed.). Worth Publishers.

Bern, S. L. (1983). Gender schema theory and its implications for child development: Raising gender-aschematic children in a gender-schematic society. *Signs*, *8*(4), 598–616. https://www.jstor.org/stable/3173685

Boellstorff, T. (2004). The emergence of political homophobia in Indonesia: Masculinity and national belonging. *Ethnos 69*(4): 465–486. https://doi.org/10.1080/0014184042000302308

Brewer, W. F. (2000a). Bartlett, functionalism, and modern schema theories. *The Journal of Mind and Behavior*, *21*(1/2), 37–44. https://www.jstor.org/stable/43853903

Brewer, W. F. (2000b). Bartlett's concept of the schema and its impact on theories of knowledge representation in contemporary cognitive psychology. In A. Saito (Ed.), *Bartlett, culture, and cognition*. Psychology Press.

Bubandt, N. (2009). Interview with an ancestor: Spirits as informants and the politics of possession in North Maluku. *Ethnography*, *10*(3), 291–316. https://doi.org/10.1177/1466138109339044

Buijs, K. (2006). *Powers of blessing from the wilderness and from heaven: Structure and transformations in the religion of the Toraja in the Mamasa area of South Sulawesi*. KITLV Press.

Chan, M. (2014). Tangki war magic: The virtuality of spirit warfare and the actuality of peace. *Social Analysis*, *58*(1), 25–46. https://doi.org/10.3167/sa.2014.580102

Chauvet, C. (2012). *Sous le voile rouge: Rituels de possession et réseaux culturels à Hà Nôi (Viêt Nam)* [Under the red veil: Possession rituals and cultural networks in Hanoi]. Les Indes Savantes.

Chonpairot, J. (2016). *Pwe* dramatic performance in Mandalay. *Mekong-Salween Civilization Studies Journal*, *7*(1), 15–30. https://so04.tci thaijo.org/index.php/jnuks/article/view/56105

Choonara, E., & Robinson, S. (2008). *Hunger in a world of plenty*. Socialist Workers Party.

Cook, S. & Pincus, J. (2014). Poverty, inequality, and social protection in Southeast Asia: An introduction. *Journal of Southeast Asia Economies, 31*(1), 1–17.

Davies, S. G. (2002, November). Sex, gender, and priests in South Sulawesi, Indonesia. *IAS Newsletter*, 27.

Davies, S. G. (2007). *Challenging gender norms: Five genders among Bugis in Indonesia*. Thomson Wadsworth.

Endres, K. W. (2011). *Performing the divine: Mediums, markets, and modernity in urban Vietnam*. NIAS Press.

Foxeus, N. (2013). Esoteric Theravada Buddhism in Burma/Myanmar. In T. Ahlbäck & B. Dahla (Eds.), *The symposium on digital religion, Åbo/Turku, Finland, 13–15 June 2012* (pp. 55–79). Donner Institute for Research in Religious and Cultural History.

Gleeson, J. (2021). *Judith Butler: We need to rethink the category of woman*. https://www.theguardian.com/lifeandstyle/2021/sep/07/judith-butler-interview-gender.

Gramsci, A. (1971). *Selections from the prison notebooks of Antonio Gramsci*. Lawrence and Wishart.

Guthrie, E. (2004). *A study of the history and cult of the Buddhist earth deity in mainland Southeast Asia* [Doctoral dissertation]. University of Canterbury.

Hayashi, Y. (2003). *Practical Buddhism among the Thai-Lao: Religion in the making of a region*. Kyoto University Press.

IJsendijk, A. R. (2023). Eight years and counting: Why the gender affirmation law matters in Viet Nam. https://www.undp.org/vietnam/blog/eight-years-and-counting-why-gender-affirmation-law-matters-viet-nam

Jackson, P. A. (2003). *Buddhadasa: Theravada Buddhism and modernist reform in Thailand*. Silkworm Books.

Jackson, P. A., & Baumann, B. (Eds.). (2021). *Deities and divas: Queer ritual specialist in Myanmar, Thailand and beyond*. NIAS Press.

Johnson-Laird, P. N. (1983). *Mental models*. Harvard University Press.

Kamchan, M. (2001). *Lao Reūang Phii Lan Na* (in Thai) [The story telling of Lan Na ghosts]. Matichon.

Kertzer, D. I. (1988). *Ritual, politics, and power*. Yale University Press.

Khaing, H. (2016, August 20). *Rites and raucous fun at the Taung Byone Nat festival*. https://www.frontiermyanmar.net/en/rites-and-raucous-fun-at-the-taung-byone-nat-festival/

Knox, R. (2007, February 5). *Vietnam Expands Protection for People with HIV*. https://www.npr.org/templates/story/story.php?storyId=7161374

Kozinets, R. (2010). *Netnography: Doing ethnographic research online*. Sage.

Lewis, I. M. (1989) [1971]. *Ecstatic religion: A study of shamanism and spirit possession*. Routledge.

Maisuria, A. (2014). The nonlinearization policy agenda and its consequences in England: A focus on resistance now and possibilities for the future. *Policy Futures in Education*, *12*(2), 286–296. https://doi.org/10.2304/pfie.2014.12.2.286

Ministry of Hotels and Tourism. (2021). *Festivals of Myanmar*. https://tourism.gov.mm/january-festivals/

Morris, R. C. (1994). Three sexes and four sexualities: Redressing the discourses on gender and sexuality in contemporary Thailand. *Positions*, *2*(1), 15–43. https://doi.org/10.1215/10679847-2-1-15

Nguyen, T. B. V. (2012). *Exhibit views mother Goddesses' worship*. Vietnamese Women's Museum.

Nguyen, T. H. (2006). A bit of spirit favor is equal to a load of Mundane Gifts': Votive paper offering of Len Dong rituals in post-renovation Vietnam. In K. Fjelstad & Nguyen T. H.

(Eds.), *Possessed by the spirits: mediumship in contemporary Vietnamese communities* (pp. 127–142). Cornell University Press.

Ongsakul, S. (2005). *Prawattisat Lan Na* (in Thai) [History of Lan Na]. Silkworm Books.

Peletz, M. G. (2002). *Islamic modern: Religious courts and cultural politics in Malaysia*. Princeton University Press.

Peletz, M. G. (2006). Transgenderism and gender pluralism in Southeast Asia since early modern times. *Current Anthropology*, *47*(2), 309–337.

Piaget, J. (1977). *The development of thought: Equilibration of cognitive structures*. Viking Press.

Ramitanon, C. (2002). *Phii Jao Nai* (in Thai) [Spirit of ancestor] (2nd ed.). Kledthai.

Rentsch, J. R., Mot, I. & Abbe, A. (2009). *Identifying the core content and structure of a schema for cultural understanding, Technical Report 1251*. United States Army Research Institute.

Rumelhart, D. E. (1980). Schemata: The building blocks of cognition. In R. J. Spiro, B. C. Bruce, & W. F. Brewer (Eds.), *Theoretical issues in reading comprehension*. Erlbaum.

Sakamoto, M. (2009). *Faun Phii: Northern Thai trance dance photo essay*. Center for Southeast Asian Studies, University of Hawai'i at Manoa.

Saksung, A. (1996). *Satri Nai Sangkhom Chiang Mai Samai Wong Chao Chuea Chet Ton* (in Thai) [Women in the Chiang Mai society in the period of the Chüa Cao Cet Ton Dynasty] [Master's thesis]. Sinlapakorn University.

Sennett, R. (2012). *Together: The rituals, pleasures, and politics of cooperation*. Yale University Press.

Spiro, M. E. (1996). *Burmese supernaturalism*. Routledge.

Strate, S. (2016). *The lost territories: Thailand's history of national humiliation*. Honolulu: University of Hawai'i Press.

Strauss, A. & Cobin, J. (1998). *Basics of qualitative research techniques and procedures for development grounded theory*. Sage Publications.

Temple, R. C. (1906). *The thirty-seven Nats: A phrase of spirit-worship prevailing in Burma by Sir R. C. Temple*, with full-page and other illustrations. W. Griggs (Printer of Plates).

Tengakson, P. (2021). *Medium*. https://thestandard.co/the-medium-5/

Thai PBS. (2023). *Mother goddess worship: The physical representation of God*. https://www.youtube.com/watch?v=CxYYe3WQqoQ

Thamrin, U. (2015). *How economy matters to indigenous identity of Bissu, Transgender priests of South Sulawesi, Indonesia*. Asia Research Institute, National University of Singapore.

Vũ, T. T. A. (2015). The modernization of Đạo Mẫu: The impact of political ideology and commercialism on the worship of the mother Goddess in Vietnam. *Journal of Indigenous Social Development*, *4*(1), 1–17. http://hdl.handle.net/10125/38517

Wyatt, D. K., & Wichienkeeo, A. (1998). *The Chiang Mai chronicle* (2nd ed.). Silkworm Books.

On the Speech Style and Humour Effect
of the Chinese Stand-up Comedy *"ROCK & ROAST"* *

การศึกษารูปแบบภาษาและการชนะใจคนด้วยอารมณ์ขัน
ของรายการ *Rock & Roast*

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Abstract

Stand-up comedy, originating from the West and now thriving in China, has become widely accessible to the general public through hit variety shows like "ROCK & ROAST." The humorous and witty expressions of stand-up comedians have made this format widely appreciated by audiences nationwide. Stand-up comedy, as a unique form of performance art, is characterized by its distinctive language style. As an improvised speech, the show needs to attract the audience quickly. Stand-up comedians usually need to be adept at using colloquial language to connect with the audience. Compared with formal written language, the speech of stand-up comedy is more concise, easier to understand, and richer in humour. This study

utilizes discourse analysis and content analysis methods. By systematically examining the transcripts of talk shows, research results: the use of modal particles, internet vocabulary, and dialect vocabulary in speech style makes the language livelier, and many words are vivid and interesting, which easily triggers humour. With over a hundred dialects spoken across China, each with its distinct vocabulary and pronunciation, dialects play a crucial role in comedy performances. They bring performers closer to their audience and provide them with diverse linguistic tools, blending humour to create distinctive punchlines. The use of dialect in a particular context highlights the regional characteristics and creates a unique atmosphere of humour.

Keywords: "ROCK & ROAST", Speech Style, Humour Effect, Chinese Stand-up Comedy

บทคัดย่อ

รายการตลกยืนเดี่ยว (Stand-up Comedy) ซึ่งมีต้นกำเนิดจากตะวันตกและปัจจุบันกำลังเฟื่องฟูในประเทศจีน กลายเป็นรายการวาไรตี้ที่คนทั่วไปเข้าถึงได้อย่างกว้างขวางผ่านรายการวาไรตี้ยอดนิยมอย่าง "ROCK & ROAST" การแสดงออกด้วยคำพูดตลกขบขันของนักแสดงตลกยืนเดี่ยวทำให้รูปแบบการแสดงนี้ได้รับความชื่นชอบจากคนทั้งประเทศ รายการตลกยืนเดี่ยวเป็นรูปแบบการแสดงที่มีเอกลักษณ์เฉพาะตัว มีรูปแบบคำพูดชัดเจน และเนื่องจากเป็นรายการที่พูดสดจำเป็นต้องดึงดูดผู้ชมอย่างรวดเร็ว นักแสดงจึงต้องมีความชำนาญในการใช้ภาษาที่เข้าใจง่ายและสามารถสร้างจุดเชื่อมโยงกับผู้ชมได้เป็นอย่างดี คำพูดในรายการตลกยืนเดี่ยวจะกระชับ เข้าใจง่าย และเต็มไปด้วยอารมณ์ขันมากกว่าเมื่อเปรียบเทียบกับภาษาเขียนที่เป็นทางการ

การวิจัยครั้งนี้ใช้การวิเคราะห์วาทกรรมและเนื้อหาจากรายการที่ถอดเสียงออกมาโดยทำการตรวจสอบข้อความในรายการตลกยืนเดี่ยวอย่างเป็นระบบ จากการศึกษาพบว่า การใช้อนุภาคกิริยาหรือคำพูดเสริมน้ำเสียง คำศัพท์ทางอินเทอร์เน็ต และคำศัพท์ภาษาถิ่นในรูปแบบคำพูด ทำให้ภาษามีชีวิตชีวามากขึ้น และคำหลายคำมีความแจ่มชัดและน่าสนใจ ซึ่งสามารถกระตุ้นให้เกิดอารมณ์ขันได้ง่าย เนื่องจากประเทศจีนมีภาษาถิ่นมากกว่าร้อยภาษา และในแต่ละภาษาจะมีคำศัพท์และการออกเสียงที่แตกต่างกันมาก การใช้ภาษาถิ่นช่วยให้นักแสดงใกล้ชิดกับผู้ชมมากขึ้น และทำให้นักแสดงมีตัวช่วยในการพูดที่หลากหลายซึ่งเมื่อผนวกกับอารมณ์ขันจะทำให้เกิดจุดที่สร้างเสียงหัวเราะได้อย่างมีเอกลักษณ์เฉพาะตัว อีกทั้งการใช้ภาษาถิ่นในบางสถานการณ์ไม่เพียงแสดงให้เห็นถึงจุดเด่นของแต่ละภูมิภาคเท่านั้น แต่ยังสร้างบรรยากาศที่ตลกขบขันที่ไม่เหมือนใครอีกด้วย

คำสำคัญ: รายการ Rock & Roast รูปแบบการพูด การชนะใจคนด้วยอารมณ์ขัน รายการวาไรตี้จีน

Introduction

"ROCK & ROAST" is a stand-up comedy competition show produced by Tencent Video, jointly produced by Penguin Film and Television, and Shanghai XiaoGuo Culture Media Co., Ltd. According to the topic of each episode, the show is based on different perspectives, using professional comedy writing ability to produce high-quality content output to meet the audience's information needs and competing with each other for the annual "Comedy King" crown.

There were over 5 million interactions with the show in just three weeks, setting a new high for growth in the 2022 Tencent Video Variety Art Pop-up Interaction and making it the best on-air variety art show during that time. Lighthouse Professional Edition data shows that the show has been the daily variety list champion seven times and made it into the top 3-month list in September, with a 22.75% market share, the highest in the show's history. According to data from Weibo (a Chinese social media platform like Twitter.) , the topic "ROCK & ROAST" has been read more than 15 billion times. Whenever a new episode airs, related topics will be at the top of the hot search list. For language variety shows, the fifth season of "ROCK & ROAST' is the top line. (The Self-Cultivation of Proper Public Relations, 2022)

It only takes five minutes for comedians from all walks of life and backgrounds to use funny words to show their lives, how they feel, and what they think about things. Their excellent word control and stage presence can make the audience laugh. The people who watched this life-themed show were very interested in it. The different ways the comedians used humour to make the show more interesting were a big part of it and the subject of this study.

Objectives

The research aims to analyze the presentation of speech styles and their causes of laughter in the "ROCK & ROAST" from a linguistic perspective.

Research Methodology

This research use discourse analysis as the core research tool to deeply explore the elements of speech style and the relationship between it and the humour effect in the program "ROCK & ROAST" from season 1 to 5.

In this study, the following steps are used to analyze speech style and humour effect systematically:

1. Collect and transcribe the performance texts of the contestants who participated in the show more than twice from season 1 to 5 to ensure the completeness and accuracy of the data.

2. Conduct a preliminary qualitative analysis to identify and classify the program's humorous speech strategies and style features.

3. Explore the reasons for the humorous effect through speech style.

Review of Relevant Literature

In the academic circle, numerous studies have delved into the linguistic analysis of "ROCK & ROAST" employing various theoretical frameworks and methodologies.

1. Construction and Efficacy of Humorous Language

Xie and Cui (2023) examined the Humorous Language in "ROCK & ROAST" is crafted using various rhetorical devices such as hyperbole, ambiguity, contrast, metaphor, and distortion. These rhetorical strategies leverage contrasts between maximal and optimal relevance, enhancing the comedic effect through audience interaction. Wang (2023) applied Relevance Theory to analyze the cognitive processes of verbal humour, revealing how "ROCK & ROAST" engages audiences through dynamic cognitive processes.

2. Sociolinguistic Perspective

From a sociolinguistic standpoint, code-switching is prevalent in "ROCK & ROAST." Wang and Liu (2022) examined code-switching in"ROCK & ROAST,"exploring its societal functions and origins. Furthermore, Wang (2022) analyzed the linguistic characteristics of the show, including style, technique, and rhythm, discussing how "ROCK & ROAST" fulfills audiences' needs for stress relief, social voyeurism, self-expression, and identity recognition.

3. In-depth Analysis of Humour Mechanisms

Presupposition theory plays a vital role in verbal humour in "ROCK & ROAST". Zhao (2020) analyzed presuppositions in "ROCK & ROAST" speeches, demonstrating how they cleverly employ presuppositions for success of comedies. Sun (2018) used pragmatic presupposition theory to analyze verbal humour in "ROCK & ROAST," unveiling the relationship between presuppositions and humour generation.

4. Multimodal Discourse Analysis

Yang (2022) employed multimodal discourse analysis to study the third season of "ROCK & ROAST," exploring linguistic, bodily expression, and background modalities. This approach offers a theoretical framework and data support for researching dynamic discourses in "ROCK & ROAST" performances.

5. Pragmatic Research

Yang (2021) examined the pragmatic features, effects, and strategies of humour in "ROCK & ROAST," providing normative recommendations to advance the development of "ROCK & ROAST."

6. Cognitive Model Theory

Hu (2022) utilized cognitive model theory to categorize and analyze verbal humour in "ROCK & ROAST," exploring humour generation mechanisms and contrasting them with traditional cross-talk and comedy sketches.

7. Social Function and Norms of Humorous Language

"ROCK & ROAST" not only entertains but also serves a satirical and critical function. The research identifies issues and proposes normative suggestions to guide the positive development of Humorous Language in "ROCK & ROAST."

8. Study of Humorous Language in Stand-Up Comedy

Wang (2022) focused on the third season of "ROCK & ROAST," studying the Humorous Language of stand-up comedy. The study delineated linguistic variations in phonetics, vocabulary, grammar, and pragmatics, including features like accentuation, intonation dynamics, harmonious rhyme, diverse vocabulary, semantic distortions, unconventional phrasing, concise expressions, independent clauses, and cohesive sentences. It elucidated the comedic techniques, mechanisms, and principles of stand-up comedy, asserting that it amalgamates phonetic, semantic, and discursive elements to satisfy incongruity, unpredictability, and straightforwardness. These humour principles align with the Incongruity Theory's disharmony-based humour and the Relief Theory's emotion-driven humour.

Based on the comprehensive analysis of existing literature, it shows that humor in stand-up comedy shows is a multidimensional phenomenon. It not only involves language arts, sociolinguistics, cognitive science, pragmatics, and multimodal discourse analysis but also closely relates to audience demands and societal cultural values. Through in-depth analyses from different researchers, common patterns and characteristics can be identified to help us gain a more comprehensive understanding of the construction and effects of humor in stand-up comedy language.

Firstly, rhetorical strategies are key means of constructing Humorous Language. Stand-up comedians create unexpected linguistic effects by using contrast, metaphor, distortion, and language or dialect switching, eliciting laughter from the audience. The application of these strategies and techniques not only showcases the linguistic creativity of comedians but also meets audiences' expectations for novelty and creative expression.

Secondly, the use of presuppositions and intentional violations of the cooperation principle are crucial mechanisms for humor generation. Comedians often set specific presuppositions and deliberately violate them at appropriate times to create humorous effects. This subversion of expectations and breaking of norms enrich the generation of humor and adds layers of complexity.

Furthermore, the integration of multimodal elements enhances the expressive power of humor. The combination of linguistic modality, body gestures, facial expressions, and

background settings in stand-up comedy programs provides a richer channel for conveying humor. Comedians' body language, facial expressions, and eye contact, along with language itself, work together to make the transmission of humor information more vivid and intuitive.

Lastly, stand-up comedy programs play an important role in satisfying audience needs and conveying social information. As a form of entertainment, stand-up comedy not only provides audiences with opportunities for relaxation and stress relief but also satirizes and criticizes social phenomena in a humorous way. This dual function allows stand-up comedy programs to strike a balance between entertainment and social responsibility.

To summarize, humor in stand-up comedy shows is a complex phenomenon that integrates various language skills, cognitive strategies, and multimodal expressions. By identifying and understanding these common patterns, A deeper insight can be gained the construction mechanisms of humor in stand-up comedy language and how it conveys societal cultural values through entertainment.

Findings

People use different types of language and styles when they talk to each other depending on the situation, the task, and the quality and personality of the people talking. There are four main types of style: everyday oral style, applied style, artistic style, and personal style. Each has its vocabulary, grammar, phonetics, rhetorical devices, and other style elements.

1. Spoken Expressions

Language is a symbol of human civilization and the most important tool of communication. It exists in two forms: oral and written. Before the emergence of written texts, human beings relied primarily on oral language for communication, thereby establishing the initial importance and roots of spoken language.

Stand-up comedy is a unique form of performance with a distinctive style of speech. This style comes from stand-up comedy, a spontaneous speech show that needs to grab people's attention quickly. Most of the time, stand-up comedians need to be good at using slang to connect with their audience. Standard written language is longer, harder to understand, and less funny than stand-up comic language. Spoken language is used for talking and listening, focusing on getting information across quickly. In face-to-face communication, there is not much time for careful consideration, so spoken language tends to be loosely structured, with more colloquial vocabulary and shorter sentences. The results of the odd slip of the tongue or catchphrase are often more surprising than expected. Shortness and looseness are essential parts of spoken language. Spoken language often uses short sentences, elliptical sentences, suggestive sentences, and broken sentences. Its grammar is also very casual. Owing to the need for more time to prepare hard words and phrases, the words are often broken up with "you know?" For instance: "What is incorrect, for instance? It

seems like the big foreign brands are having crazy clearance sales, while I, a small brand in a third-tier city, am trying to raise prices against the grain, you know?" (Yang, 2019) It does not have any real meaning; it is used to give the brain a moment to think.

The sentence needs to be better organized. Conversely, talking depends on shared and situational past knowledge, so there is no need to go into too much detail. Speaking uses many different ways to express ideas, which makes comments short and easy to understand.

One of the most basic ways people communicate is through spoken language, which has many unique qualities, such as its immediacy, variety, shortness, and reliance on context. The success and fun of talk shows are built on these traits, which also improves how people talk to each other in daily life.

1.1 Modal Particles

Modal particles are rarely used in writing because writing is formal, structured, and logical. Friendly speech is common, and sentences are short and often omitted. Using more words in a sentence makes it stronger. Spoken language is more flexible than written language when adding or removing parts of phrases. This is also reflected in modal particles. Modal particle words can be used in sentences, at the end of words, to connect them, or with other types of words. Commonly used modal particles in "ROCK & ROAST" are:

āi yā āi yōu	wā	wǒ de tiān nà	hēi	wā sāi
1.唉 呀，唉 呦	2.哇	3.我 的 天 呐	4.嘿	5.哇 塞
mā yā	wǒ qù	ō hēng	āi	yí
6.妈 呀	7.我 去	8.噢，哼	9.哎	10. 咦

There are many ways of presenting humour, including using words in context and other techniques. Modal particles can also be a good expression of humour. Modal particles are in the statement's expression because they are directly connected to the emotion, so expressing the comedian's emotion is evident. Example 1: Chizi uses intonation word to express annoyance: 唉呀，唉呦（āi yā, āi yōu）. Everyone understands at once that this is pretending to the other person, thus inducing laughter.

哇（wā）is often utilized by the comedian Wang Siwen and tends to be employed more by women than men in everyday situations. It serves not only to indicate surprise but also convey a sense of charm. When combined with expressions like 'Oh no,' 'Oh my goodness,' or 'D'oh,' it emphasizes astonishment, usually in response to something unexpectedly funny or incredible. Consequently, these expressions quickly bring about a feeling of happiness.

嘿（hēi），added at the end of the sentence in example four, has a sense of stolen joy. The wow of example five expresses surprise. In examples 8.噢，哼（ō, hēng）9.哎（āi），

the use of modal particles makes people feel that the life scene of the landscape is reproduced and that life is exciting.

咦（yí），without adding this modal particle, the whole sentence falls flat as a plain old declarative sentence. Adding a modal particle that expresses surprise and makes it funny.

1.2 Internet Vocabulary

Most of the buzzwords are generated and initially used in cyberspace. These buzzwords generated on the Internet gradually expand their application fields with the users' understanding and use of them and begin to appear in people's daily lives and other contexts such as literary works. Therefore, as far as buzzwords are concerned, internet buzzwords should be the most influential category.

As the most active language component, internet buzzwords play an essential role in the Chinese language; due to the fast speed of Internet communication and the fact that young people like freshness and novelty, popular internet words are not only used on the Internet. However, they will be quickly applied to daily life and become a part of oral expression.

The internet vocabulary in "ROCK & ROAST" are:

wò cáo			dǎ guǐ chù		
1. 卧槽	2. diss	3. BGM	4. 打call、鬼畜	5. 666	6. battle
	Kāi xuàn	diē wèi	shuān	bà bǐ bié	
7. YYDS	8. 开炫	9. 爹味	10. 栓Q	11. 爸比别Q	12. CP

卧槽 (wò cáo) is a rewording of a swear word into the most commonly used word to express surprise that has taken the Internet by storm. Until now, the word was the default consensus, an unspeakable word on TV programs broadcast to the public. It was not expected that the comedian would use the word in the segment, but instead, it would create a sense of joy.

Diss is the abbreviation of English words "disrespect or disparage", which means to look down on, despise and is used to denigrate or insult other people or groups, and is now mainly used to express dislike for someone. It has become a very trendy expression of "dislike".

BGM stands for Background Music. In this context, comedian Wang Siwen adds a layer of humour by speaking with the inflections of an old Shanghai auntie, blending it into the background to create an amusing sense of stereo surround.

打call（dǎ call）、鬼畜(guǐ chù), and deep admiration for someone as buzzwords. The main audience is young people, and the comedian is Rear Admiral Zhang Zhaozhong, born in 1952; such a trendy word is inexplicably comical when it used by such an older man.

YYDS stands for the first letters of the pinyin for the Chinese phrase "永远的神" (yǒng yuǎn de shén), which translates to "eternal god" and is used to describe something or someone as exceptionally outstanding, almost god-like. CP originates from the Japanese ACGN fan community, where it stands for "Coupling" (カップリング in Japanese), and refers to a fictional romantic pairing in fan works. Battle, YYDS, and CP are newly popular internet terms that have quickly been adopted by actors in their speech. Since their audience is typically of a similar age group, these terms are seamlessly understood when used in conversation.

开炫（kāi xuàn）、爹味（diē wèi）、栓Q（shuān Q）、爸比别Q（bà bǐ bié Q）. These words happen to be the most popular internet words of that year, popular vocabulary is usually embraced most swiftly by young people, whereas their acceptance and usage rates are comparatively lower among middle-aged and elderly individuals. Middle-aged and elderly comedians often integrate the latest internet slang into their routines, creating a significant contrast with our expectations and thereby generating humor.

1.3 Dialectal Vocabulary

Dialect vocabulary is only prevalent in a particular area; there is no general use in the common language of the Chinese people.

The dialect words in the Talk Show are:

nà ge shá	zǎ	kēng chī biě dù	zǎ zhěng	niángmén	nòng
1. 那 个 啥	2. 咋	3. 吭 哧 瘪 肚	4. 咋整	5. 娘们	6. 弄
Ne	lǎo bí zi	gāo dī	xiǎo nī ér	jiè	
7. Ne	8. 老 鼻子	9. 高 低	10. 小妮儿	11. 介	

In the use of dialectal vocabulary, excluding "娘们" (niáng mén) and "弄" (nòng) as they have a broader regional usage., the 小妮儿 (xiǎo nī er) is the Henan dialect, 介 (jiè) for the Tianjin dialect words, the rest are all northeastern dialect vocabulary. Northeastern dialect features such as 啥(shá), 咋(zǎ),啥玩意儿(shá wán yi'er) make the tone of voice words with the unique local characteristics of the Northeast, it has the characteristics of being straightforward, rough, and direct.

2. The Relationship between Humour and Dialect

This section focuses on the relationship between dialects and humour. Dialects are unique in spoken expression, mainly because they carry rich geographical and cultural characteristics, deep historical settlements, and local customs. Dialectal vocabulary is often associated with specific geographic regions, reflecting the region's social customs, lifestyles, and cultural traits. This nature makes dialects unique in style and emotion in expression and can communicate more accurately the emotions and attitudes of the speaker. Many dialects have a long history; they are the living fossils of language evolution and cultural heritage. The

vocabulary often contains stories and cultural backgrounds in the region, making them unique in cultural content and depth in their expression. Using the same dialect can evoke a common identity and sympathy. This sense of affection is an unlikely substitute for common words or popular networks (Zheng, 2012).

Comedian Uncle Wei is the host of Golden Eagle 955 Radio Station; because of the requirements of his profession, his Putonghua (mandarin, Chinese official language) is very standard. When Yang Tianzhen commented on comedian Uncle Wei 's segment in the third season of "ROCK & ROAST," she said his Putonghua was too standard, unlike a real person, less popular, with a little accent, and felt like a living person. ("ROCK & ROAST," season 3, Episode 7, 2020) The ratings of the audience and the feelings of the other comedians were also the same, so he lost to his fellow comedian competitors by only five votes. In contrast, Uncle Chang and Jiang Zihao, two comedians from the Cantonese-speaking area, performed in a way that their Putonghua with a dialectal tone, which weakened their words in conveying the message, thus reducing the humour. Based on these two situations, this section analyses the relationship between humour and dialect.

China has 56 ethnic groups and is a multi-ethnic, multi-lingual, multi-dialect and multi-script country. China has always put much effort into promoting Putonghua so that there is less of a difference between the dialects and languages spoken by different ethnic groups in different parts of the country. Article 19 of the Constitution of the People's Republic of China says, "The state promotes the nationwide use of Putonghua." (National People's Congress, 2018)

As the official language of China, Putonghua plays a vital role and is supported by the government. However, it is not quite as good as dialects when making jokes. This is why dialects are still prevalent in comedy films or TV dramas, comedies, sketches, stand-up comedy shows, and popular short videos on sites like TikTok.

2.1 Dialect

Dialects are branches and variants of languages. Dialects can be divided into two categories: regional dialect and social dialect. Regional dialect refers to the variations of the language in different regions. Borong Huang and Xudong Liao's edition of Modern Chinese divides dialects into seven major dialect areas: Northern dialect (the official dialect), Wu dialect, Xiang dialect, Gan dialect, Hakka dialect, Min dialect, and Cantonese dialect. (Huang & Liao, 2017)

According to the program's regulations, stepping onto the stage twice is required to be officially considered a contestant. The table shows the stand-up comedian's hometown:

Table 1 List of Hometowns of Stand-up Comedians

	Stand-up comedian	Native place
1	Zhou Qimo	Liaoning Province
2	Wang Jianguo	
3	Qiu Rui	
4	Li Xueqin	
5	Zhang Cailing	
6	Wang Shiqi	
7	Hu Lan	Heilongjiang Province
8	Wang Mian	
9	Niao Niao	Inner Mongolia Autonomous Region
10	Li Dan	
11	Rock	
12	Yang Mengen	
13	Yang Bo	Hebei Province
14	Xiaobei	
15	Yang Li	
16	Pang Bo	
17	Zhang Boyang	
18	Meng Chuan	Shandong Province
19	He Guangzhi	
20	Zhang Haozhe	
21	Cheng Lu	
22	Xu Zhisheng	
23	Tang Xiangyu	
24	Mao Dou	
25	Wang Siwen	Shaanxi Province
26	Bu Jingyun	
27	Tong Monan	Beijing Municipality
28	Xiaokuai	
29	House	
30	Guo Zhanhao	
31	chizi	
32	Dou Dou	Zhejiang Province

33	Yanyi, Yanyue	Jiangxi Province
34	Huang Huang	Tibet Autonomous Region
35	Da Mu	Xinjiang Uygur
36	Kamu	Autonomous Region
37	Wei Daye	Hunan Province
38	Xiaojia	Fujian Province
39	Hei Deng	Jiangsu Province
40	Kid	
41	Jiang Zihao	Guangdong Province
42	Chang Shu	
43	CY	
44	Liang Haiyuan	
45	Norah	Shanghai Province
46	Pi Qiu	Sichuan Province
47	Zhang Jun	Hubei Province
48	Wu Xingchen	No introduction
49	Bo Luo	No introduction

Only two of the 49 screened comedians could not be found outside their home country. The other 47 were mainly from the Northeast (Heilongjiang, Jilin, and Liaoning Provinces), where the accents and ways of life are very similar. The second most reported is Shandong Province, and the third most mentioned is Beijing and Hebei Province. Traditionally, the seven main dialect areas are split into the following groups:
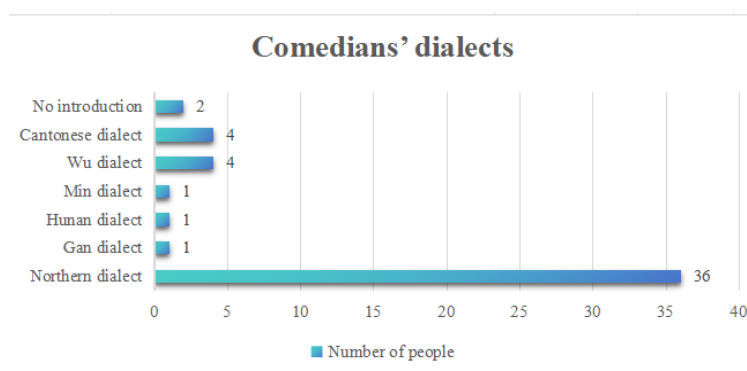
The northern dialect has the largest share, which corresponds to the fact that the northern dialect has the most speakers. The statistics on the origin of stand-up comedians show that a relatively small number of people use the southern dialect, and the understanding of dialects is low, which makes it difficult to arouse people's resonance when humour is

transmitted. Although dialects have distinct advantages and characteristics for expressing humour, not all can deliver humour well on stage due to public acceptance.

Among the eight northeastern comedians, those with distinct accents are Li Xueqin and Zhang Ceiling. Wang Jianguo has a weaker Northeastern accent, and the skits contain a lot of Northeastern dialect words, while the other five have more standard Putonghua.

Two of the Shandong comedians, Xu Zhisheng and Mao Dou, add to the humour of their segments because of their heavy dialect accents, e.g., Zhisheng "jiao měi." Because of the inability to pronounce the word "jué," it made everyone laugh. Later, he makes fun of him in the passage, and after he finds out that he is weak, no one feels sympathy for him. Some people laugh at his accent. Mao Dou's accent is heavier than Xu Zhisheng's, but it did not cause any difficulty in understanding; instead, the accent was very much in line with his experience as a soldier, which added special element to his segment. Norah, who is from Shanghai, adds a certain amount of Shanghainese dialect to her segments to recreate the scene of her own life, which is also very interesting. Cheong Uncle and CY, both Cantonese-speaking comedians, incorporate Cantonese vocabulary into their segments, as the difference between Cantonese and Putonghua is too great, resulting in a much lower acceptance level, which weakens the delivery of the punchline. In addition to the Shandong dialect, which has accidentally left the circle, the Northeast dialect still occupies the first place in the field of humour in "ROCK & ROAST."

2.2 Causes of Humour in the Northeast Dialect

As per You Rujie's analysis, the term "Official Dialect," synonymous with Northern Putonghua or Northern Dialect, is subdivided into eight regions based on the criteria of "ancient entering tones and modern tone categories." These regions are delineated as the Beijing Official Dialect Region, Northeast Official Dialect Region, Hebei-Shandong Official Dialect Region, Jiaoliao Official Dialect Region, Central Plains Official Dialect Region, Lanyin Official Dialect Region, Southwest Official Dialect Region, and Jianghuai Official Dialect Region. Characteristics specific to Northeast Official Dialect include the transition of ancient entering tones with clear initial sounds into Yin Ping, Yang Ping, Shang Sheng, and Qu Sheng. A noteworthy difference from Beijing Official Dialect is the increased prevalence of ancient entering tones with clear initial sounds pronounced as Shang Sheng. Furthermore, the pitch values of Yin Ping tones are generally lower than those in the Beijing dialect. Most local dialects in this region lack the [ʐ] initial sound, found in Beijing Official Dialect and pronounced as zero initial sound. Northeast Official Dialect is prevalent in most Heilongjiang, Jilin, and Liaoning provinces (You, 2004).

The Northeastern dialect system is open, concise, vivid, graphic, rough, and bold but humorous, showing a strong vitality (Sheng & Han, 2006). Zhou's (2007) study found: "As a cultural system, Northeastern folk humor significantly shapes and sustains the daily lives and thinking of its people" (pp. 140-150).

The art of laughter in the Northeast is manifested in various linguistic expressions using the Northeastern dialect as the primary medium. This form exists in everyday conversations between Northeasterners, is incorporated into folk tunes, and is reflected in literary works that record Northeastern legends and beliefs and depict Northeastern life. Today, Northeastern dialect humour is so prevalent in Northeastern comedies that its influence has spread across the country and has won the hearts of fun-loving audiences around the globe.

As an essential part of Northeastern culture, the dialect vividly captures the region's diverse cultural elements, including its history, natural surroundings, production lifestyle, and unique characteristics. Influenced by Northeast China's rich historical and cultural heritage, the locals have developed an optimistic personality, viewing smile as a common response to life's challenges and hardships. The Northeastern people's cheerful and optimistic disposition is expressed through the humour embedded in the Northeastern dialect.

The Northeastern dialect is used predominantly as its primary medium for various linguistic expressions in the humour art in the Northeast region. This form is present in the daily conversations among Northeastern people, seamlessly blending into folk performing arts. Moreover, it is expressed in literary works that document Northeastern legends and beliefs and portray the region's daily life. Today, humour rooted in the Northeastern dialect is widely popular in comedic works within the Northeast.

In the early 1990s, figures like Zhao Benshan, Gong Hanlin, and Pan Changjiang brought forth productions such as "Thirteen Fragrances" "Facing Each Other" "Mahjong·Tofu" and "Such Competition" Over the subsequent decades, Zhao Benshan collaborated with Fan Wei, Gao Xiumin, Song Dandan, producing a series of works with distinct Northeastern characteristics, including "Selling Cars" "Selling Crutches" "Yesterday·Today·Tomorrow" "Delivery Water Worker" "Kung Fu" and "Talking Affairs" These works consistently held the dominating position in the China Central Television's Spring Festival Gala, to the point that the presence of entertaining and laughter-inducing sketches became a crucial criterion for evaluating the success of the annual Spring Festival Gala (Xue, 2005).

When the proportions of various regional dialects were compared, Northeastern dialect comedies took the lead. During the 2004 Spring Festival, the TV drama "Ma Dashuai," directed by Zhao Benshan, received 28% viewership in the three Northeast Chinese provinces, with Harbin receiving 46%. Compared to other dialects, the Northeastern dialect has a lower comprehension threshold and is notable for its comedic effects. As a result, it became popular with viewers far beyond the Northeast. When "Liu Laogen" aired on CCTV-1 in 2002, it attracted more than 10% of the audience. "Ma Dashuai," which aired on CCTV-8, also attracted a 10% viewership. During the first season of "Country Love" in 2006, CCTV had an average viewership of around 11%. The second season aired on CCTV

in 2007 and had an average viewership of 8.64%, with single-episode ratings surpassing "Xinwen Lianbo." No other regional dialect TV dramas have aired during CCTV primetime.

Nationally acclaimed TV dramas, such as "Wulin Wai Zhuan"and "Chu Shi Ban De Gu Shi," incorporate dialects from regions like Northeast, Shaanxi, Shandong, Fujian, Hubei, and Sichuan. "Passionate Years" and "Country Love" are primarily in the Northeastern dialect. "My Brother is Shunliu" features Hubei, Henan, and Tianjin dialects. The movie "Speak Well if You Have Something to Say" uses Northeastern, Beijing, and Shaanxi dialects. "Crazy Stone" is mainly in Chongqing dialect, interspersed with Hebei, Shandong, and Tianjin dialects. "Perfect Ten" utilizes Yunnan, Hebei, and Northeastern dialects. "Cell Phone" includes dialects from Henan and Sichuan. "Hot Tofu in a Hurry" uses the Baoding dialect in Hebei. "Aunt's Postmodern Life" features Shanghai dialect. "Let the Bullets Fly" even released a complete version in Sichuan dialect, and so on. Regarding the distribution of dialects by province, the majority belong to the Northern dialect area, including Northeast, Tianjin, Shaanxi, Shandong, Shanxi, Hebei, Henan, Hubei, Sichuan, Chongqing, etc. Hunanese belongs to the Xiang dialect area, Shanghainese belongs to the Wu dialect area, and Fujianese belongs to the Min dialect area.

In 2014, Zhiguo Wang and Bingnian Liu used the Questionnaire Star website to send out a survey. They got 203 valid answers. Only 1.48% of the people who answered were younger than 18; 51.23% were between the ages of 18 and 30; 37.93% were between the ages of 31 and 40; 7.39% were between the ages of 41 and 50; and 1.97% were between the ages of 51 and 60. The question that was looked at through the statistics was: Which dialect would be interesting for the audience of the show? The poll found that 39.41% of people who answered were interested in programs using the Beijing dialect. This was followed by 34.98% interested in programs using the Northeastern dialect. The rate at which Beijing and Northeastern dialect programs win is much higher than other dialect programs and is in the top tier. The survey asked people how they felt when they listened to or watched dialect programs. The results showed that people felt calm (64.04%) and friendly (58.13%) when they listened to or watched dialect programs. They also found the programs funny (46.8%), which helped them relax. Also, 35.96% of those who answered thought that getting speech programs made them feel like they belonged. The majority of respondents do not believe that dialect programs have a negative impact on the promotion of Putonghua. Only a few respondents think that dialect programs impede the promotion of Putonghua. The poll results show that 90.15 percent of people think that dialect and Putonghua programs will not stop the development of Putonghua as long as they keep the right balance. Not even 9.85% of those who answered think that dialect programs should be banned because they take away from the educational purpose of language-based media. Answers to the poll question about how people feel about keeping dialect programs or not showing them show that most people like dialect programs and hope they can be kept. 33% of those who answered said they were very much in favor of keeping dialect programs, and 62.07% said they were in favor of it. A few people (3.45%) said they do not agree with keeping dialect programs on, and another 1.48% said

they highly disagree with keeping dialect programs on (Wang & Liu, 2014, pp Zhao, Q. Q. (2020). 23-24).

In 2021, China Youth School Media conducted a dialect questionnaire survey for 900 college and university students across China, which showed that the TOP 3 most popular dialects were Northeastern, Sichuan, and Cantonese. Dialect of northeast: nǐ chǒu shá？（你瞅啥）56.17%, Cantonese: liáng zǎi（靓仔）44.61%, Sichuanese: zuò shǎ zi（做啥子）37.15% (Sina.com, 2022)

In comedy, the Northeast dialect has always accounted for a significant proportion of years of deep cultivation; the accent of the Northeast dialect and humour are closely linked; we have equated the Northeast dialect with humour due to the Northeast region in the field of comedy in the emergence of a very large number of talented people, so it is even more to strengthen this perception.

Conclusion

Compared to the strict structure of written language and the elegance of the words used, spoken language has a looser structure, the use of tone words, network vocabulary, and dialect vocabulary is more colloquial and life-like, and many vocabulary words are vivid and interesting, as well as more likely to elicit humour. This colloquial term adds a casual and amusing tone to the play, making it simpler for the audience to connect and laugh.

The show's usage of dialect is particularly noteworthy. Some particularly Chinese Northeastern dialects are purposefully inserted into segments by the performers. Some comedians have non-standard Putonghua pronunciation, but their use of dialect phonetics and vocabulary has become their personal characteristic. Dialect gives artists a diverse linguistic instrument and generates unique punchlines when combined with humour. Dialect in a certain setting emphasizes regional traits and generates a distinct sense of comedy.

While this study has yielded some interesting findings, there are also several limitations:

Firstly, this study only selected "ROCK & ROAST" as the research subject and did not cover other comedy shows. Future research could consider expanding the scope of research subjects to gain a more comprehensive understanding of humor expression styles and genres.

Secondly, the analysis in this study primarily focused on textual and discursive aspects and did not delve into the audience's reception and response. Further research could employ methods such as audience feedback and psychological experiments to gain deeper insights into how audiences perceive and react to humor in comedy shows.

Additionally, this study did not conduct a detailed comparison of different seasons of "ROCK & ROAST" programs but rather analyzed them as a whole. Future research could consider comparing each season and then all five seasons to reveal trends in program development and changes.

References

Hu, G. W. (2022). *A study of talk show language under the cognitive model theory* [Master's thesis, Sichuan Normal University]. China National Knowledge Infrastructure. https://kns.cnki.net/KCMS/detail/detail.aspx?dbname=CMFD202301&filename=1022034546.nh

Huang, B., & Liao, X. (2017). *Modern Chinese. Volume 1 (Revised 6th ed.).* (in Chinese). Higher Education Press.

National People's Congress. (2018, March 11). *Constitution of the People's Republic of China (2018 Amendment)*. Xinhua News. Retrieved May 31, 2024, from http://www.xinhuanet.com/politics/2018lh/2018-03/22/c_1122572202.htm

"ROCK & ROAST" Season 3, Episode 7. (2020, September 2). Retrieved June 19, 2024, from Tencent Video https://v.qq.com/x/cover/mzc00200lhn9f21/m00340axepw.html

Sheng, L. Ch., & Han, M. (2006). The relationship between northeastern dialects and regional culture. *Journal of Changchun Normal University, 11*, 74-77.

Sina.com. (2022, January 11). *"Lone Brave" makes "cicada larvae" popular*. Sina. Retrieved October 31, 2023, from http://k.sina.com.cn/article_1988518703_7686632f001011jdt.html

Sun, X. (2018). A brief analysis of language in talk shows—Taking Season 3 of "ROCK & ROAST" as an example. *Chinese Character Culture, 7*, 18-20. doi:10.14014/j.:CNKI.cn11-2597/g2.2021.07.009

The Self-Cultivation of Proper Public Relations. (2022, November 21). *Stand-up comedy on the ceiling: How long can the "comedic effect" last?* Baidu. Retrieved July 2, 2023, from https://baijiahao.baidu.com/s?id=1750113164489040755&wfr=spider&for=p.c.

Wang, C. (2022). *A study of Humorous Language in stand-up comedy* [Master's thesis, Central China Normal University]. China National Knowledge Infrastructure. https://kns.cnki.net/KCMS/detail/detail.aspx?dbname=CMFD202301&filename=1022091302.nh

Wang, J. X. (2023). A cognitive analysis of verbal humor in "ROCK & ROAST" from the perspective of comprehension theory. *Western Radio and Televisi*on, 5, 92-94. doi:CNKI:SUN:XBGS.0.2023-05-031

Wang, J. Y. (2022). The language art of talk shows and audience alignment—Taking Season 4 of "ROCK & ROAST" as an example. *Media Forum, 22,* 57-60. doi:CNKI:SUN:CMLT.0.2022-22-017

Wang, X. J., & Liu, H. (2022). An analysis of rhetorical strategies in Humorous Language in "ROCK & ROAST". *Cai Xie Bian, 12,* 155-157. doi:CNKI:SUN:CXBI.0.2022-12-053

Wang, Zh. G., & Liu, B. (2014). Investigation on the reception of dialect programs. *Youth Journalist,* (34), 23-24.

Xie, J., & Cui, M. W. (2023). A study on rhetorical devices in Humorous Language of talk shows from the perspective of relevance theory—Taking Season 4 of "ROCK & ROAST" as an example. *Journal of Chuzhou University, 4,* 43-49. doi:CNKI:SUN:CZSB.0.2023-04-009

Xue, Ch. R. (2005). An analysis of the artistic charm of northeast dialect sketches. *Heilongjiang Historical Records,* (11), 30-31.

Yang, J. (2021). *A pragmatic study of talk show language: A case study of "Talk Show Conference"* [Master's thesis, Beihua Normal University]. https://kns.cnki.net/KCMS/detail/detail.aspx?dbname=CMFD202201&filename=1021750024.nh

Yang, L. (2019, August 4). Episode 3 of Season 2 of *"ROCK & ROAST."* Retrieved June 19, 2024, from Tencent Video https://v.qq.com/x/cover/mzc00200iqko65a/f0041payivr.html

Yang, L. F. (2022). *A multimodal discourse study of "ROCK & ROAST"* [Master's thesis, Harbin Normal University]. China National Knowledge Infrastructure. https://kns.cnki.net/KCMS/detail/detail.aspx?dbname=CMFD202202&filename=102249 1134.nh

You, R. J. (2004). *Hàn yǔ fāng yán xué dǎo lùn* (A course in Chinese dialectology). (in Chinese), Shanghai Education Press.

Zhao, Q. Q. (2020). An analysis of verbal humor in "ROCK & ROAST" from the perspective of presupposition. *Cultural Innovation Comparative Research, 11,* 48-49. doi:CNKI:SUN:WCBJ.0.2020-11-020

Zheng, Z. S. F. (2012). Formation of Chinese dialect characteristics and analysis of historical levels. *Journal of Linguistic Studies,* (00), 1-5.

Zhou, F. Y. (2007). Dialects, errenzhuan, and the issue of northeastern regional culture. *Folklore Research,* (02), 140-150.

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