Journal
of Liberal Arts

Prince of Songkla University

Journal
of Liberal Arts

Prince of Songkla University

Journal of Liberal Arts, Prince of Songkla University

Publisher
Faculty of Liberal Arts, Prince of Songkla University, Hat Yai Campus

Focus and Scope
The Journal of Liberal Arts, Prince of Songkla University publishes original manuscripts on current research and issues in language and language education, cultural studies, as well as social sciences. The journal welcomes contributions especially in the following areas:

Language and Language Education
First and second language acquisition
Language professional development
Language teaching and learning
Literature, linguistics, and discourse analysis

Cultural Studies
Folklore studies
Creative culture
Cultural tourism
Cultural communication

Social Sciences
Sociology
Psychology
Sociocultural anthropology
Tourism and hospitality management
Education

Advisory Board
Dean of Faculty of Liberal Arts
Prince of Songkla University, Thailand

Associate Professor Nathasorn Angsuviriya, Ph.D.
Prince of Songkla University, Thailand

Associate Professor Prasong Tanpichai, Ph.D.
Kasetsart University, Thailand

Associate Professor Punya Tepsing, Ph.D.
Prince of Songkla University, Thailand

Associate Professor Rewadee Ungpho, Ph.D.
Prince of Songkla University, Thailand

Associate Professor Sarah Ablagon Galang, Ph.D.
Carlos Hilado Memorial State University, Philippines

Associate Professor Wanna Numun, Ph.D.
Prince of Songkla University, Thailand

Associate Professor Yothin Sawangdee, Ph.D.
Mahidol University, Thailand

Associate Professor Chaleosri Piboonchon
Thailand

Assistant Professor Alejandro Azocar, Ph.D.
University of Wisconsin-Madison, USA

Assistant Professor Anuchit Toomaneejinda, Ph.D.
Thammasat University, Thailand

Assistant Professor Keeratiporn Jutaviriya, Ph.D.
Khon Kaen University, Thailand

Assistant Professor Kettawa Boonprakarn, Ph.D.
Hatyai University, Thailand

Assistant Professor Malee Sabaiying, Ph.D.
Thailand

Assistant Professor Naratip Jindapitak, Ph.D.
Prince of Songkla University, Thailand

Assistant Professor Pimpawan Chaipanit, Ph.D.
Prince of Songkla University, Thailand

รองศาสตราจารย์ ดร.อนุสรณ์ อุณโณ
มหาวิทยาลัยธรรมศาสตร์ ประเทศไทย

รองศาสตราจารย์ เฉลียวศรี พิบูลชล
ประเทศไทย

ผู้ช่วยศาสตราจารย์ ดร.กีรติพร จูตะวิริยะ
มหาวิทยาลัยขอนแก่น ประเทศไทย

ผู้ช่วยศาสตราจารย์ ดร.เก็ตถวา บุญปราการ
มหาวิทยาลัยหาดใหญ่ ประเทศไทย

ผู้ช่วยศาสตราจารย์ ดร.นราธิป จินดาพิทักษ์
มหาวิทยาลัยสงขลานครินทร์ ประเทศไทย

ผู้ช่วยศาสตราจารย์ ดร.พิมพวรรณ ใช้พานิช
มหาวิทยาลัยสงขลานครินทร์ ประเทศไทย

ผู้ช่วยศาสตราจารย์ ดร.มาลี สบายยิ่ง
ประเทศไทย

ผู้ช่วยศาสตราจารย์ ดร.สุรีย์ ชุณหเรืองเดช
จุฬาลงกรณ์มหาวิทยาลัย ประเทศไทย

ผู้ช่วยศาสตราจารย์ ดร.อนุชิต ตู้มณีจินดา
มหาวิทยาลัยธรรมศาสตร์ ประเทศไทย

ดร.บุษกร โกมลตรี
มหาวิทยาลัยสงขลานครินทร์ ประเทศไทย

ดร.พิชามญชุ์ บุญสิทธิ์
มหาวิทยาลัยสงขลานครินทร์ ประเทศไทย

ดร.ศุภชัย ชาญวรรณกุล
มหาวิทยาลัยมหิดล ประเทศไทย

ดร.ห้าวหาญ ทวีเส้ง
มหาวิทยาลัยสงขลานครินทร์ ประเทศไทย

ดร.แทนพันธ์ เสนะพันธุ์ บัวใหม่
มหาวิทยาลัยสงขลานครินทร์ ประเทศไทย

รองศาสตราจารย์ ดร.วิษณุพงษ์ โพธิพิรุฬห์
มหาวิทยาลัยสงขลานครินทร์ ประเทศไทย

รองศาสตราจารย์ ดร.ศศ วัฒนโภคากุล
มหาวิทยาลัยมหิดล ประเทศไทย

รองศาสตราจารย์ ดร.สมศักดิ์ ศรีสันติสุข
มหาวิทยาลัยขอนแก่น ประเทศไทย

ผู้ช่วยศาสตราจารย์ ดร.จงรักษ์ เลี้ยงพาณิชย์
มหาวิทยาลัยขอนแก่น ประเทศไทย

ผู้ช่วยศาสตราจารย์ ดร.ไซนี แวมูซอ
มหาวิทยาลัยสงขลานครินทร์ ประเทศไทย

ผู้ช่วยศาสตราจารย์ ดร.เด่นชัย ปราบจันดี
มหาวิทยาลัยบูรพา ประเทศไทย

ผู้ช่วยศาสตราจารย์ ดร. ปิยะพร ปุณณกะศิริกุล
มหาวิทยาลัยขอนแก่น ประเทศไทย

ผู้ช่วยศาสตราจารย์ ดร.ภาสนันท์ อัศวรักษ์
มหาวิทยาลัยเทคโนโลยีพระจอมเกล้าธนบุรี ประเทศไทย

ผู้ช่วยศาสตราจารย์ ดร.วิสุทธิ์ สีนวล
มหาวิทยาลัยเทคโนโลยีราชมงคลธัญบุรี ประเทศไทย

ผู้ช่วยศาสตราจารย์ ดร.อรรถพล คำเขียน
มหาวิทยาลัยธรรมศาสตร์ ประเทศไทย

ผู้ช่วยศาสตราจารย์ ดร.อารณีย์ วิวัฒนาภรณ์
มหาวิทยาลัยรังสิต ประเทศไทย

ผู้ช่วยศาสตราจารย์ปวิธ สิริเกียรติกุล
มหาวิทยาลัยรามคำแหง ประเทศไทย

ดร.กิตติชัย นิลอุบล
มหาวิทยาลัยขอนแก่น ประเทศไทย

ดร.บุษกร โกมลตรี
มหาวิทยาลัยสงขลานครินทร์ ประเทศไทย

อาจารย์ศิรประภา รัตนรวมการ
มหาวิทยาลัยราชภัฏสุรินทร์ ประเทศไทย

Associate Professor Budi Waluyo, Ph.D.
Walailak University, Thailand

Cherish How, Ph.D.
Universiti Malaya, Malaysia

ผู้พิสูจน์อักษร

ผู้ช่วยศาสตราจารย์มูนีร แลฮะ
มหาวิทยาลัยสงขลานครินทร์ ประเทศไทย

อาจารย์ชุติมา สว่างวารี
มหาวิทยาลัยสงขลานครินทร์ ประเทศไทย

Cherish How, Ph.D.
Universiti Malaya, Malaysia

Mr. Jens Martin Franz
มหาวิทยาลัยสงขลานครินทร์ ประเทศไทย

กำหนดการเผยแพร่ 2 ฉบับต่อปี

ฉบับที่ 1 มกราคม - มิถุนายน
ฉบับที่ 2 กรกฎาคม - ธันวาคม

เลขานุการวารสาร

นางสาวญารีนา แท่นทอง
งานวิจัยและวารสาร คณะศิลปศาสตร์
มหาวิทยาลัยสงขลานครินทร์

Contents

Contents

(7) Review Article

Teamwork and Communication among Healthcare Professionals in Thailand:
Perspectives of Organizational Psychology on Socio-Cultural Challenges

Porntep Chantarakamol
ID: 294108, pp. 1-13

Using Khmer Ancient Folktales to Guide Local Development in Northeastern Thailand: A Case Study of Nakhon Ratchasima and Buriram

การใช้นิทานโบราณสถานขอมเป็นแนวทางพัฒนาท้องถิ่นไทย

ภาคตะวันออกเฉียงเหนือ: กรณีศึกษานครราชสีมาและบุรีรัมย์

Duangden Boonpok[1]

ดวงเด่น บุญปก

Sathit Songsup[2]

สาธิต ทรงทรัพย์

Pathima Pojanasunthorn[3]

ปฐิมา พจนสุนทร

Kritsada Thanakun[4]

กฤษดา ทานะคุณ

Abstract

The purpose of this research is to study the folktales of Khmer stone temples in Nakhon Ratchasima and Buriram provinces in order to analyze them and develop guidelines for community development based on local cultural heritage. The research methodology involved field data collection, using snowball sampling and purposive selection methods to identify and connect with key individuals. Data were collected through interviews, observations, and participation in local ceremonies and festivals. The findings indicate that the story of "Pachit Orapim" is very popular and widely known in these areas. It conveys a modern love story in which the protagonist falls in love with Orapim and emphasizes the

[1-4] *Affiliation:* Faculty of Humanities, Srinakharinwirot University, Thailand

หน่วยงาน: คณะมนุษยศาสตร์ มหาวิทยาลัยศรีนครินทรวิโรฒ ประเทศไทย

Corresponding Author: Duangden Boonpok
E-mail: duangden@g.swu.ac.th

roles of talented women. Another folktale—about women and men competing to build Khmer stone temples—presents the power of women who stand up to fight for changes in culture and tradition, as well as showing women's empowerment. The story of the god Narayana at Prasat Phanom Rung reveals the villagers' beliefs and understanding regarding the god Narayana and the hermit Narayana. Regarding the tale of Lawo village, a female statue excavated by the villagers—named "Nang Lawo"—was later believed to represent the female Bodhisattva Prajnaparamita. This reflects the villagers' reverence for Nang Lawo as a guardian spirit who protected their community. The findings, based on the small group discussion, revealed that the communities should also consider environmental factors and facility development for the benefit of people's daily life. Additionally, promoting cultural tourism through various activities is essential. Communities must build local brands for marketing, advertising and public relations.

Keywords: Folktale, Khmer Stone Temple, Community Development

บทคัดย่อ

การวิจัยนี้มีวัตถุประสงค์เพื่อศึกษาเรื่องเล่าชาวบ้านเกี่ยวกับปราสาทขอมในจังหวัดนครราชสีมาและบุรีรัมย์ เพื่อวิเคราะห์ข้อมูลและเสนอแนวทางการพัฒนาชุมชนจากฐานมรดกทางวัฒนธรรมของท้องถิ่น โครงการวิจัยเก็บข้อมูลภาคสนาม โดยใช้เทคนิคสโนว์บอล และวิธีการคัดเลือกแบบเจาะจงเพื่อติดต่อคนในท้องถิ่น เก็บข้อมูลโดยวิธีสัมภาษณ์ การสังเกต และการเข้าร่วมพิธีกรรมและเทศกาลในท้องถิ่น ผลการวิจัยพบว่าเรื่อง "ปาจิต-อรพิม" ได้รับความนิยมอย่างมากและแพร่หลายในพื้นที่ เรื่องปาจิตอรพิมถ่ายทอดเรื่องราวความรักสมัยใหม่ที่ตัวเอกตกหลุมรักอรพิม และส่งเสริมบทบาทของผู้หญิงที่มีความสามารถ นิทานพื้นบ้านเรื่องอื่นที่เกี่ยวกับผู้หญิงและผู้ชายที่แข่งขันกันเพื่อสร้างปราสาทหินสะท้อนพลังผู้หญิงที่ต่อสู้เพื่อการเปลี่ยนแปลงวัฒนธรรมและประเพณี แสดงให้เห็นถึงศักยภาพผู้หญิง เรื่องพระนารายณ์ที่ปราสาทพนมรุ้งทำให้ทราบถึงความเชื่อและความเข้าใจของชาวบ้านเกี่ยวกับพระนารายณ์และฤๅษีนารายณ์ เรื่องท้องถิ่นของหมู่บ้านละโว้คือการขุดพบรูปเคารพสตรี ชาวบ้านเรียกชื่อว่า "นางละโว้" และต่อมาเชื่อกันว่านางละโว้คือพระโพธิสัตว์ปรัชญาปารมิตา เรื่องนางละโว้ทำให้ทราบว่าชาวบ้านเคารพนางละโว้ในฐานะสิ่งศักดิ์สิทธิ์ที่ปกป้องคุ้มครองหมู่บ้าน ผลการศึกษาจากการอภิปรายกลุ่มย่อยพบว่าชุมชนควรพิจารณาปัจจัยด้านสิ่งแวดล้อมและการพัฒนาสิ่งอำนวยความสะดวกเพื่อประโยชน์ใช้สอยในชีวิตประจำวันของประชาชน นอกจากนี้ การส่งเสริมการท่องเที่ยวเชิงวัฒนธรรมผ่านกิจกรรมต่าง ๆ เป็นสิ่งสำคัญอย่างยิ่ง ชุมชนต้องสร้างตราสินค้าของท้องถิ่นเพื่อการตลาด การโฆษณา และการประชาสัมพันธ์

คำสำคัญ: นิทานชาวบ้าน ปราสาทขอม การพัฒนาชุมชน

Introduction

This research aims to study folktales related to the ancient Khmer stone temples located in Nakhon Ratchasima and Buriram provinces. These stories, told by local villagers, are very important since they embody the intangible cultural heritage of local wisdom, language, and literature. The stories have been passed down in these areas for generations. Storytelling has long played a vital role in folk history and served as a means to trace the history of places, important people, and local settlements.

Maneechoti et al. (2022) stated that the essence of folktales lies in their ability to connect the past to the present. They are used to educate local people about the history of important places, which can eventually foster a sense of commitment to the locality, leading to cultural resilience based on oral narratives. These stories recount the history of local communities and explain the origins of various aspects, such as culture, beliefs, local names, and people.

Sunthornphesat (2005) pointed out that the study of folktales can build an understanding of factors influencing social changes, human development, and the way of life and culture of the local communities. Similarly, Walliphodom (1998) noted that folktales are intertwined with the history of people at both local and national levels. Storytelling serves as a paradigm for creating shared values. It fosters collective consciousness by enabling people in a nation to perceive shared meanings and become familiar with common narratives.

Folktales were created by ancient peoples to explain the relationships between people and their localities. These tales are closely tied to localities and have amazingly existed from ancient times to the present. They should be used to foster innovations for fundamental development, empower local communities, and enhance local values based on cultural heritage. Folktales are at the root of customs, traditions, rituals, and symbols that unite local people and help instill moral and ethical awareness (Nimmanahaeminda, 2008).

The Fine Arts Department has registered many Khmer stone temples in Thailand and continues to conduct research on archaeological issues and art history. However, folktales have not been a main focus and are rarely documented (Thailand. Kong Borannakhadi, 1993, 1995, 1996). According to the Borisat Moradoklok's survey on the number of Khmer stone temples in northeastern Thailand, a total of 110 archaeological sites have been discovered (Borisat Moradoklok, 1992). The research on folktales in the northeastern region by Thammawat (2006) found only a small number of folktales related to Khmer stone temples because this study focused on the survey and collection of language and cultural heritage in general.

The stories about the Khmer stone temples remain in the memories of local people, as evidenced by information collected through interviews. The methods of scouting, questioning, expanding the results, and asking local people to refer others, like in a snowball technique, were used to find individuals who could share these stories. This research project aims to collect folktales related to ancient Khmer stone temples to serve both academic purposes and local community interests and explore ways to develop these stories for the benefit of the local community, particularly by enhancing their economic value through sustainable tourism.

Objectives of the Study

      1. To study folktales related to Khmer stone temples and Khmer sculptures in the areas of Nakhon Ratchasima and Buriram provinces

      2. To present guidelines for local development based on the folktales of Khmer stone temples and Khmer sculptures

Research Methodology

This research project was conducted using a purposive sampling method. The main research areas were Nakhon Ratchasima and Buriram provinces. The content scope focused on the stories told by local people about Khmer stone temples, as well as written documents. The methods of data collection included interviews, observations, and participation in local ceremonies and festivals. In this study, a snowball technique was used to connect with people who lived in the area, worked for museums or cultural centers, or were masters of ceremonies, teachers, wise men, local sages, or related scholars. These individuals were asked to recommend others who were knowledgeable about folktales related to Khmer stone temples. The research began with a survey of relevant documents. The next step involved planning and collecting fieldwork. Then, the collected data were categorized, and a data file was created and analyzed based on predefined concepts and theories. The final step was to summarize and present the research findings.

In terms of the success and value of the research, it is expected that local institutions, such as temples, schools, communities, museums, libraries, and other involved agencies, will be able to apply the research findings to the educational management of intangible cultural heritage. The research report is anticipated to be valuable for formal, non-formal, and lifelong education in local studies. This approach aims to contribute to the development of people and society toward sustainable communities.

Theories and Key Concepts

The concept or theory used in this research is based on the narrative analysis of lives and biographical research.

Narrative analysis of lives was introduced by Roberts (2002). He points out that life narrative studies have become an important part of analyzing life experiences and identities in relation to social groups, situations, and events. It has been argued that storytelling and its analysis are alternative ways to understand both individual and social life. Life narrative studies focus on the individual's meanings and experiences, with the narrator telling the story as someone who is part of a society. In qualitative research, this approach is used to refer to data, discourse, and the context for understanding things that exist in the narrator's social and cultural space.

Storytelling represents an account of an individual's life experiences, involving both phenomena and methods; the former refers to the stories people tell about their lives, whereas the latter relates to the performances of what we perceive as members of society. The study of folktales, particularly through the stories of individuals and groups, has played an increasingly important role in storytelling, life stories, and related analyses. Additionally, the analysis of myths, originated from

history, anthropology, and semiology, also contributes greatly. What each person tells is often shaped by the continuous exchange of experiences with other members of society.

Bold (2012) studied the use of narrative in research. She highlighted the relationship between reflection and storytelling across various social settings. People share stories based on their experiences through specific methods of data collection and analysis. Storytelling is used in diverse forms, at different stages, and as appropriate to the context. People share what interests them, then elaborate on and demonstrate their own knowledge and understanding. These shared ideas contribute to societal discussions about the nature of reflection and reflection itself. Narratives should convey the events of human life, reflect human interests, and support the process of sense-making, the ability to transform life and its surrounding context.

Andrews et al. (2012) explained the narrative research method, emphasizing that storytelling is a way to make sense of human experiences that are centered around individuals. We can understand stories from personal experiences because of what they refer to as the second-order characteristic of storytelling. Storytelling serves as an important way of interpreting life. Humans are naturally inclined to tell and comprehend stories, and there exists a special relationship between people and stories. This perspective considers human morality, which is both developed and transmitted through meaningful storytelling activities.

All stories, therefore, are moralistic to some extent not only because they always involve both a listener and a speaker, but also because storytelling itself constitutes and sustains society. In narrating a story, the storyteller speaks as a social being, with an imagination that others will understand the story. Meanwhile, the researcher presents a narrative that is more centered on lived experiences.

Biographical research, as outlined by Roberts (2002), focuses on studying individual lives, experiences, and historical stories drawn from memory telling evidence that comes from individuals. According to the principle that each person has a unique life story, an individual story is a story of one person. When many people tell different stories or share different experiences, those stories become the oral history of the people and the oral history of society or the nation. Biographical research is a qualitative research approach. It provides a mind-map at the community level and even at large units such as society, the nation, and international levels. The concept and theory of biographical research consider the narrative of a person told directly from their life experiences. People tell what they have witnessed and experienced in their lives. They tell it from their memories during times gone by, making others and the next generations aware. It is very interesting in terms of the value and legacy of memories for society. An important aspect of the biographical research approach is that the researcher must know how to integrate many fields of study, know how to exchange opinions, and be able to work with others. Therefore, research in an area must take into account relevant environmental factors in order to be used as a guideline for work. The researcher must study the area, people, events, and various social factors, which will lead to understanding and interpretation of the work. Questions about life, experience, and memory are interconnected. Memory is a complex term subject to a variety of definitions and approaches (Morris & Gruenberg, 1994).

Population and Target Groups

The population and target groups of this research were divided into two categories: documents and individuals.

1. The document target group included the book "Culture and Historical Development, Identity and Wisdom of Nakhon Ratchasima Province" (Krom Sinlapakon, 2000), and the book "Culture and Historical Development, Identity and Wisdom of Buriram Province" (Krom Sinlapakon, 2001). These two books are collections of local literature from Nakhon Ratchasima and Buriram provinces. The researcher selected literature related to Khmer stone temples, namely the legend of Pachit and Orapim, the legend of Phra Ruesi Ta Fai and Nang Pathum, and the legend of Muang Nang Rong. These written legends are related to Phimai, Phanom Rung, and Rishi's shrine, totaling six versions. Another source is the book "Local Literature of Buriram Province: Written Literature of Pachit-Orapim, Inthapattha-Kunlawong," which was written by Rueangdet (1999). From this book, the researcher selected nine versions of literature related to Khmer stone temples, such as Pachit-Orapim and Inthapattha-Kunlawong.

2. The target group of individuals consisted of storytellers who are able to tell stories related to their local stone temples. The selection criteria were as follows:

(A) Individuals who are villagers that have lived in the area for a long time and/or those who has knowledge and experience in hearing stories about the stone temples passed down from previous generations. These individuals must be capable of telling these stories, or they may be elders respected by the local community and recommended as qualified sources, such as local sages, teachers, parents, heads of local ceremonies, or other local individuals recommended by scholars, community members, or screened and recommended for interviews by government officials as mentioned in Section B.

(B) Individuals working in local government, such as sub-district administrative organizations, village headmen, officials in charge of local development, academics from local educational institutions, officers in related fields, or those with expertise in local social and cultural affairs, including members of cultural divisions, caretakers of the ancient stone temple sites, local agencies affiliated with the Fine Arts Department, and museum staff.

As a results, a total of 50 interviewees were identified as the target group. However, in this article, only the interviewees whose responses were directly related to the cited texts were included in a coding format.

Findings

The results of the study, which address the two research objectives, are presented in two main parts: (1) findings related to folktales concerning Khmer stone temples and Khmer sculptures; and (2) findings on guidelines for local development based on these folktales.

1. Findings on Folktales Related to Khmer Stone Temples and Khmer Sculptures

The study of folktales related to Khmer stone temples and Khmer sculptures in the areas of Nakhon Ratchasima and Buriram provinces, conducted through interviews with local people and documentary research, led to key findings on important issues. Additionally, meetings and discussions with local people were held to explore possible community development approaches based on these folktales by taking into account the feasibility and perspectives of the local people.

1.1 The dissemination of Khmer stone temples' folktales in Nakhon Ratchasima and Buriram

The folktales reveal that many places in the region share interconnected stories. For example, Prasat Phimai and Prasat Phanom Wan are linked by a story of a woman and a man competing to build the two stone temples. Among these, Pachit Orapim's story stands out as the most prominent. It is a love story set against the backdrop of a Khmer stone temple. Such stories were traditionally used by ancient people to describe the names of places, towns, and villages. Some stories served to explain the origins of what exists today. Local people always shared common perceptions, which reflected the dissemination of the Khmer stone temples' folktales across the region.

Many places share similar stories. This suggests that the stories may originate from common roots. Perceptions remained consistent across locations, and some local residents expanded specific scenes to relate them to their village. For instance, in the story of Nang Lawo, some villagers understood that Nang Lawo and Nang Orapim were the same woman. The ruins of an ancient platform near Prasat Phanom Wan are commonly known locally as Nang Orapim Hill, showing how place names can be derived from folktales. This practice emphasizes the cultural importance of these folktales in different communities and their deep connection to community identity. The widespread presence of these folktales in various communities not only raises awareness but also reflects a cultural connection in the area.

1.2 Indrapattha Kulwong: Ancestors of stone temple builders

This is a story of a man named "Guruwongsa", who came from an Indian royal family and married a woman from a native royal family named "Indrapattha". They are regarded as the ancestors of the people who had the knowledge and technology to build city walls and stone monuments (Suchachaya, 2015). According to the legend of Urangathat, the king of Indrapat City participated in a grand project to build Phra That Phanom. Folktales that use the word "Indrapat" are often interpreted as stories about the Khmer group, known for their expertise in stone construction. The name "Indrapat" may refer to a city believed to have been designed by the god Indra.

In some folktales, the name "Indra" is used as the name of a city, while in others, it refers to a character. These variations imply cultural influences from India because Indra is an ancient deity of India. In both Thai and Khmer folktales, Indra is depicted as the guardian of happiness. When people face difficulties or injustices, the god Indra descends from heaven to help them. His role aligns with that of a righteous king, whose main duty is to help alleviate the suffering of the people. Indra's glorification reflects the culture of states in Indochina, where rulers are revered for their responsibility to ensure the well-being of their citizens.

1.3 Nang Lawo of Lawo village, Chum Phuang district, Nakhon Ratchasima

Nang Lawo is a story that has been passed down by villagers for generations. "Lawo" is both the name of the village and the local school. A shrine housing the idol of Nang Lawo can be found at Lawo School and in the village itself. According to some villagers, Lawo was a woman originally from Lawo or Lopburi. Others believe that she was the daughter of a Khmer king who traveled from Angkor Thom to Phimai and was on his way to Lawo City. There is also a belief that Nang Lawo was Phra Nang Chamdevi, the daughter of the Lawo king, who later became Queen of Hariphunchai. It is possible that her statue was built for worship by those who held this belief.

The story of Nang Lawo became tangible when a statue of a female deity was found in Lawo village, which the villagers identified as Nang Lawo. The statue then served as concrete evidence linking the village to the story. Nang Lawo is also related to the folktale of Pachit Orapim. In the scene where Pachit and Orapim were fleeing from Phimai, they wandered for a long time through a desolate and unfamiliar area. Pachit described their emotional state using the phrase "wo wae" or "lawo lawae", a Korat dialect expression that conveys anxiety, confusion, and the feeling of being lost or going in circles with no way out (Sanchai Kwanma, personal communication, April 5, 2023).

Based on the features of the female deity that the villagers call Nang Lawo, it is likely a representation of Prajnaparamita, the female bodhisattva. This suggests that the folktale of Nang Lawo likely emerged from the blending of various older stories and beliefs, gradually forming a localized version of supernatural belief. As a result, Nang Lawo became the sacred statue of the village. Villagers pay respect to her and seek her protection for safe travel, success in business, and the fulfillment of personal wishes.

1.4 The story of Prasat Muang Kao

The story of Prasat Muang Kao reflects the coexistence between humans and the supernatural within the same space. According to local villagers, the existence of the stone temple is closely tied to supernatural powers. They believe in the presence of sacred guardians who watch over the stone temple and its surrounding area. These sacred guardians are known as "Chao Pho Phaya Luang" and "Chao Mae Krong Kaew" (Hok Poonsungnern, personal communication, May 9, 2023).

In honor of these guardians, the villagers built a Chao Pho Chao Mae shrine in the Khmer architectural style. The history of the shrine is often shared with guests visiting the temple. Worship rituals at the shrine are held in the form of dancing, playing music, performing rituals, and making offerings to the shrine.

During the construction of a nearby shrine, which featured an image of a naga, a white snake was said to have suddenly appeared at the temple. In addition, the leaves turned white, and leaves on the water's surface coiled in a shape similar to that of a naga. In one version of these supernatural narratives, a photograph was said to have accidentally captured ancient people standing in the area of the stone temple (I. Mitsungnern, personal communication, May 9, 2023).

1.5 The story of Prasat Phanom Rung's footprint

The nationally renowned Khao Phanom Rung tradition originated as an event organized by government. According to local villagers, the tradition of ascending Khao Phanom Rung dates back over a hundred years. People used to climb the mountain to pay homage to the footprints of the Lord Buddha and the hermit Narayana (Pu Ruesi Narai). According to local history, a monk brought a replica of the Buddha's footprint to be enshrined in Prang Noi on Phanom Rung Mountain in 1894, and since then, it has been a significant site of worship for local communities (Suksawat, 1993).

By 1938, the locals began holding an annual merit-making event at Phanom Rung. Large numbers of people would travel up Phanom Rung to make merit and pay homage to the sacred footprint. When the Fine Arts Department undertook restoration efforts at Prasat Phanom Rung, the Buddha's footprint was taken away. Following the completion of Phanom Rung, the government held a traditional event on Khao Phanom Rung to worship Lord Shiva, the Hindu deity (L. Waleeprakhon, personal communication, April 6, 2023).

According to Narasaj (2012), the Phanom Rung tradition was begun in order to reframe the role of Prasat Phanom Rung from a Buddhist temple where villagers once worshiped to a Hindu temple redefined under government management. The government version of the story of Phanom Rung is different from the villagers' version. The villagers continue to share stories rooted in Buddhism and beliefs in supernatural sacred powers. Locals believe that Prasat Phanom Rung was once the royal palace of "Chaochai Sairung" (the Rainbow Prince), and that the path leading up to Khao Phanom Rung is protected by a local spirit named "Ta Pek".

However, the official version of the story of Phanom Rung stated that it was a Hindu temple. In addition, people are currently starting to come up with new ways to view astronomical phenomena, for example, the phenomenal sunrise and sunset at the 15 gates of Prasat Phanom Rung.

1.6 Phanom Rung and the legend of the hermit Narayana

The lintel of Narai Banthomsin at Phanom Rung holds great significance for local people who have been worshiping on Phanom Rung Mountain for many generations. According to a personal communication with the master of ceremonies at the Narai Ashram Hermitage in Buriram province (Shaman of Hermit Ashram, personal communication, April 7, 2023), the hermit Narayana has long served as a spiritual refuge for the villagers. People ascend Phanom Rung to

pay homage to the hermit Narayana, who is considered an incarnation of Lord Narayana. This hermit form is believed to have existed before Narayana became recognized as a deity.

According to legend, Narayana was once incarnated as two hermits named Nara and Narayana to practice asceticism. Another story tells of Narayana being incarnated as the "hermit Narod", who taught the Pancharatra doctrine. Many artists involved in traditional dance, music, massage, tattoos, and other cultural practices worship Narayana in his hermit form. During important moments in their lives, they may pray to him for success.

2. Findings on Guidelines for Local Development Based on Khmer Stone Temples and Khmer Sculptures' Folktales

The recommendations that follow are the result from the interviews, discussions, and small group meetings conducted for this study. They can be used to develop local areas in collaboration with local leaders, philosophers, scholars, and others working within the community. The first approach is to focus on the development and management of local learning resources. In Nakhon Ratchasima province, for instance, there are historical parks, museums, and educational information centers that serve as learning hubs. These spaces require effective management, including rotating exhibitions that stimulate interest and promote education. Exhibitions should be well-presented to foster knowledge and understanding of local folktales, with support from media persona, local sages, monks, community leaders, teachers, and students who are actively engaged in community development.

Short video clips should be produced and disseminated on social media platforms with continuous publicity to maintain public interest. Education policies must be defined and put into practice. Educational institutions play an important role in educating society and strengthening the education system. Efforts should be made to design curricula that integrate classroom learning with field-based experiences.

In terms of environmental care and infrastructure, community collaboration is important. Local residents should be empowered to participate in maintaining and enhancing the area. These spaces should cater to residents' daily needs, offering areas for relaxation and exercise. The landscapes of Khmer stone sites should be developed to create shaded areas for tourists, such as shaded parking areas and walkways. Access routes should be improved for greater convenience, and public toilets should be renovated to meet required standards.

Cultural tourism should be promoted through activities that preserve the stories of the sites. Events should be organized to transmit these stories in order to sustain good traditions as well as promote local arts and culture. Community products should be offered at iconic spots; for example, storytelling points could feature character statues or folktale scenes to engage visitors. Promoting local identity is the key to attracting tourists from the wider society. It would be beneficial in terms of local development. This includes the creation of a product brand that reflects a community identity through its community logo, such as the Prasat Mueang Tam community's dyed fabric made from the mud of Prasat Mueang Tam's reservoir, and colored to resemble the lotus petals in the pond. Similarly, the Ban Lawo community could develop products under the "Nang Lawo" brand to support such local products.

<p style="text-align:center">**Discussion**</p>

1. Folktales related to Khmer stone temples and Khmer sculptures in the areas of Nakhon Ratchasima and Buriram provinces

The folktales of Khmer stone temples are used to describe the origins of place names. One prominent example is the folktale of Pachit and Orapim, which is widely known in the provinces of Nakhon Ratchasima and Buriram. This story provides one of the clearest illustrations of the origins of places and place names in these two provinces. The probable reason for creating the Pachit Orapim story was that it allowed the ancient people who created it to explain local features using geo-cultural wisdom.

Throughout the story, various places are named in relation to key events in Orapim's life. For instance, the village where Pachit successfully found Orapim was named "Samret" (successful), which later evolved into "Samrit". The place where Pachit opened his travel textbook and made notes was named "Ban Chan Tamra" (write a textbook). A path he traveled came to be known as "Pachit Road". When he mistakenly went the wrong way and found a large pond, the area was called "Tha Luang" (great pond or lost pond).

As Orapim grew, the places associated with her development were also given names. For instance, the place where she learned how to crawl became "Ban Nang Khlan" (crawling), and the one where she learned to walk became "Ban Nang Dern" (walking). When she became a young woman and washed her hair at a pier, it was named "Tha Nang Sa Phom" (washing hair). The place where Pachit received the news of Orapim's kidnapping and abandoned his royal chariot was named "Baan Kong Rod" (wheels). The place where bowls were smashed was named "Ban Sor Baek Chan" (broken plate).

The district "Lam Plai Mat" in Buriram means "river-silver-gold". It refers to the river where Pachit dropped his wedding accessories made of silver and gold. When Orapim was held captive in the palace and saw Pachit arriving, she joyfully exclaimed, "pee ma" (my brother is coming). This phrase later evolved into "Phimai". When Pachit brought Orapim to a city, she danced with happiness, and the area was therefore named "Ban Nang Rum", which was later changed into "Buriram", meaning "a city full of happiness". Finally, during a long journey, Orapim sat down and wept from exhaustion. That area was named "Ban Nang Rong" (crying) (Krom Sinlapakon, 2000).

2. Guidelines for local development based on Khmer stone temples and Khmer sculptures' folktales

The Khmer stone temple folktales and the theme of female empowerment are very interesting. Interestingly, this idea has resurfaced in modern times, such as on the stage of the Miss Universe contest, which has been held as an international annual beauty pageant for over 70 years (Duffell, 2023). However, similar narratives have long existed in Khmer stone temple folktales. This often showcases powerful women who sought to break free from male dominance and traditional roles.

One notable folktale narrates a competition between a man and a woman to build a stone temple, with the woman emerging as the victor. According to the story of Prasat Phanom Wan, a

woman was responsible for building Prasat Phimai, while a man constructed Prasat Phanom Wan. The women's creation was more advanced and aesthetically pleasing, while the man's work remained unfinished. This story, along with others of its kind, reflects a long-standing succession of ideas highlighting the importance and capability of women.

This plot also appears in Cambodian folktales, where both women and men built monuments, but with a deeper cultural message where women wanted to change the tradition that required them to offer wedding accessories in order to marry. They challenged this norm, pushing for a reversal in which only the man had to make such offerings. Eventually, the women succeeded in their goal. The storylines in each region seem to come from the same background, but the details and reasons for competing may differ.

Negotiation in folktales shows that women have the power to drive societal change. There is a place for women to play an active role in transforming society. Women must fight to challenge and change cultures, traditions, and unfair practices. Ancient Khmer society has been viewed by scholars as a "feminine" society, as reflected in the content of "Indrapat Kulwong", which depicts a woman as the head of state. Additionally, in the legend of the Khmer Empire, the ruler was also a woman named Princess Soma. Wongthet (2006) explains that women have power because they give birth and care for children, which grants them leadership and decision-making authority. Moreover, from the perspective of modern Western values, women and men are considered equal, and women are seen as having the same capabilities as men.

Conclusion

Folktales of Khmer stone temples serve as tools to explain local history, answer questions, and provide background on the origins of place names. Many topographical names are associated with the local folktale Pachit Orapim. These names illustrate the popularity of the story in the area. Pachit Orapim conveys a modern love story in which the protagonist, Pachit, loves Orapim. The story promotes the roles of talented women through the character of Orapim, who is depicted as a pharmacist, priest, warrior, an administrator, and able to protect her husband. Her role reflects the idea that women are just as competent as men in various roles.

The story of the stone temple-building competition further presents the empowerment of women who stand up for cultural change, traditions, and their own rights, portraying them as empowered women who fight for equality.

The story about the lintel of Narai Banthomsin at Phanom Rung introduces the story of the hermit Narayana, whom villagers in Buriram pay respect to. Unlike the Hindu worship of Lord Narayana, local people worship the hermit for good luck and protection. Similarly, the story of Lawo Village, Nang Lawo, and the idol of Prajnaparamita reflects supernatural beliefs. Nang Lawo is respected as a guardian deity who protects the village.

According to the guidelines for sustainable local development based on folktales of the stone temples, emphasis should be placed on the use and management of learning resources. Education policies must be clearly defined and implemented. The environment and community facilities should be designed to promote engagement and a sense of value among people within

the area. Cultural tourism should be promoted through activities that preserve the stories of these sites. Community products should be displayed at iconic spots to attract interest, and community branding should be established.

Recommendations for future research include focusing on areas where ancient stone temples are located, especially in the lower part of the Northeastern region of Thailand. Although stone temples are also found in other regions, such as the Central and Eastern regions, their numbers are significantly fewer compared to those in the Northeast. Furthermore, stone temples located in neighboring countries, especially Laos and Cambodia, provide valuable case studies. In particular, temples in Laos and the Northeastern region of Thailand remain under-researched and warrant more serious scholarly attention.

References

Andrews, M., Squire, C. & Tamboukouet, M. (2012). *Doing narrative research*. SAGE.

Bold, C. (2021). *Using narrative in research*. SAGE.

Borisat Moradoklok. (1992). *Raingan kansueksa sen thang watthanatham khom phuea kan thongthiao*. (in Thai). [A study of Khmer cultural routes for tourism]. Tourism Authority of Thailand.

Duffell, R. (2023, March). *Thai transgender businesswoman Miss Universe and empowering women*. https://www.tatlerasia.com/power-purpose/front-female/thai-transgender.

Krom Sinlapakon. (2000). *Watthanatham phatthanakan thang prawattisat ekkalak lae phumpanya changwat Nakhon Ratchasima*. (in Thai) [Culture and historical development, identity and wisdom Nakhon Ratchasima province]. Organizing Committee in honor of His Majesty the King Rama IX.

Krom Sinlapakon. (2001). *Watthanatham phatthanakan thang prawattisat ekkalak lae phumpanya changwat Buri Ram*. (in Thai) [Culture and historical development, identity and wisdom Buriram province]. Organizing Committee in honor of His Majesty the King Rama IX.

Maneechoti, S., Sibunruang, W., Parisutwuthiporn, N., Daorueang, N., Jansaeng, A. & Rolston, S.L. (2022). Tamnan thao Pachit kap nang Oraphim nai miti prawattisat thongthin kap kansang chut khwamru khong phu khon nai dindaen Isan Tai. (in Thai) [The legend of Pachit and Orapim in the dimension of local history and the creation of knowledge sets of people in the south Isan region]. *Ramkhamhaeng University Journal Humanities Edition, 41*(2), 175-192.

Morris, P.E. & Gruenberg, M. (1994) *Theoretical aspects of memory* (2nd ed.). Routledge.

Narasaj, B. (2012). Phap tuathaen khong prasat Phanom Rung nai mum mong thongthin. (in Thai) [Representations of Phanom Rung sanctuary in the view of local people]. *Journal of Mekong Societies*, *8*(2), 1-25.

Nimmanahaeminda, P. (2008). *Nithan Phuenban Sueksa*. (in Thai) [Folktale studies]. Faculty of Arts, Chulalongkorn University.

Roberts, B. (2002). *Biographical research*. Open University Press.

Rueangdet, P. (1999). *Wannakam thongthin changwat Buri Ram: Wannakam lailak rueang Pachit-Orapim, Inthapattha- Kulwong, Sisawatwat, Prathom Ko-Kha, Phra Poramat, Tamra Phrayasi wa duai rok phi*. (in Thai) [Local literature of Buriram province: Written literature of Pachit-Orapim, Inthapattha-Kulwong, Sisawatwat, Prathom Ko-Kha, Phra Poramat, Phrayasi's treatise on ghost disease]. Faculty of Humanities and Social Sciences, Buriram Rajabhat Institute.

Suchachaya, S. (2015). Nang Inthapattha-Kulwong kap Nang Orapim-Phrapachit: tamnan khong chon phusang prasat hin. (in Thai) [Nang Inthapattha-Kulwong and Nang Orapim-Prapachit: The legend of the people who built stone temple]. *Muang Boran Journal, 41*(2), 97-105.

Suksawat, S. (1993). *Prasat khao Phanom Rung: Sa Son Banphot thi Ngotngam thisut nai prathet Thai*. (in Thai) [Prasat Phanom Rung: The most beautiful religious sanctuary in Thailand] (3rd ed.). Phra Ganesha Printing Center.

Sunthornphesat, S. (2005). *Manutsayawitthaya kap prawattisat: Ruam khwamriang waduai kanprayukchai naeokhwamkhit lae thruesadi thang manutsayawitthaya nai kansueksa khomulthang prawattisat*. (in Thai) [Anthropology and history: A comprehensive essay on the application of anthropological concepts and theories in the study of historical data. Muang Boran.]

Thailand. Kong Borannakhadi. (1993, 1995, 1996). *Thamniap boransathan Khom nai prathet Thai*. (in Thai) [Khmer archaeological site in Thailand]. Bangkok: Kong Borannakhadi, Krom Sinlapakon

Thammawat, J. (2006). *Kanchat thankhomun watthanatham phuea kan khumkhrong moradok thang watthanatham thai phuenthi phak isan*. (in Thai) [Establishment of a cultural database for the protection of Thai cultural heritage in the Northeastern region]. Office of Research and Cultural Promotion Office of the National Cultural Commission.

Walliphodom, S. (1998). *Withithat Lao nai chumchon songfang Khong.* (in Thai) [The Lao way of life in communities on both sides of the Mekong River]. The Thailand Research Fund Senior Research Savant Project, Faculty of Humanities and Social Sciences, Mahasarakham University.

Wongthet, S. (2006). *Phalang Lao chao isan ma chak nai*. (in Thai) [Where does the Lao power of the Isaan people come from?]. Matichon.

A Metacognitive Information Literacy Model for Enhancing Critical Thinking in EFL Learners: A Quasi-Experimental Study[1]

โมเดลการรู้สารสนเทศเชิงอภิปัญญาเพื่อส่งเสริมทักษะการคิดอย่างมีวิจารณญาณ ของนักศึกษาไทยที่เรียนวิชาภาษาอังกฤษเป็นภาษาต่างประเทศโดยใช้การวิจัยกึ่งทดลอง

Chanida Phongnapharuk [2]
ชนิดา พงศ์นภารักษ์

Piansin Pinchai [3]
เพียรศิลป์ ปินชัย

Abstract

The objective of this study was to evaluate the effectiveness of a Metacognitive Information Literacy (MIL) model for enhancing learners' critical thinking skills. Furthermore, the study assessed learners' satisfaction with the model as it was incorporated into the learning experience. To this end, a one-group pretest–posttest design using purposive sampling was employed. Data was collected from 83 English-major undergraduates enrolled in the Digital Media Literacy course. Critical thinking assessments were conducted before and after the implementation of the MIL model. The test scores were calculated for mean, standard deviation, and p-value. Additionally, the satisfaction survey collected feedback about teaching instruction, student engagement, and collaborative activities through the ratings on a five-point scale. The findings indicate that the MIL model significantly enhances critical thinking as evidenced by the comparison of pre-test (M = 40.41, SD = 10.9) and the post-test (M = 52.77, SD = 8.73) scores statistically significant (p<.00). The survey results also reveal high levels of satisfaction with the model's strategies for fostering a cooperative learning environment (M = 4.25), promoting metacognition (M = 4.41), and developing critical thinking abilities (M = 4.33). The result of this study suggests that the MIL model can be valuable, particularly

Corresponding Author: Piansin Pinchai
E-mail: piansin.pin@mfu.ac.th

for supporting learners as they develop their capacity to evaluate online sources, a necessary competency for university education and lifelong learning.

Keywords: Information Literacy, critical thinking, CRAAP Test, metacognitive strategies, formative assessment

บทคัดย่อ

งานวิจัยนี้มีวัตถุประสงค์เพื่อประเมินประสิทธิผลของโมเดลการรู้สารสนเทศเชิงอภิปัญญา (Metacognitive Information Literacy: MIL) ในการส่งเสริมทักษะการคิดอย่างมีวิจารณญาณของผู้เรียน รวมถึงประเมินความพึงพอใจของผู้เรียนที่มีต่อการใช้โมเดลดังกล่าวเมื่อถูกนำไปประยุกต์ใช้ในการจัดการเรียนรู้ งานวิจัยนี้ใช้รูปแบบการทดลองแบบกลุ่มเดียววัดผลก่อนและหลัง (One-Group Pretest–Posttest Design) โดยใช้การสุ่มตัวอย่างแบบเจาะจง (Purposive Sampling) กลุ่มเป้าหมายคือนักศึกษาระดับปริญญาตรีสาขาภาษาอังกฤษจำนวน 83 คน ที่ลงทะเบียนเรียนในรายวิชาความรู้เท่าทันสื่อดิจิทัล การวิจัยนี้มีการวัดผลทักษะการคิดอย่างมีวิจารณญาณก่อนและหลังการใช้โมเดล MIL โดยวิเคราะห์ค่าคะแนนเฉลี่ย ค่าเบี่ยงเบนมาตรฐาน และค่าระดับนัยสำคัญทางสถิติ (p-value) นอกจากนี้ยังมีการสำรวจความพึงพอใจของผู้เรียนที่มีต่อการจัดการเรียนการสอน การมีส่วนร่วมของผู้เรียน และกิจกรรมการเรียนรู้แบบร่วมมือ โดยใช้มาตรวัดห้าระดับ ผลการวิเคราะห์ทักษะการคิดอย่างมีวิจารณญาณก่อนและหลังการใช้โมเดล MIL พบว่าคะแนนทดสอบก่อนเรียน (M = 40.41, SD = 10.9) และคะแนนหลังเรียน (M = 52.77, SD = 8.73) มีความแตกต่างอย่างมีนัยสำคัญทางสถิติ (p<.00) แสดงให้เห็นว่าโมเดล MIL สามารถเสริมสร้างทักษะการคิดอย่างมีวิจารณญาณได้อย่างมีประสิทธิผล นอกจากนี้ ผลการประเมินความพึงพอใจแสดงให้เห็นว่าผู้เรียนมีความพึงพอใจในระดับสูงต่อกลยุทธ์ของโมเดลในการส่งเสริมการเรียนรู้แบบร่วมมือ (M = 4.25) การส่งเสริมการรู้คิด (M = 4.41) และการพัฒนาทักษะการคิดอย่างมีวิจารณญาณ (M = 4.33) ผลการวิจัยนี้ชี้ให้เห็นว่าโมเดลนี้สามารถส่งเสริมให้ผู้เรียนพัฒนาทักษะการประเมินแหล่งข้อมูลออนไลน์ได้อย่างมีประสิทธิภาพ ซึ่งเป็นทักษะสำคัญในการศึกษาระดับมหาวิทยาลัยและการเรียนรู้ตลอดชีวิต

คำสำคัญ: การรู้สารสนเทศ การคิดอย่างมีวิจารณญาณ การวิเคราะห์แหล่งข้อมูลตามหลัก CRAAP กลวิธีการคิดเชิงอภิปัญญา การประเมินระหว่างการเรียน

Introduction

Technological advancements have changed the way we teach English as a Foreign Language (EFL), with classrooms now filled with digital natives who do not know life without digital technologies. The latest disruptive innovations present a double-edged sword for learners; they provide extensive information resources and an overabundance of unreliable knowledge from the internet, social media, and big data. Information Literacy (IL) is essential for learners to navigate the complex information landscape and make informed decisions about the resources they find. The Association of College and Research Libraries (2016) emphasizes the importance of IL as information resources expand rapidly. It not only helps learners access information effectively, but also demonstrates how to utilize resources judiciously and

transform them into valuable assets for personal, professional, and social development in a dynamic information environment.

Developing IL skills helps EFL learners gain access to global information and transform it into usable knowledge, truly promoting learning freedom. In higher education—particularly in the Thai context, where research-based learning is emphasized—learners must acquire a range of research competencies, such as critically evaluating the credibility and relevance of online resources, synthesizing, and contextualizing information (Fieldhouse & Nicholas, 2008). Examples such as Mahidol University's English for Digital Literacies course (Faculty of Liberal Arts, 2023) and Silpakorn University's Information Literacy course (Faculty of Arts, 2021) reflect the recognition of IL's importance in EFL education across the country. However, Thai EFL learners often face difficulties with reading comprehension and critical analysis, which are essential for evaluating information sources effectively (Apairach, 2023). Additionally, the limited emphasis on critical thinking and analytical skills in most secondary schools means that incoming university students can only achieve a superficial level of reading comprehension, where they rely on simple heuristics rather than deep analysis (Imsa-ard & Tangkiengsirisin, 2023). Furthermore, challenges in digital literacy among Thai EFL teachers may also contribute to gaps in IL instruction, as instructors with low digital literacy struggle to integrate effective online source evaluation strategies into their teaching (Karanjakwut & Sripicharn, 2024).

In 2006, the International Federation of Library Associations and Institutions (IFLA) established IL standards, which included frameworks for accessing, evaluating, and using information. These basic components were later developed into a five-stage IL process: identifying, finding, evaluating, applying, and acknowledging. This represents a constructivist learning procedure for seeking valid information and drawing conclusions (Khatun, 2013; Landøy et al., 2020). Among these stages, evaluation plays a crucial role in developing critical thinking. Learners must assess the reliability, authority, and purpose of information sources. For the purposes of this study, IL practice was incorporated into the Digital Media Literacy course at Mae Fah Luang University (MFU). This course is part of the English-major curriculum for undergraduates. The IL framework serves as a core instructional component that aligns directly with the course's objective for learners to discern reliable information sources appropriate for both academic and professional contexts. In addition, the course specifically emphasizes source evaluation using the CRAAP Test, which assesses Currency, Relevance, Authority, Accuracy, and Purpose of information sources (Muis et al., 2022), in the Evaluating stage of the five-stage IL process.

IL instruction and the CRAAP Test have been integrated into the Digital Media Literacy course for over two years previous to this study. Course evaluations indicate that learners still struggle to clearly demonstrate their critical thinking and information analysis skills. This was evident in their written work and project presentations, where they had difficulty applying CRAAP Test criteria to evaluate the credibility and relevance of information sources effectively. Certain CRAAP Test components, particularly those related to bias and authority, can be highly subjective and might overwhelm learners, resulting in a mechanical application to meet assignment criteria rather than being an engaging, meta-cognitive tool (Lowe et al., 2021). Instructors have recommended developing a clearer understanding of the Evaluation component to engage learners in deeper critical analysis, focusing on authentic sources like

academic websites and scientific studies. Key IL components might be too broad in practice, requiring adaptation or modification to better support critical thinking and information analysis. Research supports this concern, emphasizing that the development of effective IL and critical thinking skills is a complex and dynamic process (Kani et al., 2020).

To respond to this feedback, this study explores the potential of a Metacognitive Information Literacy (MIL) model, which integrates metacognitive strategies and formative assessment into IL instruction. The current IL framework, supplemented with the CRAAP Test, provides structured guidelines for evaluating information, but it often fails to engage learners in deep, reflective thinking.

Liu (2021) claimed that incorporating metacognitive strategies, such as self-monitoring, self-questioning, and reflection, help learners become more conscious of their thought processes and more adaptable, thoughtful consumers and producers of information. Similarly, Denke et al. (2020) found that metacognitive practice and constructivist activities increased recognition of learners' IL skills through active learning and knowledge construction since they allowed learners to demonstrate their IL abilities more clearly as they could recognize the sample actions and strategies that helped them to engage in classroom tasks and to read critically. Their findings also suggest that adjusting teaching strategies and scaffolding learners through constructivist activities can increase metacognitive skills, including critical thinking, which improves their IL. Additionally, the use of reflection evokes insights into how they might achieve learning tasks more effectively. It is important to establish a visible connection between metacognition and IL skills in learners so that they can understand the methodology and outcomes explicitly.

Alongside metacognitive strategies, formative assessment plays a key role in reinforcing continuous learning and critical self-assessment in IL instruction, unlike summative assessments, which do not allow for reflection and improving performance (French et al., 2024). Learning processes with strategically timed formative assessment tasks foster deeper interest and enhance capacity to analyze, evaluate, and synthesize information more efficiently (Stanley & Moore, 2010). This process-oriented approach shifts IL instruction from a checklist-based application to a deeper, iterative learning experience. Also, formative assessment supports a more interactive and dynamic approach to IL development, helping learners improve their analytical, interpretative, and evaluative skills.

Therefore, this study aims to promote learners' critical thinking skills and learning experience through an adapted version of the MIL model intervention, which combines the five key strategies of Formative Assessment (FA) (Leahy et al., 2005) with the five-stage IL process (Landøy et al., 2020). The CRAAP Test is also used for evaluating the quality of information sources. The findings will provide insights into the efficacy of the adapted MIL model as a pedagogical procedure that fosters critical thinking through metacognitive engagement.

Research Questions

To explore whether the MIL model with critical perspectives could offer alternatives to learners, we devised the following two research questions:

1. To what extent does the MIL model enhance English-major learners' analytical, interpretative, and evaluative skills as facets of critical thinking?

2. What is the level of learner satisfaction on the teaching instruction, engagement, and collaborative activities toward the IL model intervention?

Literature Review

1. Information Literacy (IL)

Julien and Genuis (2011) view Information Literacy (IL) as crucial for academic success. Individuals with IL skills are those who not only obtain technology skills, but can also analyze, evaluate, and apply IL knowledge to decide and think critically, which are essential in the 21st century. The Association of College and Research Libraries (2016) has outlined five standards of IL in higher education, including identifying the extent of needed information; finding needed information effectively and efficiently; evaluating selected information and its sources critically; applying collected information to create and communicate ideas effectively; and acknowledging information sources ethically with proper referencing information per copyright guidelines. Therefore, IL skills are vital for university-level learners because many assignments, such as term papers and presentations, all involve these critical processes of research-based learning.

2. Information Literacy: CRAAP Test

Developed by Sarah Blakeslee (2010, as cited in Tardiff, 2022) at California State University, the CRAAP Test has become a widely adopted tool for evaluating information sources due to its simplicity, adaptability, and effectiveness. The CRAAP Test consists of five criteria as follows (Blakeslee, 2010): Currency indicates the timeliness of the information, such as publication dates. Relevance involves the suitability of the information and alignment with intended purposes and needs. Authority refers to the credibility of the information source, such as authors' qualifications and expertise. Accuracy focuses on the reliability and correctness of the information, and Purpose refers to an intention behind the creation of the information. Overall, this convenient packaging of IL concepts makes the CRAAP Test suitable for teaching in diverse contexts and for learning at different levels, enabling learners or researchers to make informed decisions about the quality and suitability of various online information for academic or research purposes (Esparrago-Kalidas, 2021; Ruleman et al., 2017).

3. Critical Thinking Strategies in IL Classroom Practice

Typically, a class that integrates IL offers learners exercises in critical thinking and processing skills because learners have to go through several stages of IL to find suitable information sources, especially at the Evaluating stage. This IL stage requires analysis, problem-solving, or critical thinking processes to evaluate and choose information sources intelligently. However, in an EFL classroom, learners might not be able to go through these higher-order thinking skills due to difficulties with language comprehension. Metacognitive interventions for language comprehension, such as for text comprehension or for reading skills, are not well understood and need to be addressed in IL classroom practice (Blummer & Kenton, 2014).

3.1 Effective Metacognitive Instruction: Shifting IL Class Management from Product-Oriented to Process-Oriented

To foster metacognitive skills in the IL classroom, shifting from a product-oriented approach to a process-oriented approach is essential (AASL, 1998). According to Flavell (1979), learners must be aware of their own cognitive processes when processing information and actively reflect on whether the information is credible, and aligns with their goals. For EFL learners who face language and cultural barriers, this approach might need adaptation with more support, engagement, and interaction to achieve IL development, particularly in the source evaluation stage. Similar to Vygotsky's (1978) Constructivist Learning Theory, learning can be enhanced through guidance from peers and the instructor's scaffolding to internalize metacognitive processes. Additionally, managing a process-oriented classroom through formative assessments could be more effective in the EFL context, allowing learners to demonstrate their understanding throughout the learning process (Lam, 2015). Halpern's (2008) study on applying metacognitive strategies in elementary education found that integrating collaborative activities and problem-solving tasks enhanced students' abilities to think critically and apply metacognitive thinking strategies in real-life situations. By adapting assessment strategies to the specific needs of EFL learners, instructors can create more effective and supportive learning environments for developing IL skills.

Leahy et al. (2005) proposed five key strategies of Formative Assessment (FA) for an effective implementation that can significantly improve learning outcomes and develop metacognitive skills through learner-focused assessment. In this study, the lesson plan applies the CRAAP Test, emphasizing reading comprehension and analyzing the author's writing, with a focus on critical reading strategies that help learners understand the information they read and to consider what the author intended to communicate. The FA strategies, serving as significant guidelines for supporting this learning objective, start with clarifying and understanding learning intentions and criteria for success where instructors ensure all students understand learning intentions and success criteria (William, 2013). Furthermore, the strategy of engineering effective classroom discussions and tasks that elicit evidence of learning helps instructors design classroom activities to engage individual learners, rather than just collect right or wrong answers. Then, providing feedback that moves learning forward is when instructors give constructive feedback that is action-oriented and outlines a series of scaffolded steps to support the learner to improve their thinking. Additionally, activating learners as learning resources for one another through peer activities adds valuable feedback rather than from an authority, supporting a collaborative learning environment. Lastly, in activating learners as owners of their own learning, learners practice self-regulation with a range of metacognitive strategies, enabling them to regularly plan, monitor, and evaluate their own learning (William & Leahy, 2015).

The FA strategies unite formative assessment processes with the role of three key agents: teacher, peers, and learners as seen in Figure 1. By implementing these strategies, it is believed that educators can foster a culture of critical thinking and metacognitive practice in the classroom. Each strategy is essential in promoting educators' ability to assess learners during learning, which helps them set learning goals. It also empowers learners as owners of their own learning.

Figure 1

Five Key Strategies of Formative Assessment (Leahy et al., 2005)

	Where the learner is going	Where the learner is	How to get there
Teacher		Engineering effective discussions, tasks, and activities that elicit evidence of learning	Providing feedback that moves learners forward
Peer	Clarifying, sharing and understanding learning intentions	Activating students as learning resources for one another	
Learner		Activating students as owners of their own learning	

Therefore, placing greater emphasis on learner interaction with both the instructor and classmates (especially in Step 3) strengthens learners' understanding of the task during the IL evaluation process. Greater interactivity gives learners a chance to exchange ideas and engage in critical thinking skills while working on tasks. Table 1 shows the comparison between a regular IL classroom practice, which is frequently product-oriented, and metacognitive integration, which is more process-oriented. It outlines the steps involved in both approaches and contrasts their strategies.

Table 1

Metacognitive Integration for Shifting to the Process-Oriented Class Management

	Former IL classroom practice	Current IL classroom practice
Step 1: Identify your topic	Brainstorm and a group discussion	Clarify learning goals and discuss assessment criteria
Step 2: Find the information	Practice keyword strategies individually	Foster effective classroom discussion on how to access information
Step 3: Evaluate the sources	Practice on source evaluation for writing an expository essay on Factors that Affect Gender Identity using the **CRAAP** question list individually	- Foster effective classroom discussion on how to evaluate sources - Empower learners to take ownership of their learning - Activate learners as instructional resources of different arguments and perspectives
Step 4: Apply the information	Practice creating verbal citations individually	Provide further feedback to advanced learners

	Former IL classroom practice	Current IL classroom practice
Step 5: Acknowledge the originality	Practice on source citations for a written report individually	Provide further feedback to advanced learners

3.2 Metacognitive Intervention: Integrating Critical Reading Strategies into IL Classroom Practice

When shifting from a product to a process-oriented classroom, there should be directed reading strategies deployed when evaluating sources with the instructor's feedback and a strategic prompt to help learners perform group discussions. In terms of critical reading strategies, instructors normally employ pre-while-post-reading stages in the regular reading classroom. However, when critical thinking is considered, especially when evaluating information sources in an IL classroom, five critical reading steps should be considered (Yu, 2015):

1) **Pre-reading**: A quick scan to find relevant details that support understanding and a brief skim on overall content, organization, and the text's purpose.

2) **Reading in context**: Learners engage with the text as if conversing with the author to grasp the fundamental meaning and underlying ideas.

3) **Further the understanding by asking questions and answering them**: Questioning employed in reading instruction helps learners comprehend and respond to the text more thoroughly.

4) **Further thinking and reflections after reading**: An additional time to deliberate and restructure the concepts helps learners develop further understanding of the text after reading.

5) **Outlining and summarizing**: Differentiating main ideas, supporting details, and examples helps learners to understand the text's structure.

When evaluating sources, questioning the author's purpose and critiquing the structure of the text are crucial. This exercise enhances text comprehension and allows learners to determine the text's main idea and relevance to their purpose in the class. Utilizing the cognitive domain of Bloom's Taxonomy, particularly the three higher-order skills of analyzing, evaluating, and creating, is beneficial for developing questions aimed at teaching critical reading in EFL classes and helps instructors plan objectives and design assessment items (Anderson et al., 2001). Similarly, Paul and Elder (2006) presented eight Elements of Reasoning: Purpose, Point of View, Assumptions, Implications, Information, Inferences, Concepts, and Questions, that enhance understanding and critical thinking skills. These elements illustrate how learners critically evaluate the quality of information, investigate questions, and develop personal viewpoints. Synthesizing these two frameworks provides a sophisticated and structured approach for formulating questions that exercise critical thinking skills. Adding this metacognitive practice of guided questions with the CRAAP test helps enhance the depth and breadth of learning experiences. Table 2 presents the alignment of critical reading strategies with Bloom's Taxonomy and the Paul-Elder Critical Thinking Models in IL classroom management.

Table 2

Comparison Between Former IL Classroom Practice and a Metacognitive Intervention

Former IL classroom practice	Metacognitive intervention	
	Critical reading strategies	Bloom's Taxonomy and the Paul-Elder Critical Thinking Models
Step 1: Identify your topic.		
Step 2: Find the information.		
Step 3: Evaluate the sources. *No specific reading strategies for the CRAAP Test	Pre-reading - Predicting	What patterns of text organization are used?
	While-reading - Reading in context: **CRAAP Test** - Questions generating: Further the understanding by asking questions and answering them	What is the overall main idea of the text? Is the information fact or opinion-based? How do you know? Please give an example from the text.
	Post-reading - Clarifying: Further thinking and reflections after reading - Summarizing: Outlining and summarizing	Is the overall information convincing? Why or why not? Would you choose this text as a source of information? What can be concluded from the information?
Step 4: Apply the information.		
Step 5: Acknowledge the originality.		

The information gathered in the literature reveals a strong correlation between several vital elements. Firstly, a five-stage IL process is critical for learners to detect the information characteristics they require, strategize searching techniques, evaluate information qualities, and leverage such information efficiently. Complementing IL with the CRAAP Test enables learners to investigate quality and appropriateness of online sources for academic purposes. Moreover, critical reading strategies aid insightful understanding and perceiving authors' intentions through pre-reading, contextual comprehension, questioning, reflection, and summarization. Additionally, the FA strategies foster an environment conducive to learning. These strategies, which include setting learning objectives, facilitating discussions, offering feedback, promoting peer collaboration, and empowering student autonomy, have all been shown to enhance critical thinking skills significantly. Therefore, integrating the ideas of metacognitive approaches and critical reading processes into the IL process, as seen in Figure 2, nurtures independent thinking, problem-solving abilities, and the capacity to construct knowledge autonomously.

Figure 2

Framework of the Study

1. Research Design

This study employed a one-group pretest-posttest design as part of a quasi-experimental research approach, as it is appropriate for evaluating ongoing instructional programs or interventions integrated into the regular classroom activities. It enables teachers to assess the effectiveness of new teaching methods without disrupting instruction or needing extra resources for control groups (Johnson, 1986). The research project focused on measuring changes within a single cohort. The study used a pretest to establish a baseline for each participant's knowledge before the intervention in the initial stage. Then the MIL model was implemented, followed by a post-test to analyze score differences at the individual level, rather than assuming uniform improvement across all students. Additionally, a satisfaction survey covered areas related to the FA strategies, such as engagement in classroom discussions and feedback, and was administered to gather data about the model from the participants. Data was collected over a 4-month period, with classes running 3 hours per week. The duration of contact-intervention was 48 hours.

2. Participants

The site of this study was the School of Liberal Arts, Mae Fah Luang University in Thailand. The participants were 83 English-major undergraduates who enrolled in the *Digital Media Literacy* course in the first semester of 2023. Students at this level were capable of reading and writing both Thai and English and generally had basic to intermediate English proficiency, ranging from A2 to B1 according to the Common European Framework of Reference (CEFR). They had over nine years of English language learning experience in Thai educational settings. The participants were selected through purposive sampling as all participants belonged to the same class. Every subject participated in this study voluntarily and anonymously, and they were informed that they could withdraw if they wished.

3. Research Instruments

3.1 MIL Model Development

Before developing the MIL model, the content and learning outcomes of the *Digital Media Literacy* course were reviewed. The model, integrating key components from various frameworks as shown in Figure 2, was developed through a comprehensive review process to equip the participants with enhanced critical thinking abilities. Combining all crucial elements, the MIL model emphasizes reflection and critical thinking in classroom practice. The teaching instructions were then carefully designed to align with each stage of the model, ensuring a seamless integration of the various components and a consistent focus on developing critical thinking skills. Table 3 illustrates the implementation of selected frameworks that pertain to critical thinking skills within the course.

Table 3

MIL Model

Five Components of Information Literacy	Intervention of five FA strategies, critical reading strategies & CRAAP Test in instructions
Class 1 Identify: Task - Recognize the task, information need, purposes of information.	**Clarify and share intentions and criteria.** - Classroom discussion to clarify the learning goal of the assigned task - Work samples circulation to establish success criteria and prompt a discussion about quality
Class 2 Find: Task - Find needed information effectively and efficiently.	**Engineer effective classroom discussion.** - Exit Passes to review and use the responses to shape the next lessons **Activate leaners as instructional resources for one another.** - A small group activity to share and propose effective searching techniques
Class 3 Evaluate: Task - Analyze and evaluate information and its sources critically.	**Critical reading skills for information selection.** - Reading comprehension questions to summarize main ideas and evaluate an argument of the assigned reading - CRAAP Test to evaluate academic and non-academic sources **Activate learners as owners of their learning.** - A self-regulated task to further the source evaluation
Class 4 Evaluate: Task - Share information and its sources critically.	**Engineer effective classroom discussion.** - General critical reading questioning to encourage brainstorming and sharing about how to evaluate the assigned information sources **Activate learners as instructional resources for one another**. - A small group discussion to share and give feedback to each other
Class 5 Apply: Task - Integrate information and a direct quotation from sources into an oral presentation.	**Provide feedback that moves learners forward**. - A small group activity to share ideas for the project and receive some detailed comments from the instructor
Class 6 Acknowledge: Task - Cite an information source in the written report.	**Provide feedback that moves learners forward**. - Turnitin program to receive constructive feedback on grammatical usage of their report - Written feedback on content development from the instructor

3.2 Critical Thinking Pre-test and Post-test Design

The critical thinking pre-test and post-test were administered to assess changes in participants' critical thinking abilities before and after using the MIL model. The test featured two sets of a reading passage and ten questions that assessed higher levels of critical thinking skills. Some questions were adapted from the CRAAP test, as the participants were set to encounter the question sets through the MIL model. For each question, the participants were asked to respond in English. The test was administered in a print format, and the time taken to complete the test was recorded.

Additionally, the pre and post-test aligned with class activities, namely selecting and using appropriate online sources of information for the group project (infographic). The work process in the classroom required analysis, synthesis, and evaluation of online sources; therefore, the test questions on analysis, interpretation, and evaluation skills closely aligned with the class activities.

Table 4

Connections of Critical Thinking Levels

Bloom's Taxonomy	Paul-Elder Model	Critical thinking pre-posttests	
Analyze	Point of view	**Analysis Asks:**	**Interpretation Asks:**
		Q1. Text organization	Q3. Author's point of view
		Q2. Main idea	Q4. Fact VS opinions
Evaluate	Inferences or conclusion, and questions	**Evaluation Asks:**	**Information Literacy Asks:**
		Q5. Conclusion	Q8. Validation
		Q6. Reference	Q9. Selection
		Q7. Argument	Q10. Judgment

In the test, the critical thinking skills assessed started at the level of Analyze, which was considered the critical thinking stage of Bloom's Taxonomy (Anderson et al., 2001). The first two questions ("Analysis Asks") focused on analyzing the text organization and the overall main idea. Similarly, questions 3 and 4 ("Interpretation Asks") were aimed at assessing learners' abilities to distinguish between facts and opinions, as well as to identify the author's point of view. Next, learners were assessed on their interpretation of inferences, conclusions, and arguments drawn from the passage in questions 5 to 7 ("Evaluation Asks"). Finally, questions 8 to 10 ("Information Literacy Asks") required learners to present and defend opinions by making judgments about information, the validity of ideas, or the quality of work based on the criteria in the questions.

The same test was administered before and after the intervention. To evaluate the content validity and reliability of the test, three experts in English instruction were asked to complete evaluation forms to determine the index of Item-Objective Congruence (IOC). Items with an IOC index greater than 0.50 were considered valid, while those below this standard were modified based on the experts' feedback. The reliability analysis result of the test was 0.96, indicating high reliability. Even though the test could be considered valid overall, some items were modified based on the experts' feedback to ensure accuracy and consistency.

3.3 Participants' Satisfaction Survey

The satisfaction survey consisted of 11 items, all scored on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The survey was administered online through a Google Form with five main sections based on the Five Key Strategies of Formative Assessment (FA).

To evaluate the content validity and reliability of the survey, three experts in English instruction were asked to complete evaluation forms to determine the index of Item-Objective Congruence (IOC). Items with an IOC index greater than 0.50 were considered valid, while those below this standard were modified based on the experts' feedback. The reliability analysis result of the survey was 0.93, indicating high reliability. Even though the survey could be considered valid overall, some items were modified based on the experts' feedback for accuracy and consistency.

4. Data Collection

The data collection process began in the first week of the course with the administration of the pre-test for about two hours to measure the participants' critical thinking abilities. Then, the MIL model interventions were implemented across two distinct course periods. The first intervention was before a formative assessment to familiarize participants with key components of the model's structure and instructions, providing the groundwork for developing critical thinking skills. Meanwhile, the second intervention before a summative assessment was intended to reinforce the learning process and solidify the model's application. Revisiting the strategies and activities at this stage was done to strengthen the participants' ability to engage with the course content critically. The specific intervention procedures, including the teaching instructions and activities used to enhance critical thinking skills, are presented in Table 5.

Table 5

The Interventions of the MIL Model

Weeks 2 – 7 1st intervention	Week 2 - **Identify**: Classroom discussion on understanding university's assignments and choose a topic with suitable types of information for the 20% Individual Assignment
	Week 3 – **Find:** Exit Passes to review effective use of keyword techniques and university's library resources to locate needed information for the 20% Individual Assignment
	Week 4 - **Evaluate:** Answering critical reading questions and CRAAP Test to discern false, biased information and analyze information sources for the 20% Individual Assignment
	Week 5 - **Evaluate:** Sharing individual analysis based on the self-regulated task in a 30-minute group discussion on analyzing information sources and evaluating the arguments of others.
	Week 6 - **Apply:** Sharing progress of the 20% Individual Assignment and gain feedback on in-text citations in oral presentation from the instructor

	Week 7 - **Acknowledge:** Integrating *Turnitin* program to gain feedback on grammatical usage of the 20% Individual Assignment report and gain feedback on content development from the instructor
Week 10 – 15 2nd intervention	Week 10 - **Identify:** Classroom discussion on understanding the 50% Final Project and choose a topic with suitable types of information
	Week 11 - **Find:** Sharing and proposing effective searching techniques in a small group discussion for the 50% Final Project
	Week 12 - **Evaluate:** A self-regulated task to further the source evaluation through critical reading questions and CRAAP Test to discern false, biased information and analyze information sources for the 50% Final Project
	Week 13 - **Evaluate:** Sharing individual analysis based on the self-regulated task in a 30-minute group discussion on analyzing information sources and evaluating the arguments of others
	Week 14 - **Apply:** Sharing progress of the 50% Final Project and gain feedback on in-text citations in oral presentation from the instructor
	Week 15 - **Acknowledge:** Integrating *Turnitin* program to gain feedback on grammatical usage of the 50% Final Project presentation and gain feedback on content development from the instructor

On the sixteenth week, the participants took the critical thinking post-test with the same time allocation, and an additional 30 minutes for the satisfaction survey. Later, the researchers compared the pre- and post-test scores to determine the effectiveness of the MIL model intervention in developing the participants' critical thinking skills.

5. Data Analysis

In the data analysis and interpretation phase, the researchers utilized two primary data sources: the critical thinking pre- and post-tests and the satisfaction survey. These test scores were analyzed using the SPSS program, which calculated the mean, standard deviation, and probability value (p-value) to determine the statistical significance of any observed improvements. Moreover, for better result interpretation, the effect size analysis (Cohen's d) was used to demonstrate the strength of improvements. To analyze the data from the satisfaction survey, the researchers employed arithmetic means to interpret the ratings on a 5-point scale to gauge the participants' overall level of satisfaction with the model and its implementation. With the quantitative data from the pre- and post-tests and the satisfaction survey, the researchers were able to develop a well-rounded understanding of the model's impact on critical thinking skills and the participants' perceptions of its effectiveness.

Findings

RQ1: To what extent does the MIL model enhance English-major learners' analytical, interpretive, and evaluative skills as facets of critical thinking?

This section includes quantitative analysis of pre- and post-test scores, showing a statistically significant increase in critical thinking skills. Table 6 below shows the effectiveness of the MIL model in enhancing students' critical thinking.

Table 6

Pre-Posttest on Learners' Critical Thinking Skills

Group	Participants (n=83) M (SD)	p	Cohen's d
Pre-test	40.41 (10.9)	.00*	0.88
Post-test	52.77 (8.73)		

When comparing the pre-test (M = 40.41, SD = 10.9) and the post-test (M = 52.77, SD = 8.73) scores, the difference in critical thinking skills was statistically significant (t (82) = 12.42, p<.00. This revealed that the MIL model intervention enhanced the participants' critical thinking skills. While the standard deviation (SD) in the post-test was slightly lower than in the pre-test, the first observation was that the model had a more uniform impact on students. This suggests that regardless of the similarity or varying levels of initial ability in critical thinking of the students, the model reduced the disparities in critical thinking skills that were present before the intervention to a similar degree after the intervention. Moreover, the model increased students' confidence and engagement, particularly those who initially struggled, which resulted in a more equal distribution of performance by the end of the intervention. In addition, the effect size (Cohen's d ≈ 0.88) indicated a statistically and practically significant difference between the pre and posttest based on Cohen's d interpretation (a value of d>0.8 indicates a large effect). It was evident that the MIL model intervention had a large effect on enhancing students' critical thinking skills.

The results suggest that the MIL model is a valuable tool for educators seeking to enhance EFL learners' critical thinking skills by refining the five key components of information literacy. These enhanced features include the critical reading strategies and the CRAAP test in the evaluation stage, as well as the five key strategies of Formative Assessment (FA) embedded in all five stages of the IL components. These enhancements facilitate learners' discussions, interactions, and collaborations with classmates and instructors, which is essential for cognitive achievement as shown in Figure 3.

Figure 3

The Enhancement of MIL Model

	Where the learner is going	Where the learner is	How to get there
Teacher		**Classes 2 & 4:** Facilitate classroom discussions & tasks to visualize learning procedures	**Classes 5 & 6:** Give verbal & written feedback for assignment development
Peer	**Class 1:** Clarify and share the learning objectives, task characteristics, and rubric through peer-to-peer activities	**Classes 2 & 4** Share sources evaluation strategies and offer arguments to others	
Learner		**Class 3 & End of Intervention:** Apply source evaluation strategies in the assignment and reflect working process in the written report	

At the beginning of the course, learners were informed of the objectives and assessment criteria to ensure they understood their progress and areas for improvement. After learners have gone through all five stages, they can then identify, find, and evaluate the information, and make intelligent decisions about the sources of information that they intend to use for a particular topic. This demonstrates that learners develop critical thinking skills through the MIL model, reflecting a shift from summative to formative assessment.

RQ2: What is the level of learner satisfaction on the teaching instruction, engagement, and collaborative activities toward the IL model intervention?

The section addressing RQ2 provides findings on student satisfaction with the model, using results from a structured satisfaction survey.

Table 7

Survey on Learners' Satisfaction with the MIL Model

Items	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)	M*	SD
1. Clarifying and sharing intentions and criteria							
1.1 You felt that the objectives of the course were clearly communicated to you.	0	0	9	27	47	4.07	0.56

Items	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)	M*	SD
1.2 You understood what was expected of you in terms of learning outcomes and assessment criteria.	0	0	11	17	55	4.13	0.58
2. Engineering effective classroom discussions							
2.1 Your participations in discussions were valuable.	0	0	2	24	57	4.25	0.50
2.2 You felt encouraged to share your ideas and opinions during discussions.	0	0	0	14	69	4.41	0.50
2.3 You found these discussions engaging and relevant to the subject matter.	0	0	2	17	64	4.33	0.53
3. Providing feedback that moves learners forward							
3.1 You received timely and constructive feedback on your assignments and assessments.	0	0	4	19	60	4.26	0.54
3.2 The feedback helped you understand your strengths and areas for improvement.	0	0	3	20	60	4.27	0.52
4. Activating learners as instructional resources for one another							
4.1 You were allowed to collaborate with your peers for group projects or study sessions.	0	0	0	16	67	4.38	0.49
4.2 You found these collaborative experiences beneficial in enhancing your	0	0	7	25	51	4.13	0.66

Items	Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)	M*	SD
understanding of the subject matter.							
5. Activating learners as owners of their learning							
5.1 You felt that you had autonomy over your learning process.	0	0	6	24	53	4.16	0.64
5.2 When doing assignments, you were able to set personal learning goals and engage in activities that matched your interests and learning style.	0	0	7	24	52	4.14	0.64

Cronbach's alpha for internal consistency of the survey items is approximately 0.92.

Table 7 presents the survey results of 83 participants who rated their level of satisfaction with the MIL model. Most participants strongly agree that the model effectively achieves several functions. These include clarifying the intentions and objective criteria, provoking effective classroom discussions, providing feedback that moves learners forward, activating students as instructional resources for one another, and empowering students as owners of their learning. Regarding the items related to classroom discussion, most participants agree that the model effectively engineered practical classroom discussions, and their participation in discussions is valuable ($M = 4.25$). They feel encouraged to share their ideas and opinions during discussions ($M = 4.41$), and they find them to be engaging and relevant to the subject matter ($M = 4.33$). Additionally, the high mean scores for each item suggest strong satisfaction with the MIL model, and the 0.92 Cronbach's alpha value indicates that the survey items consistently measure the students' perceptions of the MIL model's effectiveness. This shows the internal consistency of the survey items.

Discussion

The integration of metacognitive strategies, formative assessment, and the CRAAP test strengthens key components of information literacy, and thereby fosters critical thinking development in four key ways.

First and foremost, learners could detect the characteristics of information needed for the task, and they developed an ability to search, evaluate, and leverage such information efficiently. It fosters learners' skills in identifying, finding, evaluating, applying, and acknowledging relevant information. This is considered a baseline for the analytical skills necessary for critical reading

and metacognitive strategies, thus serving as an essential skill for EFL learners learning in the modern era (Blummer & Kenton, 2014).

Secondly, learners demonstrated insight and understanding of the quality and appropriateness of online sources for academic purposes (Kani et al., 2020). The addition or modification of strategies within the IL framework of the CRAAP test, according to learners' circumstances and context, such as the added criterion for metacognition by Tardiff (2022) in a new set of CRAAP criteria, helped learners think critically and enhanced their metacognition, resulting in improved information literacy awareness.

Thirdly, learners achieved a depth of understanding of the selected information and could interpret the genuine intentions of the writers. This was shown through techniques like outlining and summarizing the main idea, analyzing the author's point of view, evaluating the author's facts and opinions in an argument, and drawing conclusions from the reading texts. These skills are a frequent crutch for EFL learners, and this model demonstrates some promising results for facilitating the improvement of learners' critical thinking.

Fourthly, shifting from a summative to a formative assessment approach fosters a cooperative learning environment conducive to constructing knowledge. These strategies, which encompass emphasizing learning objectives, facilitating classroom discussions, offering peer feedback, promoting group work collaboration, and empowering individual student autonomy (Leahy et al., 2005) are all valued by students, as shown in the satisfaction survey. The model effectively facilitated classroom discussions throughout the IL process, as it embedded group, peer, and teacher discussion activities that allowed learners to take on various roles and work on their individual tasks. Learners appreciated timely and constructive feedback and found it helpful for understanding their strengths and areas for improvement. They acknowledged their role in peer collaboration and group projects in enhancing understanding and critical thinking. They also felt a sense of autonomy over their learning process and could set personal learning goals. This is important as learners are expressing a desire to construct knowledge and understanding independently, and to engage in discussion with the teacher and peers. In other words, students do not want instructions to follow but actually appreciate the critical thinking process.

In summary, the MIL model demonstrates an innovative approach to teaching critical thinking by integrating the CRAAP test, metacognitive practices, and critical reading processes into a structured, process-oriented IL framework. This approach leads to statistically significant and pedagogically meaningful outcomes that have not been systematically implemented in EFL education before, particularly in the Thai higher education context. It signals new directions for adapting IL instruction to help students better evaluate digital sources and construct knowledge autonomously, preparing EFL learners for success in critical thinking.

Conclusion and Implications

In conclusion, the MIL model significantly improves EFL learners' critical thinking skills. This model provides educators and instructional designers with a critical thinking skills development framework by integrating metacognitive practice, critical reading strategies, and the CRAAP test.

1. Practical Implications for Educators and Instructional Designers

For educators, this study offers a combination of a learning tool set from the IL model, the CRAAP Test, and the Five Key Strategies of Formative Assessment (FA) for Higher Education EFL learners. The study highlights the importance of learners' involvement in their learning and responsibility for their learning process, as well as the scaffolding from peers and teachers in the classroom through a tool set that develops their metacognition. The process underneath the IL model strengthens students' metacognition while interacting with the teacher and peers, for it synthesizes various strategies for critically evaluating information. Moreover, the study has also shown that summative assessment tasks alone are inadequate for metacognitive development. Educators and instructional designers should apply group activities, instructions, scenarios, or individual assignments such as the ones integrated into this study for developing EFL learners' cognitive and metacognitive skills. Students obtain skills in evaluating online sources and materials for their classroom assignments, and it sets them up to be lifelong learners.

Additionally, educators and instructional designers may find the pre- and post-test and metacognitive information literacy satisfaction survey beneficial in evaluating learners' critical thinking skills development and satisfaction with the formative assessment process, although it will need adaptation to fit the unique needs of their students and context.

2. Limitations and Areas for Future Research

While this study contributes to improving critical thinking skills in the EFL context, its first limitation is the research design. This study was implemented with one group of learners using a one-group pre-and post-test purposive sampling research design. Therefore, future research could compare the MIL model with the regular IL components or other models using a true experimental research design. This would ensure that the teaching practices are constantly evolving to be process-oriented, constructivist, and encouraging of collaborative learning.

Moreover, our context was limited to the IL course for higher education; therefore, future research could explore or implement the model in other courses, such as a research and seminar course for either undergraduate or graduate students, or some other non-degree course, evaluating the critical thinking skills for learners of different levels and disciplines. Addressing these aspects will help to refine and broaden the pedagogical role of the MIL model in education.

Additionally, the MIL model has certain limitations regarding its scope and technology integration that require further attention. While it aims to enhance critical thinking and digital literacy, it may not fully accommodate the fast-evolving digital environment. Adapting newly emerging digital trends might better the model's relevance and effectiveness. Moreover, a lack of flexibility in accommodating diverse cultural and local contexts should be considered. Therefore, the model might require adjustment to reflect cultural variance in information processing and media consumption for its wider applicability.

Another limitation of this study is that it solely rests on quantitative research methods. While quantitative data provides certain important statistical information, this kind of data, at times, is missed with respect to subtle perspectives and subjective experiences of participants. It would be more holistic to integrate qualitative approaches, such as in-depth interviews or focus groups, into this subject matter. This would not only deepen the findings but also enrich the investigation of participants' underlying motivations, attitudes, and the contextual factors that shape their responses. Qualitative dimensions may be incorporated in future studies as one way to enhance validity and applicability by offering a more holistic view of the investigated topic.

Lastly, this study did not collect direct data on the effectiveness of the intervention in terms of the reinforcement gap or self-regulated learning nor did it include any open-ended feedback. Future study could investigate student participation trends, academic performance, and responses to open-ended questions. More qualitative study could uncover external factors that may have influenced the results.

Acknowledgment

References

American Association of School Librarians and Association for Educational Communications and Technology (AASL). (1998). *Information literacy standards for student learning*. American Library Association.

American Library Association. (2000). *Information literacy competency standards for higher education*. American Library Association Institutional Repository. http://www.ala.org/acrl/standards/informationliteracycompetency

Anderson, L. W., Krathwohl, D. R., & Bloom, B. S. (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives*. Pearson.

Apairach, S. (2023). Going the extra miles in a reading lesson: Insights from a Thai EFL classroom. *LEARN Journal: Language Education and Acquisition Research Network, 16*(1), 320-338. https://so04.tci-thaijo.org/index.php/LEARN/index

Association of College and Research Libraries. (2016). *Framework for information literacy for higher education*. ACRL. http://www.ala.org/acrl/standards/ilframework

Blakeslee, S. (2010). *Evaluating information - Applying the CRAAP test*. California State University Chico Meriam Library. https://www.csuchico.edu/lins/handouts/eval_websites.pdf

Blummer, B., & Kenton, J. (2014). *Improving student information search: A metacognitive approach*. Chandos Publishing.

Denke, J., Jarson, J., & Sinno, S. (2020). Making the invisible visible: Enhancing information literacy and metacognition with a constructivist activity. *International Journal for the Scholarship of Teaching and Learning, 14*(2), 7. https://doi.org/10.20429/ijsotl.2020.140207

Esparrago-Kalidas, A. J. (2021). The effectiveness of CRAAP test in evaluating credibility of sources. *International Journal of TESOL & Education*, *1*(2), 1–14. https://i-jte.org/index.php/journal/article/view/25

Faculty of Liberal Arts, Mahidol University. (2023). *TQF2 BA (English) Revised program 2566 (2023)*. https://la.mahidol.ac.th/th/wp-content/uploads/2023/11/TQF2-ENG-2566.pdf

Faculty of Arts, Silpakorn University. (2021). *TQF2 BA (English) Revised program 2564 (2021)*. https://drive.su.ac.th/s/8atddAFCPXEiRi9?dir=undefined&openfile=357189

Fieldhouse, M., & Nicholas, N. (2008). Digital literacy as information savvy: The road to information literacy. In M. Knobel & C. Lankshear (Eds.), *Digital literacies concepts, policies and practices* (pp. 43–72). Peter Lang Publishing.

Flavell, J. H. (1979). Metacognition and cognitive monitoring: A new area of cognitive–developmental inquiry. *American Psychologist, 34*(10), 906–911. https://doi.org/10.1037/0003-066X.34.10.906

French, S., Dickerson, A., & Mulder, R.A. (2024). A review of the benefits and drawbacks of high-stakes final examinations in higher education. *High Education*, *88*, 893–918. https://doi.org/10.1007/s10734-023-01148-z

Halpern, D. F. (2008). *Thought and knowledge: An introduction to critical thinking*. Psychology Press.

Imsa-ard, P. & Tangkiengsirisin, S. (2023). Language assessment literacy: A preliminary survey of Thai EFL university lecturers' language assessment knowledge, beliefs, and practices [Special issue]. *PASAA, 66*, 33–76. https://doi.org/10.58837/CHULA.PASAA.66.1.2

International Federation of Library Associations and Institutions. (2006, August). *Guidelines on information literacy for lifelong learning*. IFLA. https://repository.ifla.org/handle/123456789/193

Johnson, C. (1986). A more rigorous quasi-experimental alternative to the one-group pretest-posttest design. *Educational and Psychological Measurement, 46*(3), 585–591. https://doi.org/10.1177/0013164486463011.

Julien, H., & Genuis, S. K. (2011). Librarians' experiences of the teaching role: A national survey of librarians. *Library & Information Science Research, 33*(2), 103–111. https://doi.org/10.1016/j.lisr.2010.09.005

Kani, J., Lowe, S., Macy, K., & Murphy, E. (2020). *Teaching learners to evaluate sources: Getting back to basics.* [PowerPoint slides]. IUPUI Scholarworks. https://scholarworks.iupui.edu/server/api/core/bitstreams/ea97b3f1-4338-4147-be43-af1c396bdd76/content

Khatun, M. (2013). *Digital information literacy of the Oslo Public Library Professionals.* [Master's thesis, Oslo and Akershus University College of Applied Sciences]. Research Gate. https://doi.org/10.13140/RG.2.1.2551.8240

Karanjakwut, C., & Sripicharn, P. (2024). Exploring the experiences, challenges, and perspectives in digital literacy training of older Thai EFL teachers with low digital literacy. *Anatolian Journal of Education, 9*(1), 81–96. https://doi.org/10.29333/aje.2024.916a

Lam, R. (2015). Understanding EFL students' development of self-regulated learning in a process-oriented writing course. *TESOL Journal*, *6*(3), 527–553. https://doi.org/10.1002/tesj.179

Landøy, A., Popa, D., & Repanovici, A. (2020). Basic concepts in information literacy. In A. Landøy, D. Popa, & A. Repanovici (Eds.), *Collaboration in designing a pedagogical approach in information literacy* (pp. 22–38). Springer. https://doi.org/10.1007/978-3-030-34258-6_3

Leahy, S., Lyon, C., Thompson, M., & Wiliam, D. (2005). Classroom assessment: Minute by minute, day by day in classrooms that use assessment to support learning, teachers continually adapt instruction to meet student needs. *Educational Leadership, 63*(3), 18–24. https://pdo.ascd.org/LMSCourses/PD11OC101M/media/FA_M03_Reading_02_Classroom-Assessment.pdf

Liu, G. (2021). Moving up the ladder of source assessment: Expanding the CRAAP test with critical thinking and metacognition. *College & Research Libraries News, 82*(2), 75–79. https://doi.org/10.5860/crln.82.2.75

Lowe, M., Macy, K., Murphy, E., & Kani, J. (2021). Questioning CRAAP: A comparison of source evaluation methods with first-year undergraduate students. *Journal of the Scholarship of Teaching and Learning, 21*(3), 33–48. https://doi.org/10.14434/josotl.v21i3.30744

Muis, K., Denton, C., & Dube, A. (2022). Identifying CRAAP on the internet: A source evaluation intervention. *Advances in Social Sciences Research Journal, 9*(7), 239–265. https://doi.org/10.14738/assrj.97.12670

Paul, R., & Elder, L. (2006). Critical thinking: The nature of critical and creative thought. *Journal of Developmental Education, 30*(2), 34–35.

Ruleman, A. B., Horne-Popp, L., & Hallis, R. (2017). Show me the learning: Navigating information literacy through multiple life perspectives. *Proceedings of ACRL National Conference, At the Helm: Leading Transformation*, *18*, 627–636. https://alair.ala.org/items/829a7a64-9a25-4f99-91c3-c41e9841c7fb

Stanley, T., & Moore, B. (2010). *Critical thinking and formative assessments: Increasing the rigor in your classroom* (1st ed.). Routledge. https://doi.org/10.4324/9781315856261

Tardiff, A. (2022). Have a CCOW: A CRAAP alternative for the internet age. *Journal of Information Literacy*, *6*(1), 119–130. https://doi.org/10.11645/16.1.3092

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

William, D. (2013). Assessment: The bridge between teaching and learning. *Voices from the Middle, 21*(2), 15–20. https://doi.org/10.58680/vm201324461

William, D., & Leahy, S. (2015). *Embedding formative assessment: Practical techniques for K-12 classrooms*. Learning Sciences International.

Yu, J. (2015). Analysis of critical reading strategies and its effect on college English reading. *Theory and Practice in Language Studies*, *5*(1), 134–138. http://dx.doi.org/10.17507/tpls.0501.18

An Exploration of Hostility towards Covid-19 Patients from Cluster Infection in Thailand on a Facebook News Page[1]

การศึกษาความเป็นปรปักษ์ต่อผู้ป่วยโควิด-19 จากการติดเชื้อโควิด-19 แบบกลุ่มก้อนในประเทศไทยบนเพจเฟซบุ๊กสำนักข่าว

Natthakieat Noknoi[2]
ณัฏฐเกียรติ นกน้อย

Pattama Patpong[3]
ปัทมา พัฒน์พงษ์

Abstract

      The imposition of quarantine during the Covid-19 pandemic led to increased social media use to stay updated on infection levels. It was reported that the virus had spread through cluster infections resulting from quarantine violations. Consequently, social media users expressed their feelings towards the infected group in these clusters through evaluative language. This study aims to investigate the expression of hostility towards Covid-19-infected

---

[2-3] *Affiliation:* Department of Linguistics, Research Institute for Languages and Cultures of Asia, Mahidol University, Thailand
  หน่วยงาน: สาขาวิชาภาษาศาสตร์ สถาบันวิจัยภาษาและวัฒนธรรมเอเชีย มหาวิทยาลัยมหิดล ประเทศไทย

Corresponding Author: Pattama Patpong
E-mail: pattama.pat@mahidol.ac.th

individuals from cluster infections in Thailand. The data comprised 44 clauses extracted from comments on 11 posts about cluster infections in Thailand on the official Facebook page of the Thai news TV program *Rueang Lao Chao Ni* during 2020-2021. The ATTITUDE system in Martin and White's (2005) Appraisal Theory was employed to analyze the data. The findings showed a co-occurrence of hostility and satisfaction in comments directed at infected people who violated the quarantine guidelines. Hostility was expressed by Facebook users in the extremity of violence. Satisfaction was invoked based on the belief that these infected people should be removed by violent methods so that infection levels in the country would decline. The findings of this study contribute to designing better communication content in the digital era for future pandemic crises to prevent stigmatization and hate speech towards patients.

Keywords: Covid-19 Cluster Infections, Facebook News Page, Appraisal Theory, Hostility and Satisfaction, Facebook Comments

บทคัดย่อ

การประกาศให้มีการกักตัวในช่วงที่มีการระบาดใหญ่โควิด-19 ทำให้เกิดการใช้โซเชียลมีเดียในการติดตามระดับการติดเชื้อมากขึ้น และมีการรายงานว่ามีการแพร่ระบาดจากการติดเชื้อโควิด-19 แบบกลุ่มก้อน (คลัสเตอร์) อันสืบเนื่องมาจากการฝ่าฝืนการกักตัว จึงทำให้เกิดการแสดงความรู้สึกที่ผู้ใช้โซเชียลมีเดียมีต่อกลุ่มผู้ติดเชื้อจากคลัสเตอร์ดังกล่าวผ่านการใช้ภาษาที่แสดงถึงการบอกความรู้สึก บทความนี้มีจุดประสงค์เพื่อศึกษาการแสดงออกถึงความรุนแรงต่อผู้ติดเชื้อจากคลัสเตอร์ ที่แสดงออกผ่านการใช้ภาษา ข้อมูลประกอบด้วย 44 อนุประโยค จากคอมเม้นต์ของโพสต์ในเพจเฟซบุ๊ก "เรื่องเล่าเช้านี้" ที่โพสต์ข่าวการติดเชื้อโควิด-19 แบบกลุ่มก้อน (คลัสเตอร์) ในประเทศไทย ช่วงปี พ.ศ. 2563-2564 ทั้งหมด 11 โพสต์ วิเคราะห์โดยใช้กรอบแนวคิด ระบบแอตติจูด (ATTITUDE system) ในทฤษฎีการประเมินค่า (Appraisal theory) ของ มาร์ตินและไวท์ (2005) ผลการวิจัยพบว่ามีการปรากฏร่วมระหว่างความเป็นปรปักษ์และความพึงพอใจผ่านคอมเม้นต์ มุ่งเป้าไปที่ผู้ติดเชื้อจากคลัสเตอร์ที่ฝ่าฝืนข้อบังคับของภาครัฐ ผู้ใช้เฟซบุ๊กแสดงความเป็นปรปักษ์ผ่านการใช้ข้อความที่ส่อถึงการใช้ความรุนแรง และพบความพึงพอใจแฝงไว้ผ่านการเสนอดังกล่าวซึ่งเกิดจากความเชื่อที่ว่าหากผู้ติดเชื้อจากคลัสเตอร์ถูกกำจัดด้วยการใช้ความรุนแรง ระดับการติด

เชื้อในประเทศจะลดลง ผลวิจัยของงานชิ้นนี้จะเป็นประโยชน์ในการออกแบบเนื้อหาในการสื่อสารในยุคดิจิทัลที่ดีขึ้น สำหรับวิกฤติการระบาดใหญ่ในอนาคต เพื่อป้องกันการตีตราและการใช้ถ้อยคำแสดงความเกลียดชังต่อผู้ป่วยจากโรคระบาด

คำสำคัญ: การติดเชื้อโควิด-19 แบบกลุ่มก้อน (คลัสเตอร์) เพจเฟซบุ๊กสำนักข่าว ทฤษฎีการประเมินค่า ความเป็นปรปักษ์และความพึงพอใจ คอมเม้นต์เฟซบุ๊ก

Introduction

The absence of face-to-face communication during the Covid-19 pandemic stifled human interaction, leading to the growing influence of digitalization (Sharma, 2023). According to Park et al. (2021), the number of Covid-19 cases was a major concern for social media users, and many mainstream media outlets managed to expand their audiences by reporting the news on their social media platforms.

In Thailand, Kemp (2021) reported that Facebook was ranked second (surpassed only by YouTube) among the most visited social media websites in 2021; thus, many mainstream media outlets in Thailand created their own Facebook accounts to report news about Covid-19 cluster infections to their online audiences. Rawinit and Tepjak (2021) found that Facebook news outlets were among the main platforms people used to stay informed about the Covid-19 pandemic in Thailand. The popularity of using Facebook to receive updates on the Covid-19 pandemic in Thailand is further supported by Ubolwan et al. (2023), who reported that Facebook was the most widely used platform by university students to follow news about the pandemic and that commenting was one of the online behaviors commonly exhibited by Facebook users.

Che Hassan and Mohammad Nor (2022) argued that pandemic-related Facebook comments often targeted the government's approaches to pandemic management, one of which was the enforcement of stricter quarantine law in the hope that the positive cases would decrease. Phansuma and Boonruksa (2021) conducted surveys on public attitudes toward Covid-19 virus and the importance of following quarantine guidelines, showing that the majority of people held negative attitudes toward Covid-19. The Covid-19 virus was viewed as controllable if quarantine guidelines were strictly followed. The results from Phansuma and Boonruksa (2021) highlight the emphasis on compliance with quarantine, which resulted in negative attitudes towards those who violated the

quarantine guidelines. Chinsuwatay (2021) reported that people were well aware of quarantine measures. Violators were blamed for causing new infection due to their negligence; as a result, people imposed negative labels on them (e.g., "uncooperative" and "troublemakers"). Such labels caused those infected to be viewed as individuals who aggravated the pandemic due to their lack of social awareness. This terminology aligns with the public's perception of quarantine violators.

Commenting as an online behavior and the negative public sentiment about the pandemic served as sources of evaluative language reflecting Facebook users' views towards the infected people. Thus, Facebook users evaluated and expressed their dissatisfaction towards the "troublemakers" by calling for stricter enforcement, punishments, or greater public health awareness.

To study this evaluative language, Appraisal Theory, established by Martin and White (2005), was employed. The theory focuses on the expression of attitudes and opinions. The main subsystem of Appraisal Theory is ATTITUDE, which is essential in investigating the expression of emotions (either positive or negative) through language, whether inscribed or invoked. The interpretation depends on the interpreter's language competence as well as shared social and cultural knowledge interlinked with the language.

It is believed that text-based analysis of Facebook comments regarding "troublemakers" during the Covid-19 pandemic in Thailand will provide empirical evidence confirming the negative public sentiment towards quarantine violators. Without an understanding of public sentiment towards "troublemakers", governments and authorities might not be able to effectively address violations of quarantine guidelines in event of a future pandemic.

Objective

The objective of this study is to investigate the hostility expressed in the language used towards the Covid-19 cluster-infected people on the *Rueang Lao Chao Ni* Facebook news page. The program was the most popular news show in Thailand (Jongwilaikasaem, 2015) at that time, with 12.45 million Facebook followers (Statista, 2021).

Literature Review

1. Language use during the Covid-19 pandemic

During the Covid-19 pandemic, institutional agencies (e.g., governmental organizations and TV news outlets) reported news on both social media and traditional platforms (TV and radio) to encourage the public to adhere to the new health safety measures. According to Amusan (2024), the communicative functions of these institutional agencies were threefold: first, to warn about the virus; second, to recommend vaccination; and third, to persuade the general public to get vaccinated. Syntactically, Amusan (2024) states that one of the most prominent sentence types used by institutional agencies is the imperative mood, whose primary function is to give orders or commands.

Mohammad Nor and Che Hassan (2022) studied the speech acts of online comments on Facebook regarding Covid-19 reports disseminated on the official Facebook page of the Malaysian National Security Council in 2021 and found that directive speech acts were used to suggest to the government that stricter law enforcement be implemented to ensure compliance with its guidelines. Beyond directive speech acts, expressive speech acts were used by Facebook users to convey negative emotional reactions (i.e., anxiety, unhappiness, frustration, and anger) towards the rising Covid-19 cases and the management of the pandemic. Overall, the language used on social media reflects the negative public sentiment about the pandemic, expressed through emotional language.

2. Definition of violence

Bufacchi (2005) explored both the original and the extended concepts of violence; the former focuses solely on physical force as a litmus test for identifying violence; while the latter expands the definition to include psychological abuse. Jia (2024) argued the victims of cyber violence can also experience deterioration in both physical and mental health. Cansiz and Akça (2024) defined cyber violence as the exhibition of aggressive and hostile behaviors on online platforms. They investigated cyber violence in digital games with instant messaging features. The results show that digital game players often used threats, hate speech, and insults.

Jia (2024) argues that moral disengagement is the main factor contributing to cyber violence. Aside from psychological factors, Mukred et al. (2024) also highlight technological factors that influence cyber violence, such as online anonymity, the proliferation of harmful content, and the expansion of virtual environments.

2.1 Online hostile language

Language used in online comments reflects hostility towards those who are different through word choice, meaning, and language structure. The term "hostile language" is used in this study to refer to various types of language used to express hostility towards troublemakers, who are viewed as "non-conforming". The "non-conforming" refers to troublemakers who fail to comply with quarantine guidelines, thereby not aligning with public sentiment during the pandemic. "Hostility", as used in this study, refers to the expression of negative attitudes or behaviors towards the non-conforming, based on the explanations of hostility provided by Humprecht et al. (2020) and Esposito and Breeze (2022).

Humprecht et al. (2020) argued that the expression of hostility is shaped by the social and cultural contexts of a particular time, often targeting those who are deemed "non-conforming" or part of an "out-group". The judgement may be based on identity (such as immigrants or foreigners) or on deviations from conventional norms. For example, Esposito and Breeze (2022) reported that female politicians in the UK are frequently the targets of hostile comments rooted in misogynistic ideas.

Hostile language is commonly found in comments on social media platforms that report hard news (e.g., politics) (Su et al., 2018). The reason for such aggressive reactions is that many people, including social media users, may be directly affected by the political situation. Su et al. (2018) reported that many uncivil comments on hard news on Facebook involve inappropriate or insulting vocabulary, which commenters often project onto the individuals mentioned in the news.

Online hostile language involves the expression of hate towards a particular group of people. Murthy and Sharma (2019) stated that comments containing hateful content are expressed through various word choices, such as name-calling and threats.

Although "troublemakers" is a proposed term, it shares characteristics with incitement in hate speech. Culpeper (2021) gave two examples of incitement, namely, threats of killing and forcing someone out of the country. If such threats are directed at others with the intention of prompting them to commit the act expressed, it is considered incitement. The participants in incitement in hate speech include the inciter, the incitee, and the target. In this study, these participants are represented by Facebook users as the inciter, the authorities as the incitee, and the troublemakers as the target. Thus, if hostile language is expressed as a suggestion of violence, it may constitute incitement. Hostile language also aligns with the characteristics of curses and ill-wishes, which involve conventionalized language forms used to attack someone's face, as proposed by Culpeper (2011).

In this study, hostility was directed at the troublemakers during a time when compliance with quarantine guidelines was strongly encouraged. These infected individuals were viewed as "non-conforming" because they failed to adhere to the quarantine guidelines.

3. Systemic functional linguistics

Systemic functional linguistics (thereafter SFL) examines language in its social context (Martin and Rose, 2007). SFL views language in two ways: strata of language and metafunctions. The former consists of phonology/graphology, lexicogrammar, discourse semantics, and context, while the latter pertains to three broad functions of language: ideational, interpersonal, and textual.

This current research only deals with one language stratum, namely, semantics. Semantic resources were identified in Facebook comments to analyze how Facebook users evaluated individuals infected in Covid-19 clusters. This study focuses on the interpersonal metafunction, i.e., language in interactions, such as the expression of subjective opinions (Eggins, 2004). Different evaluations arise from different perspectives: how speakers view the situation and how their preconceived ideas influence that view. Hart (2014) further argued that people also use language to legitimate their ideas and persuade others to adopt the same viewpoint.

3.1 Appraisal theory

Appraisal Theory was developed by Martin and White (White, 2015) to extend the analysis of Halliday's interpersonal metafunction in SFL. The theory shifts the analysis of evaluative language from the Modality system to a more comprehensive system of Appraisal, enabling the analysis of subjective opinions together with the underlying stance-taking (Hart, 2014: p.44). According to White (2015, p.1), Appraisal Theory views positive and negative assessments in texts as "language of evaluation" that reflects language users' personal evaluations and stance-taking. Martin and White (2005) argued that the evaluative source in the Appraisal theory is situated within the semantics stratum of Halliday's SFL.

There are three main systems in Appraisal Theory, namely, ATTITUDE, ENGAGEMENT, and GRADUATION. ENGAGEMENT refers to how language users engineer stance-taking in relation to the propositions of previous speakers (Martin and White, 2005; Hart, 2014; White, 2015). GRADUATION refers to mechanisms by which speakers or writers 'graduate' either force or focus (Martin and White, 2005 p. 94). ATTITUDE deals with emotional reactions, social judgements, and aesthetic evaluations (Hart, 2014). There are three types of ATTITUDE: AFFECT, JUDGEMENT, APPRECIATION (written in uppercase to adhere to Hart's (2014) orthographic representation). AFFECT refers to emotional reactions and is considered the main category of ATTITUDE (Lu, 2023; Zhang, 2024). JUDGEMENT refers to evaluations in terms of social esteem and social sanctions, while APPRECIATION refers to the assessment of aesthetic value. As emotions are mainly expressed in Facebook comments on hard news (Su et al., 2018; Lopes, 2020), the ATTITUDE system and its subsystem AFFECT were chosen as the most suitable analytical tools for this study.

In English, ATTITUDE is realized by an adjective, a descriptive verb, or a noun (Hart, 2014). Lu (2023) and Zhang (2024) argued that attitudes can be identified through lexical, syntactic, and pragmatic strategies. ATTITUDE can be either inscribed or invoked; the former is realized through grammatical resources, while the latter is realized through experience (Thompson, 2008) and based on predefined values (Hart, 2014), rather than being directly inscribed in the text.

AFFECT is pivotal to the data as it deals with emotional reactions. There are three types of emotions subsumed under AFFECT: happiness, security, and satisfaction. The focus here is on the expression of satisfaction and dissatisfaction. This focus is grounded in four major contextual factors: frustration towards quarantine violators (Chinsuwatay, 2021), the use of directive speech act to call for stricter management of the pandemic (Mohammad Nor and Che Hassan, 2022), compliance with the quarantine guidelines (Phansuma & Boonruksa, 2021), and the incitement in hate speech (Culpeper, 2021).

Previous studies on evaluation in hard news incorporated AFFECT into their analysis to investigate the sentiment of news agencies. For instance, Lu (2023) deployed AFFECT to explore the perspective of a Chinese news agency regarding the Japanese government's handling of nuclear-contaminated water from the damaged Fukushima reactor. The results showed that the agency's overall impression was mainly negative, as it was dissatisfied with how the Japanese government planned to address the problem. Prastikawati (2021) employs Appraisal Theory to analyze online news articles on the BBC website regarding the typhoon disaster in the Philippines amidst the Covid-19 pandemic. Verbs such as 'to evacuate' (the Covid-19 patients) and 'to shut' (the airport) are categorized under Dis-/satisfaction of AFFECT, based on the context reflecting how people felt about these actions.

Appraisal Theory contributes to the study of evaluative meaning in Thai hard news platform. Arunsirot (2012) analyzed AFFECT found in Thai adjectives, noun phrases, and verbs in news content regarding the disruption of the 2009 ASEAN summit carried out by the Red Shirts (supporters of former Thai Prime Minister Thaksin Shinawatra, who was forced out of power). The dissatisfaction of the Red Shirts was inscribed through verbs denoting mental states and invoked through action verbs. Results from Prastikawati (2021) and Arunsirot (2012) show that dis-/satisfaction can be invoked through verbs in both Thai and English. In this study, the suggestion of violence is expressed through verb; thus, it is hypothesized that the invocation of dis-/satisfaction is also expressed through verbs.

This study addresses a specific research gap related to instant reaction, namely, online comments in response to hard news reports and the empirical evidence of incitement to violence on social media, as realized through text-based analysis.

Research Methodology

The data for this study consisted of Facebook comments from posts reporting news about Covid-19 cluster infections in Thailand during 2020-2021. The satisfaction invoked in words referring to hostility was analyzed based on Appraisal Theory (Martin and White, 2005).

1. Data collection

The data for this research consisted of Thai-language Facebook comments on news about Covid-19 cluster infections in Thailand, sourced from the official Facebook page of the popular Thai news show *Rueang Lao Chao Ni*. Comments were extracted from official posts on the *Rueang Lao Chao Ni* Facebook page shared between December 2020 and November 2021, in which the term 'cluster' (in Thai orthography) was circulated in the news. The reason for using only this keyword is its wide circulation in the media and its strong recognition in Thai society.

In total, 45 posts were analyzed, with details recorded about the location of each cluster infection and the identity of the infected people mentioned in the news items. The total number of comments in these 45 posts was 1,100, and the total number of clauses in these comments was 3,641. This study focuses on examples from 11 posts that contained hostile language towards the Covid-19 infected group, with 44 clauses identified as hostile language.

The comments in each post were selected according to the following criteria. Firstly, the comments had to be posted on the same date the news item was shared to ensure they represented instant reactions. Secondly, only written texts were extracted; pictorial aids (e.g., memes and emoticons) were excluded to focus on linguistic sources. Thirdly, the content of the comments had to be relevant to the infected people or other parties mentioned in the cluster infection news. Comment replies were not extracted, as they might not have been directly related to the infected people. Lastly, commercial advertisements in the comments were excluded. After extracting the comments, clause numbering was done by identifying clause boundaries when a comment contained more than one clause. In total, 44 clauses were selected for analysis.

Table 1

Troublemakers in Facebook Posts

No.	Infected troublemakers	Type of violation	Location of cluster	Posted on (D/M/Y)	Clauses with hostile language
Post 1	Visitors to a gambling house	Social gathering	A gambling house in Rayong	28/12/2020	3
Post 2	Visitors to a gambling house	Social gathering	A gambling house in Rayong	28/12/2020	1
Post 3	A deceased male programmer	Social gathering	A nightclub in Thonglor district	16/4/2021	1
Post 4	Partygoers	Social gathering	A nightclub in Thonglor district	16/4/2021	1
Post 5	Menial workers	Unhygienic practice	A factory	5/5/2021	1
Post 6	Menial workers	Social gathering	A tunnel workers' camp	5/5/2021	2
Post 7	Migrant workers	Unhygienic practice	A factory	23/5/2021	6
Post 8	Migrant workers	Social gathering	Suan Luang & Chatuchak district, Bangkok	5/6/2021	16
Post 9	Partygoers	Social gathering	A birthday party in Nakhon Panom	25/7/2021	8
Post 10	Partygoers	Social gathering	A civil servants' farewell party in Chaiyaphum province	12/10/2021	5

No.	Infected troublemakers	Type of violation	Location of cluster	Posted on (D/M/Y)	Clauses with hostile language
Post 11	Tourists	Social gathering	The Phu Tap Boek National Park	18/10/2021	1

This study only collected data on the use of hostile language toward marginalized groups in Thailand (i.e., migrant workers, laborers, gambler, and partygoers), with an awareness of the intentional exclusion of other groups, such as teachers, students, or individuals whose careers are deemed mainstream or prestigious.

Generally, those categorized as troublemakers were mainly guilty of violating the quarantine guidelines, and this was considered sufficient reason for Facebook users to identify them as a problem and justify the incitement of violence against them.

2. Data analysis

After collecting the comments, the data was analyzed according to the following steps:

1. Identifying semantic resources with evaluative meaning in a clause within a comment for subsequent analysis through the ATTITUDE system
2. Identifying the type of ATTITUDE
3. Identifying the subtypes belonging to the ATTITUDE type identified in Step 2.
4. Identifying how ATTITUDE is expressed (explicitly, as inscribed; or implicitly, as invoked) and its polarity (positive or negative).

Analyses of ATTITUDE involve examining the semantic resources of words that convey evaluation, along with the polarity of those attitudes. Words with evaluative meaning are identified and categorized according to the categories outlined in the ATTITUDE system, namely:

1. AFFECT —emotional reactions
2. JUDGEMENT — moral judgement based on one's characteristics and behavior.
3. APPRECIATION —aesthetic assessment.

The focus here is on the analysis of AFFECT – emotional reactions to the infected "troublemakers" in the comments. There are three types of AFFECT: happiness, security, and satisfaction.

Un-/happiness refers to the state of being happy or unhappy. It is explicitly realized through words expressing happiness or unhappiness (e.g., happy, glad (Zhu, 2023); *sia chai* "to be sad" (Arunsirot, 2012)).

In-/security refers to the state of being secure or insecure. It is explicitly realized through words denoting being safe or unsafe (e.g., take care of, confident (Zhu, 2023); *nihuasukhuasun* "a headlong escape", *opphayop* "to evacuate" (Arunsirot, 2012)).

Dis-/satisfaction refers to the state of being satisfied or dissatisfied. It is explicitly realized through words indicating being satisfactory or unsatisfactory (e.g., satisfied (Zhu, 2023), *sajai* "very satisfied" (Arunsirot, 2012); angry (Aljuraywi & Alyousef, 2022), the Thai rude suffix 'e' referring to a woman (Rungswang, 2021)).

This study focuses on employing Dis-/satisfaction in the analysis of the suggestion of violence as incitement, as it can reveal whether Facebook users are pleased with the suggestions they make.

Table 2

Context of the Expression of ATTITUDE

Evaluated entity	Evaluator	Social context
The infected "troublemakers"	Facebook users	Ongoing Covid-19 cluster infections in Thailand
		The encouragement of quarantine guidelines

Note: Contextual information on the expression of ATTITUDE is shown in Table 2. The infected group in the cluster was evaluated through linguistic representations by Facebook users, based on the Covid-19 situation in Thailand mentioned in the social context column.

Polarity was analyzed to explore attitudes towards the troublemakers, focusing on whether they were mainly negative or positive, as well as whether the semantic resources conveying these attitudes were inscribed or invoked.

As the data was in Thai orthography, romanization was necessary to accommodate readers who do not speak Thai. The Romanized version used in the analysis adheres to the Royal Thai General System of Transcription (RTGS) (URL: https://www.orst.go.th/). Tones are not marked. After the romanization, a free translation was provided for the Thai words.

The format of the analysis based on ATTITUDE system is presented as follows:

[+/-: Type of ATTITUDE: Subtype: Inscribed or Invoked]

"+" refers to a positive attitude (e.g., happiness and satisfaction), while "-" indicates a negative attitude (e.g., unhappiness and dissatisfaction). For example, in this study, the type of ATTITUDE identified is *invoked satisfaction*, which is subsumed under the subsystem of AFFECT. Therefore, the format used in the analysis is [+AFFECT: satisfaction: invoked].

After the data was collected, comments containing hostile language were selected based on their semantic content. Comments featuring words that connoted violence were identified and categorized accordingly. For instance, *nerathet* ("to deport") and *song klap prathet* ("to send somebody back to their homeland") connote the same concept, i.e., forcing someone to leave the country; therefore, these two words were categorized under the deportation group.

Findings and Discussion

It was found that Facebook users expressed hostility by justifying violence and showing apathy toward those infected. They justified violence using words connoting aggression, suggesting that authorities should use force against the troublemakers in order to eliminate them, in the hope that this would help improve the country's infection situation.

The findings show that Facebook users disguised their acceptance of violence against the cluster-infected group. The invoked attitude toward these individuals is one of satisfaction [+AFFECT: satisfaction], implied through language that suggests violence and dehumanization.

The words connoting violence encompassed a wide range of hateful emotions and threats. The types of violence were divided into five categories based on their lexical meaning, as shown in Table 3.

Table 3

Types of Violence towards the Infected People in Covid-19 Clusters (based on 11 Posts)

Type of violence	Examples of words and phrases	Type of troublemakers	ATTITUDE type	Number of instances
Killing	*tat hua siap prachan* "to decapitate in public"	Migrant workers	AFFECT Negative satisfaction invoked	5
	wisaman "to execute"	Migrant workers	AFFECT Negative satisfaction invoked	
	pai chap ma ying pao "to execute by firing squad"	Partygoers	AFFECT Negative satisfaction invoked	
Inhumane acts	*tat ham* "to chop male genitalia off"	Partygoers	AFFECT Negative satisfaction invoked	11
	chap tat khaen tat kha "to chop the arms and legs off"	Migrant workers	AFFECT Negative satisfaction invoked	
	chap chit ya kha ya "to inject with herbicide"	Migrant workers	AFFECT Negative satisfaction invoked	
Legal punishment	*chap khang diao* "to put somebody in solitary confinement"	Migrant workers	AFFECT Negative satisfaction invoked	

Type of violence	Examples of words and phrases	Type of troublemakers	ATTITUDE type	Number of instances
	dam noen kadi "to bring a lawsuit"	Gamblers	AFFECT Negative satisfaction invoked	11
	khang khuk "to jail"	Partygoers	AFFECT Negative satisfaction invoked	
Deportation	*nerathet* "to deport"	Migrant workers	AFFECT Negative satisfaction invoked	
	song klap prathet "to send somebody back to their homeland"	Migrant workers	AFFECT Negative satisfaction invoked	6
	blacklist "to get somebody blacklisted"	Migrant workers	AFFECT Negative satisfaction invoked	
Apathy	*som laeo* "You're supposed to die"	Partygoer	AFFECT Negative satisfaction invoked	
	som nam na "Serves you right"	Tourists	AFFECT Negative satisfaction invoked	3
	pai tai sa "You should die!"	Partygoers	AFFECT Negative satisfaction invoked	

Type of violence	Examples of words and phrases	Type of troublemakers	ATTITUDE type	Number of instances
		Total		36

Note: The number of instances in the last column of the table shows how many clauses contained words connoting each type of violence. The total number of instances is lower than the total number of clauses, as some instances appeared in more than one clause.

The following subsections provide an overview of each type of violence. Each subsection begins with an introductory paragraph summarizing the relationship between the type of troublemaker and the corresponding type of violence. This is followed by example analysis, illustrating how Facebook users expressed the type of violence they believed should be inflicted on the troublemakers.

1. Killing

Facebook users suggested capital punishment as a suitable response to the troublemakers, particularly targeting infected migrant workers and infected partygoers. Outdated forms of execution, such as beheading and firing squads, were suggested. However, Facebook users who suggested such methods appeared to believe that infected migrant workers and partygoers were deserving of such punishments. This reflects a broader negative attitude among some Facebook users toward both migrant workers and quarantine violators, especially migrant workers, who are often perceived in Thai society as the opposite of being "Thai".

Example 1.
wisaman loei krap
Execute them.
ATTITUDE: *wisaman* "to execute"
[+AFFECT: satisfaction: invoked]

Example 2.
tat hua siap prachan
Decapitate them in public.
ATTITUDE: *tat hua siap prachan* "to decapitate in public"
[+AFFECT: satisfaction: invoked]

In Example 1, a Facebook user comments on news that infected migrant workers had allegedly sneaked out of a campsite where a cluster infection was detected, suggesting that they should be executed. In Example 2, another Facebook user suggests public beheading, using the Thai words *tat hua siap prachan* (to decapitate in public). These users urged the authorities to kill the infected migrant workers to rid Thai society of them. In both examples, satisfaction is invoked, as the suggestions imply that eliminating these individuals would help reduce the number of cluster infections in Thailand. Moreover, the act proposed in Example 2 is more extreme than that in Example 1, as it not only calls for execution but also specifies that the punishment be carried out in public.

2. Inhumane acts

The suggested use of physical violence is categorized under inhumane acts. This may be attributed to the way public perception of the virus was shaped by the media, which portrayed as deadly, and that spurred hostility toward those infected. Inhumane acts were proposed against the troublemakers, who were perceived by Facebook users as belonging to an out-group (i.e., migrant workers) or as quarantine violators (i.e., partygoers).

Example 3.
chap tat khaen tat kha man loei
Chop their arms and legs off.
ATTITUDE: *chap tat khaen tat kha* "to chop their arms and legs off"
[+AFFECT: satisfaction: invoked]

Example 4.
tat ham man

Chop their penises off.
ATTITUDE: *tat ham* "to chop male genitalia off"
[+AFFECT: satisfaction: invoked]

In Example 3, a Facebook user suggests the authorities should cut off the limbs of infected migrant workers. In Example 4, another Facebook user recommends that infected partygoers be mutilated by having their penises removed. Although these actions may not be fatal, they are unquestionably disproportionate and inhumane for simply being infected with the Covid-19 virus.

Satisfaction is implied in both comments, as the Facebook users appeared to believe that these troublemakers had contributed to the emergence of yet another cluster amid rising number of cases nationwide. To them, violent punishment was seen as a justified deterrent against further violations of quarantine guidelines.

3. Legal punishment

This category refers to the use of legal measures that Facebook users suggested as a way to deal with those infected in the cluster. Unlike the previous category, it does not advocate physical violence. The most frequently suggested legal punishment was incarceration for causing cluster infections.

Such comments imply a legitimation of punishment, and it indicates a sense of satisfaction if the infected groups were punished legally. According to Facebook users' viewpoint, legal punishment was perceived as one of the possible ways to eliminate the perceived threat and thereby restore the Covid-19 situation.

The troublemakers in this category were mainly those engaged in 'morally incorrect' activities, such as gamblers and partygoers, those in labor-intensive occupations (i.e., menial tunnel workers), and those identified as out-group members (i.e., migrant workers). These associations may have led Facebook users to justify legal action as both a deterrent and a means of forcing these groups of people to comply with the quarantine guidelines.

Example 5.
laeo chap pai khang diao nai hong
And then put them in solitary confinement
ATTITUDE: *chap pai khang diao* "to put in solitary confinement"
[+AFFECT: satisfaction: invoked]

Example 6.
khang khuk ha pi
Put them in jail for five years.
ATTITUDE: *khang khuk* "to jail" [+AFFECT: satisfaction: invoked]

In Example 5, a Facebook user suggests that the infected migrant workers, who were reported to have sneaked out of the campsite, should be placed in solitary confinement. In Example 6, another Facebook user suggests that the infected partygoers be imprisoned for half a decade for becoming infected in the cluster.

4. Deportation

Words connoting deportation were employed by Facebook users to suggest to the authorities an alternative method of expelling the troublemakers, whose identity was subsumed under the out-group (i.e., migrant workers). Satisfaction was invoked in the suggestion of deportation in that if these migrant workers were forced to leave Thailand, the cluster infections would drop. Ultimately, this would result in satisfaction for Facebook users.

Example 7.
nerathet pai
Just deport them.
ATTITUDE*: nerathet* "to deport" [+AFFECT: satisfaction: invoked]

Example 8.
khuan cha blacklist mai hai klap khao ma ik
The authorities should get them blacklisted so that they will be denied entry.
ATTITUDE: *Blacklist* "to get someone blacklisted" [+AFFECT: satisfaction: invoked]

Words synonymous with deportation are shown in Examples 7 and 8. In Example 7, a Facebook user simply advises the authorities to deport the infected migrant workers who were trafficked into the country. In this case, the infected migrant workers were violators of state quarantine; therefore, the suggestion that they be deported is solely based on a binary "us" and "them", an attitude that distinguishes between the migrant workers (an out-group) and Thai society (an in-group). In Example 8, a Facebook user comes up with a method to ensure that the deported migrant workers are unable to enter Thailand again by suggesting that the authorities blacklist all the deported migrant workers to prevent them from bringing the virus back into the country.

5. Apathy

Facebook users directly expressed apathy towards those in the Covid-19 cluster by saying that they deserved to be infected or die from the virus. This may be attributed to the belief that these quarantine violators were not disciplined, so they did not deserve sympathy. Moreover, another way to express apathy is to tell the infected group to pay the medical expenses out of their own pockets despite the existence of health schemes in the country.

Satisfaction is invoked in the expression of apathy, especially in phrases whose English equivalents are "You deserve it" and "It serves you right". Arguably, these phrases might be interpreted as expressions of pure dissatisfaction towards those infected; however, they are interpreted as expressions of satisfaction because the troublemakers are frowned upon by Facebook users. Thus, it is more reasonable to feel satisfied that something undesirable happened to those they were hostile to.

Example 9.
tai sa
You should die.
ATTITUDE: *tai sa* 'You should die' [+AFFECT: satisfaction: invoked]

Example 10.
ko *som laeo*
You're supposed to die.
ATTITUDE: *som laeo* 'You're supposed to die' [+AFFECT: satisfaction: invoked]

In Example 9, a Facebook user expresses their apathy towards the infected partygoers in the cluster by evaluating that the partygoers are fated to die from the virus. Invoked with satisfaction, it indicates that if the infected partygoers died from the Covid-19 virus, this Facebook user would be satisfied. In Example 10, the news headlines alerted viewers to the death of a visitor to the nightclub where the cluster infection occurred. The male nightclubber was categorized as a troublemaker for violating quarantine guidelines by attending public gatherings. Thus, this Facebook user asserts that it was right for him to die.

Disguising satisfaction in words connoting violence and wishing harm on infected people in the cluster demonstrates that people in Thailand were inclined to lack empathy during the health crisis. Furthermore, it suggests that people tended to seize the moral high ground and justify punishment for those they considered less socially responsible than themselves.

In terms of linguistic form, the results correspond to those of Amusan (2024), in that the prominent linguistic form used on social media during the Covid-19 pandemic was the imperative mood. Apart from institutions' use of the imperative to persuade the general public, as shown in Amusan (2024), the results set out in this study show that the imperative was used by the general public (i.e., Facebook users) as a means to persuade the authorities to take a certain action. By and large, during the Covid-19 pandemic, the main communicative function of social media platforms was to persuade; the findings reveal that Facebook users resorted to persuasion in order to get the authorities to deal with the infected group, whom they viewed as "troublemakers".

6. The association between violence and "troublemakers"

There was a co-occurrence between the type of violence and the type of "troublemaker". Killing and inhumane acts were both associated with migrant workers and partygoers. The association between killing and migrant workers may be attributed to the inherent negative perception of migrant workers. This led Facebook users to think that killing and dehumanizing the infected migrant workers were acceptable. The association between killing and partygoers may be due to the perceived inappropriateness of partying during the pandemic. Facebook users felt justified in calling for the killing and dehumanizing of the partygoers.

Legal punishment was recommended by Facebook users for the infected "troublemakers" who gambled and ignored hygienic practices. The suggestion may have originated from the idea that Facebook users viewed this group as troublemakers and wrongdoers for engaging in these activities; thus, the punishment should be applied to make them realize that what they were doing was wrong.

Deportation was associated with migrant workers, based on the expectation that ridding the country of migrant workers would alleviate the cluster infection. Facebook users suggested deporting them, as it was an effective legal method. Apathy was associated with a deceased partygoer. This may be due to a combination of Facebook users' attitudes concerning the immorality of partying and a belief in karmic punishment for partying, indicating that they thought the partygoer deserved to die.

7. **The concomitance of hostility and satisfaction as a distinctive characteristic of Facebook users during Covid-19 cluster infections**

Prima facie, based on the literal meaning of the words connoting violence, Facebook users appeared openly hostile towards these troublemakers; their use of violent language indicated that they were provoked by the infected individuals and wished for violent acts to be carried out against them. However, at a deeper level, using the ATTITUDE system in Appraisal Theory and with contextual consideration, the analysis in this study, based on semantic resources conveying attitudinal meaning, reveals that Facebook users expressed a sense of satisfaction in making such suggestions. This satisfaction stemmed from their preconceived beliefs that the infected individuals should be expelled from society in order to alleviate the worsening cluster infection in Thailand. Consequently, they justified violent acts against those infected, as doing so allowed them to feel vindicated in believing that these "troublemakers" deserved to be eliminated from society.

The concomitant expressions of hostility and satisfaction to justify violence against those in the infected group are a distinguishing characteristic of Facebook users. They established criteria by which to express their feelings based on the details about the Covid-19 sufferers in the cluster. That is, the infected people in the cluster had to fit the "troublemaker" identity and therefore be eliminated.

Echoing Humprecht et al. (2020), this study found that infected groups featured in the news were regarded as "non-conforming" due to their alleged violation of quarantine guidelines, which led to victimization through hostile comments. The infected groups who were deemed to belong to an "out-group" (i.e., infected migrant workers) were verbally abused with threats of killing and deportation.

Conclusion

In summary, the concomitant expressions of hostility and satisfaction in Facebook comments directed at infected people in the Covid-19 cluster infections in Thailand are based on the subjective perspectives of Facebook users toward those infected. These expressions were realized through nominal and verbal groups, with nouns and verbs used to convey authority

and justify violence against the infected "troublemakers". The justification of violence is based on the wish to get rid of the troublemakers to alleviate the severity of the then-Covid-19 situation in Thailand. Perceptions toward each type of troublemaker resulted in different forms of violence. The results reflect the dissatisfaction with the quarantine violators (Chinsuwatay, 2021), and the veiled satisfaction found in this study corresponds to the concept of incitement (Culpeper, 2021).

Linguistically, this study has shown that the AFFECT system in ATTITUDE can be a tool for a deeper analysis of online verbal attacks, as it involves contexts beyond the mere circulation of hostile language. This study has demonstrated the subjective nature of these Facebook comments, and it is hoped that it has contributed to raising awareness among Facebook users about the justification of violence during the Covid-19 pandemic. Social media users should be aware of the danger of violence circulating on social networks. However, there should be a multimodal study to examine the interface between evaluative language and the pictorial representation of Facebook comment features, which this study did not analyze due to its singular focus on language forms.

The concomitance of hostility and satisfaction that found justification and gave rise to violent comments may be attributed to the fact that Covid-19 was a global pandemic that directly affected members of society. This made prevention a universal theme that almost everyone supported, meaning that particular groups who did not comply were denounced and threatened. This study represents an empirical study based on naturally occurring texts from a Thai social media platform. However, how sufferers of other diseases are evaluated in online comments has not yet been explored. It is suggested that subsequent studies should focus on other health crises among communities such as sex workers, the LGBTQ+ community, and low-income people. Determining how online users evaluate and respond to such groups suffering health crises would greatly enhance our understanding of how social media is used as a conduit for expressing feelings, attitudes, and opinions toward the marginalized and afflicted.

This study illustrates the use of hostile language to incite violence against a particular group; thus, it is hoped that the findings will be useful for stakeholders, such as educators, social media platforms, and policymakers, in formulating actionable measures to mitigate negative online behavior.

References

Aljuraywi, J. A., & Alyousef, H. S. (2022). Attitude in political discourse: An appraisal analysis of attitude in Donald Trump and Joe Biden's interviews on 60 Minutes, *Journal of Language and Linguistic Studies*, *18*(3), 176-193. https://www.jlls.org/index.php/jlls/article/view/4678

Amusan, K. (2024). *The use of language during Covid-19: An examination of linguistic features of selected discourses in the United States of America* [Unpublished manuscript]. ResearchGate. https://dx.doi.org/10.13140/RG.2.2.22264.25607

Arunsirot, S. (2012). The use of appraisal theory to analyze Thai news study commentaries. Manusya, *Journal of Humanities Regular*, *15*(1), 70-89. https://digital.car.chula.ac.th/manusya/vol15/iss1/5/

Bufacchi, V. (2005). Two concepts of violence. *Political Studies Review*, *3*(2), 193–204. https://doi.org/10.1111/j.1478-9299.2005.00023.x

Cansiz, A., & Akça, B. (2024). The psychological and legal dimensions of cyber violence in the digital game perspective: The case of League of legends. *Journal of Awareness*, *9*(Special Issue/Özel Sayı), 91–104. https://doi.org/10.26809/joa.2253

Che Hassan, N. S. I., & Mohammad Nor, N. H. (2022). Analysis of speech acts in COVID-19-related Facebook comments. *Proceedings*, *82*(1), 1-9. https://doi.org/10.3390/proceedings2022082050

Chinsuwatay, W. (2021). Phuettikam kanpongkanton-eng lae phonkrathop kong roktidchuea wairut korona songphansipkao to kropkrua phutitchuea nai khetphuenthi amphoe phrapadaeng changwat samutprakan. (in Thai) [Self-defense behaviors and effect of the Coronavirus Disease 2019 (COVID-19) on infected patients' families at Phra Pradaeng district, Samut Prakan province]. *Thailand Journal of Health Promotion and Environmental Health*, *44*(4), 72-85. https://thaidj.org/index.php/tjha/article/view/11781

Culpeper, J. (2011). Politeness and impoliteness. In K. Aijmer & G. Andersen (Eds.), *Pragmatics of society: Handbooks of pragmatics* (Vol. 5, pp. 391-436). Mouton de Gruyter.

Culpeper, J. (2021). Impoliteness and hate speech: Compare and contrast. *Journal of Pragmatics*, *179*, 4-11. https://doi.org/10.1016/j.pragma.2021.04.019

Eggins, S. (2004). *An introduction to systemic functional linguistics* (2nd ed.). Continuum.

Esposito, E., & Breeze, R. (2022). Gender and politics in a digitalized world: Investigating online hostility against UK female MPs. *Discourse & Society*, *33*(3), 1-21. https://doi.org/10.1177/09579265221076608

Hart, C. (2014). *Discourse, grammar and ideology: Functional and cognitive perspectives*. Bloomsbury.

Humprecht, E., Hellmueller, L., & Lischka, J. A. (2020). Hostile emotions in news comments: A cross-national analysis of Facebook discussions. *Social Media + Society*, *6*(1), 1-12. https://doi.org/10.1177/2056305120912481

Jia, L. (2024). The influencing factors of cyber violence. *Journal of Education Humanities and Social Sciences*, *26*, 669–673. https://doi.org/10.54097/1ges0s36

Jongwilaikasaem, W. (2015, July 13-16). *Cultural geography of news in digital TV age* [Conference session]. The European Conference on Media, Communication and Film 2015, Brighton, United Kingdom. https://papers.iafor.org/submission15495/

Kemp, S. (2021). *Digital in Thailand: All the Statistics You Need in 2021*. Datareportal. Retrieved March 11, 2022, from https://datareportal.com/reports/digital-2021-thailand

Lopes, R. E. de L. (2020). Reactions to social quotas: A study of Facebook comments in Brazilian Portuguese. *Revista Da ABRALIN*, *19*(3), 211–239. https://doi.org/10.25189/rabralin.v19i3.1703

Lu, Z. (2023). Discourse analysis of "Fukushima nuclear-contaminated water" news reports from the perspective of attitude in appraisal theory. *International Journal of Linguistics, Literature and Translation*, *6*(8), 174–182. https://doi.org/10.32996/ijllt.2023.6.8.16

Martin, J. R., & Rose, D. (2007). *Working with discourse: Meaning beyond the clause* (2nd ed.). Bloomsbury.

Martin, J. R., & White, P. R. R. (2005). *The language of evaluation: Appraisal in English*. Palgrave Macmillan.

Mohammad Nor, N. H. & Che Hassan N.S.I. (2022). A speech act study of online comments towards COVID-19 report in the Malaysian National Security Council's Official Facebook Page. *ESTEEM Journal of Social Sciences and Humanities*, *6*(2), 147–163. https://ejssh.uitm.edu.my/images/Vol6Sept22/LAW18687_EJSSHVOL6_2_SEPT2022.pdf

Mukred, M., Mokhtar U. A., Moafa F. A., Gumaei, A., Sadiq A. S., & Al-Othmani, A. (2024). The roots of digital aggression: Exploring cyber-violence through a systematic literature review. *International Journal of Information Management Data Insights*, *4*(2), 1-18. https://doi.org/10.1016/j.jjimei.2024.100281

Murthy, D., & Sharma, S. (2019). Visualizing YouTube's comment space: Online hostility as a networked phenomena. *New Media & Society*, *21*(1), 191-213. https://doi.org/10.1177/1461444818792393

Park, S., Han, S., Kim, J., Molaie, M. M., Vu, H. D., Singh, K., & Cha, M. (2021). COVID-19 discourse on Twitter in four Asian countries: Case study of risk communication. *Journal of Medical Internet Research*, *23*(3), e23272. https://doi.org/10.2196/23272

Phansuma, D. & Boonruksa, P. (2021). Kwamru thasanakhati lae phuettikam kanpongkan kovitsipkao kong prachachon nai tambonpruyai amphoe mueang changwat nakhonratchasima (in Thai) [Knowledge, Attitudes, and Preventive Behaviors of COVID-19 among Residents in Pru Yai Sub-district, Muang District, Nakhon Ratchasima Province]. *Srinagarind Medical Journal*, *36*(5), 597-604. https://thaidj.org/index.php/smnj/article/view/11003

Prastikawati, E. F. (2021). Attitudes perspective in BBC News' articles: An appraisal analysis. *Journal of English Language Studies*, *6*(2), 122-137. http://dx.doi.org/10.30870/jels.v6i2.10280

Rawinit, W., & Tepjak, P. (2021, April 30). *Kanpoetrapsue kiaokap kovitsipkao chak kromkuapkhumrok kasaungsatharanasuk lae kanruthaothun khaoplom khong phurapsan*. (in Thai) [Exposure to Media about COVID-19 from the Department of Disease Control and Audience's Fake News Literacy]. [Conference session]. RSU National Research Conference 2021 on Social Science and Humanity, Education, Management, and Arts, Rangsit University, Pathum Thani, Thailand. 10.14458/RSU.res.2021.67

Rungswang, A. (2021). *Investigating stereotypical gender qualities towards female and LGBTQ politicians: An appraisal analysis of Thailand's political discourse* [Doctoral dissertation, Thammasat University]. TU Digital Collections. https://digital.library.tu.ac.th/tu_dc/frontend/Info/item/dc:293854

Sharma, G. (2023). Influence of Covid 19 pandemic on intercultural communication and dialogue. *E3S Web of Conferences*. *371*, 1-9. https://doi.org/10.1051/e3sconf/202337105060

Statista. (2021). *Thailand: Leading FB pages by number of likes 2021*. https://www.statista.com/statistics/1180414/thailand-leading-facebook-pages-by-number-of-likes/

Su, L. Y.-F., Xenos, M. A., Rose, K. M., Wirz, C., Scheufele, D. A., & Brossard, D. (2018). Uncivil and personal? Comparing patterns of incivility in comments on the Facebook pages of news outlets. *New Media & Society*, *20*(10), 3678–3699. https://doi.org/10.1177/1461444818757205

Thompson, G. (2008). Appraising glances: Evaluating Martin's model of APPRAISAL. *Word*, *59* (1-2), 169-187, https://doi.org/10.1080/00437956.2008.11432585

Ubolwan, K., Pulom, N., Chuencham, J., & Sanghuachang, W. (2023). Kanruthaothansue kiaokap kanrabatkhong chuea wairut korona saiphanmai (COVID-19) (in Thai) [Media Literacy about the Novel Coronavirus (COVID-19) Outbreak of Undergraduate Students of Praboromarajchanok Institute]. *Regional Health Promotion Center 9 Journal*, *17*(1), 354-367. https://he02.tci-thaijo.org/index.php/RHPC9 Journal/article/view/260907

White, P. R. R. (2015). Appraisal theory. In K. Tracy, C. Ilie, & T. Sandel. (Eds.), *The international encyclopedia of language and social interaction* (pp. 1-7). Wiley. https://doi.org/10.1002/9781118611463.wbielsi041

Zhang, Y. (2024). Discourse analysis of COP28 news reports from the perspective of attitude in appraisal theory. *Studies in Linguistics and Literature*, *8*(2), 143–152. https://doi.org/10.22158/sll.v8n2p143

Zhu, L. (2023). Attitudes in teacher talk in EFL classroom from the perspective of appraisal theory. *Creative Education*, *14*(5), 1111-1134. https://doi.org/10.4236/ce.2023.145071

Participatory Mechanisms to Build Digital Resilience against Cyberbullying in Higher Education:
A Mixed-Methods Study in Chiang Mai

กลไกแบบมีส่วนร่วมเพื่อเสริมสร้างภูมิคุ้มกันในโลกดิจิทัลต่อไซเบอร์บูลลี่
ในสถาบันอุดมศึกษา: การวิจัยแบบผสมในจังหวัดเชียงใหม่

Thanyalak Boonlue[1]
ธัญญลักษณ์ บุญลือ

Silin Munpunya[2]
สิลิณศ์ มูลปัญญา

Abstract

The objectives of this study were to 1) evaluate the effect of participatory workshops on students' knowledge of cyberbullying prevention, and 2) develop participatory mechanisms for building protective networks against Cyberbullying within higher education institutions. This research employed a mixed-methods approach, using questionnaires and interview protocols to collect data. The data were analyzed by using descriptive statistics and content analysis. The sample group for this study consisted of 412 undergraduate students from higher education institutions in Chiang Mai. The research findings revealed that the majority of respondents to the questionnaires had experienced low levels of cyber threats while most of the participants who participated in in-depth interviews reported having been threatened on social media. It was also found that participants demonstrated a statistically significant improvement in knowledge and understanding of cyberbullying after attending the participatory workshops ($t(100) = 17.13, p < .001, d = 1.98$). These findings provide valuable implications for higher education institutions in policy and curriculum design for developing digital resilience among undergraduate students. In addition, the current data highlight the importance of psychological workshops for helping undergraduate students to deal with cyberbullying effectively.

[1,2] ***Affiliation:*** Faculty of Business Administration and Liberal Arts, Rajamangala University of Technology Lanna, Thailand

หน่วยงาน: คณะบริหารธุรกิจและศิลปศาสตร์ มหาวิทยาลัยเทคโนโลยีราชมงคลล้านนา ประเทศไทย

Corresponding Author: *Silin Munpanya*
E-mail: *Phatchara@rmutl.ac.th*

บทคัดย่อ

วัตถุประสงค์ของงานวิจัยเรื่องนี้ คือ 1) เพื่อประเมินผลของการอบรมเชิงปฏิบัติการแบบมีส่วนร่วมที่มีต่อ
ความรู้ของนักศึกษาในการป้องกันไซเบอร์บูลลี่ และ 2) เพื่อพัฒนากลไกแบบมีส่วนร่วมเพื่อสร้างเครือข่ายป้องกันไซ
เบอร์บูลลี่ภายในสถาบันอุดมศึกษา งานวิจัยเรื่องนี้ใช้รูปแบบการวิจัยแบบผสมผสาน และใช้แบบสอบถามและแบบ
สัมภาษณ์ในการเก็บรวบรวมข้อมูล วิเคราะห์ข้อมูลด้วยสถิติเชิงพรรณนาและการวิเคราะห์เนื้อหา กลุ่มตัวอย่างของ
การวิจัยครั้งนี้ประกอบด้วยนักศึกษาระดับปริญญาตรีของสถานศึกษาในจังหวัดเชียงใหม่ จำนวน 412 คน ผลการวิจัย
พบว่า กลุ่มตัวอย่างที่ตอบแบบสอบถามส่วนใหญ่ เคยถูกข่มขู่คุกคามทางไซเบอร์ในระดับต่ำ และกลุ่มตัวอย่างส่วน
ใหญ่ที่ถูกสัมภาษณ์เชิงลึก เคยถูกคุกคามบนสื่อสังคมออนไลน์ รวมทั้งพบว่า กลุ่มตัวอย่างมีความรู้ความเข้าใจเกี่ยวกับ
ไซเบอร์บูลลี่เพิ่มขึ้นหลังการเข้าร่วมการอบรมเชิงปฏิบัติการแบบมีส่วนร่วมอย่างมีนัยสำคัญทางสถิติที่ระดับ .01
($t(100)$ = 17.13, p <.001, d = 1.98) ข้อค้นพบนี้เป็นประโยชน์ในการกำหนดนโยบาย และหลักสูตรของ
สถาบันอุดมศึกษา เพื่อพัฒนาภูมิคุ้มกันในโลกดิจิทัลของนักศึกษา และข้อค้นพบจากงานวิจัยนี้ยังเน้นย้ำถึง
ความสำคัญของการอบรมเชิงปฏิบัติการด้านจิตวิทยาในการช่วยให้นักศึกษาสามารถจัดการกับการข่มขู่คุกคามทางไซ
เบอร์ได้อย่างมีประสิทธิภาพ

คำสำคัญ: ภูมิคุ้มกันในโลกดิจิทัล กลไกแบบมีส่วนร่วม สุขภาวะในระดับอุดมศึกษา

Introduction

In today's digital age, online platforms have fundamentally changed how we connect with each other. While these tools make communication easier and more immediate, they also bring new challenges—one of the biggest being cyberbullying. Around the world, many young people face harassment or hurtful comments online. This can have serious consequences, including mental health issues like depression, anxiety, and in some cases, thoughts of self-harm or suicide. For example, in the United States, nearly 29% of teens reported having being cyberbullied, and about 16% admitted to participating in cyberbullying themselves (Hinduja & Patchin, 2024). Recent studies indicate that cyberbullying is associated with increased risks of depression, anxiety, and suicidal ideation, emphasizing its serious mental health impacts (Kowalski et al., 2023). These figures are alarming and underscore how urgent it is to find effective ways to prevent and address online abuse.

In Southeast Asia, the situation is similarly concerning. In Thailand, reports suggest that roughly 80% of children and teenagers have experienced some form of bullying, whether at school or online, according to data from Mahidol University's National Institute for Child and Family Development (2019). Even more troubling, 59% of Thai youth acknowledged having engaged in cyberbullying themselves; 39% found it amusing while 28% viewed it as a frequent occurrence. This widespread issue demands solutions that are tailored to the social and cultural realities of Thai youth, especially considering how they engage and interact online.

Most existing research has focused on younger students in primary and secondary school, but there is less knowledge about what is happening at the university level. College students are at a different stage in their lives, being more independent and self-reliant, but still vulnerable to online risks that can impact their mental health and academic success. Unfortunately, current strategies tend to be reactive or centered on individuals, rather than taking a broader view or involving students in designing solutions that work for their communities.

By applying Resilience Theory and Social Cognitive Theory, we can gain a better understanding of how cyberbullying occurs and what strategies might be effective to prevent it. These frameworks show us that online behavior is not shaped only by individual choices, but it is also influenced by family, friends, school environments, and wider social norms. Moreover, they highlight the importance of developing protective mechanisms, like social support and digital skills, to help young people navigate online spaces more safely. Similarly, Barlett (2023) proposed that cyberbullying is a social behavior that is shaped by observation, reinforcement and cognitive-emotional association rather than personality traits. He also indicated that online violence is attained and restored through destructive social norms, parental modeling, and positive reinforcements from friends (Barlett, 2023). Furthermore, UNESCO Office Bangkok and the Regional Bureau for Education in Asia and the Pacific (2023) investigated the relationship between teacher and student digital citizenship competencies in the Asia-Pacific Region and how member countries may assist teachers in encouraging students to learn digital citizenship principles and skills. They also proposed a Digital Kids Asia-Pacific Framework for Education, which consists of five digital citizenship competency domains (digital literacy, digital safety and resilience, digital participation and agency, digital emotional intelligence, and digital creativity and innovation). Nevertheless, the effect of participatory workshops on Thai students' knowledge of cyberbullying prevention has remained unclear. This study aims to fill the knowledge gap about how cyberbullying operates among university students in Chiang Mai. We wanted to develop participatory programs that help students build resilience, and foster networks that promote respectful and safe online behavior. By focusing on these systemic and community-based approaches, we hope to have found practical ways to prevent cyberbullying and support young people in becoming responsible digital citizens.

Objectives

1. To evaluate the effect of participatory workshops on students' knowledge of cyberbullying prevention.

2. To develop participatory mechanisms for building protective networks against cyberbullying within higher education institutions.

Research Questions

1. What are students' experiences with cyberbullying?
2. How do students perceive participatory mechanisms for building resilience?

Literature review

Cyberbullying involves harmful actions like harassment, intimidation, and targeting that happens through digital platforms. Usually, these actions are repeated and intentional, and their goal is to make someone feel scared, ashamed, or emotionally hurt. Researchers have identified different forms of cyberbullying, such as impersonation, cyberstalking, flaming, outing, trolling, and social exclusion (Archaphet, 2017; Child and Youth Media Institute, 2018; Dhoray, 2023). The variety shows just how complicated online aggression can be. Still, most of the current classifications tend to look at each type of behavior separately, without considering how they might overlap or influence each other in different situations. This makes it harder to really understand what causes cyberbullying, especially among university students, where peer relationships and social dynamics can be quite different from those in primary or secondary schools.

The idea of Digital Intelligence (DQ), introduced by the DQ Institute (2020), offers a broad way to understand the skills and knowledge needed to navigate the digital world responsibly. DQ covers seven key areas, such as Digital Safety, Digital Security, and Digital Emotional Intelligence, all aimed at helping young people learn to act responsibly online. Although this model highlights important skills for building resilience to online harm, it has mostly been used with younger groups or in prevention programs. This leaves a big question unanswered: how does DQ apply to university students and their online behaviors and values? There is surprisingly little research connecting digital literacy, emotional intelligence, and cyberbullying among college students, even though understanding these links could help us develop better ways to prevent online abuse.

The term "resilience" has been used in varied situations to refer to the positive ability of individuals to withstand, adjust, and recover from the difficulties in their lives. Richardson (2002) proposed that there are three waves of resilience development. They comprise Resilient Qualities (first stage), The Resiliency Process (second stage), and Innate Resilience (third stage). Over time, conceptualizations of resilience have evolved from emphasizing deficits to highlighting an individual's strengths. Asnicar (2024) described that Seligman's 3Ps Model of Resilience consists of the beliefs that an individual himself is a cause of problems, which relate to guilt and self-blame (Personalization), the belief that a difficulty in one aspect of life represents the negative circumstances in all aspects of life (Pervasiveness), and the belief that the difficulties will last forever (Permanence). This model is beneficial for identifying the strategies that participants use when they encounter cyberbullying. Furthermore, Resilience Theory helps us understand how young people deal with the challenges of cyberbullying. Some students, even when they face online harassment or aggression, show strong resilience and adaptability. They often have protective factors like strong social support, good emotional awareness, and solid digital skills, which help them recover from negative experiences and avoid becoming aggressive online themselves (Luthar et al., 2021). Instead of just reacting to problems, a resilience-based approach

focuses on helping students build the skills they need to handle online challenges before they get worse. This is especially important in colleges and universities, where students face complicated social situations as well as many types of digital environments. When schools give students the right tools and support, they can help them feel safer and more confident online. Using Resilience Theory in this way shows how important it is to help young adults build protective factors and develop coping skills. By making these stronger, we can reduce the harm caused by cyberbullying and support students' digital wellbeing. This approach also aligns with the broader goal of education: preparing students for a digital world by helping them develop not only technical skills, but also emotional and social resilience online.

Most research on cyberbullying looks at younger students in primary or secondary schools. But there is still a lot we do not know about how it affects university students. They are more independent, but they still face online pressures and risks that can harm their mental health, and affect their academic success (Ali & Shahbuddin, 2022; Aparisi et al., 2021; Gohal et al., 2023). Because of this gap, we need to learn more about how college students can build resilience, and how group or community efforts might help prevent online aggression.

Originally, Bandura (1977) proposed Social Learning Theory, which explains that people learn new behaviors by watching others or experiencing things directly. In this view, modeling is key to learning. However, Bandura later expanded this idea into Social Cognitive Theory (Bandura, 1986). This newer framework adds an important focus on cognitive factors—how people think and process information. In the context of cyberbullying, these theories help explain why online aggression happens and how to stop it. Young people often see bullying behavior online. Because they see it frequently, it can grab their attention and become 'normalized' in their minds. Under Social Learning Theory, they might simply copy what they see. However, Social Cognitive Theory helps us go deeper. It explains that students are not just copying machines; their behavior is also influenced by their internal thoughts and their environment. By using this framework, we can understand how to build digital resilience—helping students use their own thinking skills (self-regulation) to reject negative online behaviors instead of copying them. The Social Cognitive Theory helps explain how and why these behaviors can be learned and continued in the digital world.

Research Methodology

1. Population and Sample

The population for this study comprised 87,816 undergraduate students enrolled in Chiang Mai province's higher education institutions during the second semester of the 2023 academic year. Overall, 412 undergraduate students took part in this study. The sample consisted of 311 students who completed the questionnaires, 15 of which also took part in subsequent in-depth interviews, and 101 students who participated in the psychological workshops.

A convenience sampling method was employed. Students were invited to participate voluntarily after class. If they were interested in taking part in this project, they were able to arrange a time to do the questionnaires and/or the interview. The research objectives, data collection methods, participant confidentiality, and opportunities for questions were clearly explained. Appointments were scheduled for questionnaire completion, interviews, and workshop participation. Faculty members at participating

universities assisted in publicizing the study to encourage participation across various departments. The study received a positive response from students at three universities within Chiang Mai province. The inclusion criteria for this study were undergraduate students who studied in Chiang Mai province's higher education institutions during the second semester of the 2023 academic year, and were provided with detailed information according to the information sheets and the Generic Informed Consent Form. The exclusion criteria were undergraduate students who did not complete all items in the questionnaires, or could not answer more than 30 percent of the required information during the interviews.

2. **Research Instruments**

Data were collected using the following instruments:

2.1 Cyberbullying and Online Aggression Survey Instrument (2021 version)

This survey, adapted from Hinduja and Patchin (2021), was translated with permission into Thai. The backward translation was applied to translate it into Thai. The 18-item survey is divided into two sections: Section 1 assesses participants' experiences of cyberbullying victimization (nine items), and Section 2 assesses their experiences of cyberbullying offending (nine items). The researchers did a pilot study by asking 37 students to complete the questionnaires. Cronbach's alpha reliability coefficients for a pilot study were 0.87 (Section 1) and 0.89 (Section 2). Then, the researchers edited some items in the questionnaires before the data collection. The results showed that Cronbach's alpha reliability coefficients were 0.94 and 0.97 for Sections 1 and 2, respectively. Each item used a four-point Likert scale. The score for each item ranged between 0 and 3 (never = 0; once = 1; a few times = 2; many times = 3). The researchers took the score of each subscale and computed a total score. The higher scores the participants obtained, the more experience in cyberbullying victimization or cyberbullying perpetration.

2.2 Semi-Structured In-Depth Interview Protocol

This protocol explored participants' understanding of participatory mechanisms to build digital resilience against cyberbullying within educational institutions in Chiang Mai. The interviews, guided by Bandura's Social Cognitive Theory (1986) and Carver & Scheier's (1994) framework on coping strategies and styles, utilized open-ended questions to allow for in-depth exploration of participants' experiences and perspectives. Interviews took approximately 40 minutes. To test the validity of the interview questions, five experts were invited to review and give some comments on them, and the Item-Objective Congruence Index (IOC) was subsequently calculated. It was found that the IOC value of the interview questionnaire was 0.97. Additionally, the researchers did a pilot study by interviewing five students and editing some questions that were unclear before interviewing the participants.

2.3 Cyberbullying Knowledge and Understanding Questionnaire

This questionnaire consisted of two sections: Section 1 assessed the participants' knowledge of cyberbullying (10 items), and Section 2 measured the participants' satisfaction with psychology workshop (four items).

2.4 Workshop Manual

A manual was developed to enhance participants' skills in managing cyberbullying, and to facilitate the creation of support networks to prevent and mitigate these issues within educational institutions.

This research received ethical approval from Rajamangala University of Technology Lanna Human Research Ethics Committee (RMUTL-IRB 099/2023).

3. Data Analysis

3.1 Quantitative Data Analysis

The quantitative data were analyzed using IBM SPSS Statistics. Frequencies, percentages, and descriptive statistics were calculated for the overall sample and for scores related to online threats and violence. The researchers assumed that students will show a significant increase in cyberbullying prevention knowledge post-intervention. Therefore, a t-test was used to compare cyberbullying knowledge scores before and after participation in the workshop. As hypothesized, participants demonstrated significantly greater knowledge and understanding of cyberbullying after the workshops compared to before the workshops, $t(100) = 17.13$, $p < .001$, $d = 1.98$, 95% CI [1.67, 2.29].

3.2 Qualitative Data Analysis

The qualitative data were analyzed using content analysis. At the beginning, the researchers determined the units of analysis and divided the data into three categories: students' experiences of cyberbullying, effects of cyberbullying, and participatory mechanism to deal with cyberbullying. Next, the researchers developed a coding scheme, tested the coding scheme, and coded all data that had been collected from participants. Then, the researchers rechecked all codes before analyzing the data and interpreting the findings.

To summarize, the researchers applied an explanatory sequential design in this study because the researchers collected the quantitative data to identify the patterns of cyberbullying among undergraduate students, and then the researchers collected the qualitative data to explore students' experiences of cyberbullying, their perception of participatory mechanisms for building resilience, and their strategies to deal with cyberbullying in detail (see Figure1).

Figure 1

Conceptual Framework

Evaluate the effect of participatory workshops on students' knowledge of cyberbullying prevention

Develop participatory mechanisms for building protective networks against cyberbullying within higher education institutions

Higher Education Students

Participatory Mechanisms to Build Digital Resilience against Cyberbullying in Higher Education Institutions in Chiang Mai province

Research Findings

1. Students' experiences with cyberbullying

For this section, there were 311 participants, who were undergraduate students with different years of college experience (freshmen to senior). There were 110 males, 197 females, and four LGBTQ+ identifications. Their ages ranged between 18 and 30 years ($M = 20.59$, $SD = 1.72$). The analysis of participants' responses to the questionnaire items employing the above-mentioned Likert scale (ranging from 0 to 3) revealed the following findings regarding experiences with online victimization and offending:

1.1 Cyberbullying Victimization

Participants responded on a scale ranging from 0 (never), 1 (once), 2 (a few times) to 3 (many times). It was found that the most frequently reported form of cyberbullying victimization was experiencing online threats ($M = 0.71$, $SD = 0.92$). Other forms of victimization, in descending order of frequency, included: Receiving offensive comments ($M = 0.57$, $SD = 0.91$), receiving offensive images ($M = 0.41$, $SD = 0.84$), receiving offensive videos ($M = 0.35$, $SD = 0.77$), identity theft and impersonation with subsequent negative behavior ($M = 0.24$, $SD = 0.61$), the creation of a negative website about oneself ($M = 0.17$, $SD = 0.52$), the spreading of rumors ($M = 0.17$, $SD = 0.54$), threats of physical harm online ($M = 0.17$, $SD = 0.51$), and threats of physical harm via text message ($M = 0.16$, $SD = 0.51$).

1.2 Cyberbullying Offending

It was indicated that the most common cyberbullying offending behavior was spreading rumors or gossip ($M = 0.39$, $SD = 0.83$). Other behaviors, in descending order of frequency, included: Posting negative or hurtful comments ($M = 0.33$, $SD = 0.71$), creating fake news ($M = 0.08$, $SD = 0.39$), posting inappropriate images ($M = 0.07$, $SD = 0.32$), threatening others online ($M = 0.07$, $SD = 0.36$), threatening others via text message ($M = 0.07$, $SD = 0.38$), posting inappropriate videos ($M = 0.06$, $SD = 0.30$), identity theft and impersonation with subsequent negative behavior ($M = 0.05$, $SD = 0.28$),

and creating a negative website about someone else (M = 0.05, SD = 0.30). Furthermore, the results showed that there was no evidence that gender had an influence on online victimization ($p = .81$). In addition, no significant differences were found between gender and online offending ($p = .09$).

2. Cyberbullying Awareness Workshop Outcomes

The participants included 101 undergraduate students who attended the workshops. They comprised 49 males, 50 females, and two LGBTQ+ identifications. They were between the ages of 18 and 25 ($M = 20.11$, $SD = 1.51$). The analysis of the cyberbullying awareness workshop outcomes revealed the participants demonstrated significantly higher mean scores on the cyberbullying knowledge questionnaires after the workshop ($M = 42.48$, $SD = 7.20$) compared to before the workshop ($M = 28.65$, $SD = 6.75$).

Table 1

Mean Scores, Standard Deviations, and t-test Results for Cyberbullying Knowledge (Pre- and Post-Workshop)

Item	N	M	SD	DF	t	p
Pre-Workshop Knowledge	101	28.65	6.75	100	17.13	< .01**
Post-Workshop Knowledge	101	42.48	7.20			

Note: **p < .01

As shown in Table 1, there was a statistically significant difference ($p < .01$) in cyberbullying knowledge scores between the pre- and post-workshop assessments, $t(100) = 17.13$, $p < .001$, $d = 1.98$, 95% CI [1.67, 2.29]. Therefore, these findings indicated a substantial increase in cyberbullying knowledge among the participants following the workshop.

3. Cyberbullying Behaviors Among Thai Youth

Overall, there were 15 participants who took part in the in-depth interviews. There were seven males and eight females. Their ages ranged from 18 to 22 years. According the data analysis, the findings were divided into three categories. They comprised of students' experiences of cyberbullying, effects of cyberbullying, and participatory mechanism to deal with cyberbullying.

3.1. Experiences of Cyberbullying

The qualitative data from interviews revealed that most students had experienced cyberbullying. Some illustrative examples include:

Student A reported having their Facebook account hacked, likely due to insecure login practices. The hacker posted inappropriate content and insulted her friends, causing embarrassment and fear of attending school. She said, "I once got my Facebook hacked, probably because I was logged in in a public place. When I checked, I found that my hacked Facebook only had posts about 18+ content, insulting friends, which made me embarrassed and unwilling to go to school."

Student B described receiving sexually explicit images and videos via private messages, resulting in significant distress. She said, "Someone using a fake account sent a picture and video of their genitals in the chat, and I was shocked. I felt really bad."

Several students also reported that their family members or friends had experienced similar forms of cyberbullying. Student M recounted a case where a fake Facebook account impersonating their mother was used to defraud others. He reported the account and it was taken down. He mentioned, "There is a fake Facebook account using my mother's picture to trick other people into giving money. But my mother and I saw it first, so we reported it to the administrators to take action."

Student C described a situation where a friend was ostracized from an online group. She helped her friend cope with this. She indicated, "I once saw a friend being pushed out of their group. I felt sorry for them, so I took them in, and they got better."

Based on the analysis of the interview data and the classification framework by Dhoray (2023), nine distinct categories of cyberbullying were identified within Chiang Mai's higher education institutions. These categories and their definitions are presented in Table 2.

Table 2

Nine categories of cyberbullying in higher education institutions in Chiang Mai

Categories of cyberbullying	Definition
1. Cyberstalking	The persistent online monitoring and tracking of a target, including real-world surveillance, with the intention of causing harm, intimidation, or exploitation (financial or sexual).
2. Flaming	The use of aggressive, abusive, and insulting language online, often in public forums or chat spaces, to provoke conflict and distress.
3. Outing	The unauthorized dissemination of a victim's private information online, often with the intention of causing humiliation or damage to their reputation.
4. Trickery	Deceptive tactics used to manipulate a target into divulging personal information, often employed by someone known to the victim, with the goal of exploitation or embarrassment.
5. Harassment	Repeated and persistent online harassment, involving threatening, insulting, or offensive messages, often designed to cause ongoing distress and fear.
6. Trolling	Provocative and often inflammatory online communication intended to incite strong reactions and disrupt online environments, typically for the amusement of the perpetrator.

Categories of cyberbullying	Definition
7. Catfishing / Impersonation	Creating a false online persona, sometimes accessing a victim's account without permission, to deceive and manipulate others, frequently used for malicious purposes.
8. Denigration / Gossip	The online spreading of false or damaging rumors and gossip about a target, aiming to harm their reputation and standing within their social circles.
9. Exclusion	The deliberate and coordinated exclusion of a target from online groups or communities, leading to feelings of isolation, marginalization, and rejection.

3.2 Effects of Cyberbullying

Participants largely recognized the negative impacts of cyberbullying. For example,

Student D reported feelings of distress, shock, shame, and reluctance to attend school. She said "... I feel bad, shocked, and ashamed. I don't want to go to school..."

Student E expressed feelings of discomfort and dislike as a result of cyberbullying.

Student F conveyed his feelings of anger, stating, "I want to know who he is. I want to get back at them."

Student G revealed, "When it happens often, it becomes really stressful and makes me feel sad."

3.3. Participatory mechanism to deal with cyberbullying: Participants employed diverse coping strategies when faced with cyberbullying:

Student H described ignoring minor incidents, blocking harassers, or reporting severe instances to authorities (although he expressed skepticism about successful prosecution due to the ease of creating fake online accounts). He mentioned, "If it's not something damaging, I don't pay attention to it and just let it go—don't engage or block them. But if it causes significant harm, I would have to report it to the police for assistance. However, I think it would be difficult because, on social media, it's easy to fake accounts, and it's probably hard to catch them since they can create new ones once the old ones are shut down."

Student I advocated for self-reliance, suggesting that changing one's own mindset was crucial. If the harasser didn't change, the victim should adjust their perspective, remain calm, and choose to ignore the bullying. He said, "It has to start with him; he needs to change his mindset. But if he doesn't change, we have to change ourselves—shift our mindset, be mindful, and not pay attention."

Student J emphasized preventative measures such as regularly changing passwords and enabling two-factor authentication for increased security. She indicated, "Change your Facebook password often to prevent people from hacking in, or use two-factor authentication for security."

Student K highlighted the importance of seeking support from trusted individuals. She described, "... So, I went to consult others, and they told me to ignore it and let it go. So, I let it go because whatever they do reflects on themselves..."

Discussion

Forms of cyberbullying in Chiang Mai higher education institutions are based on the analysis of surveys, questionnaires, and in-depth interviews. Nine distinct categories of cyberbullying were identified within Chiang Mai's higher education institutions (see Table 2). The research findings are consistent with previous research indicating that 15% of Thai youth aged 12-18 (14,945 respondents) had experienced cyberbullying (Tanta-atipanit, 2020). Other studies show high rates of verbal abuse, defamation, ostracism, and the sharing of private information online. These findings also align with Patchin and Hinduja (2024) in highlighting the importance of understanding youth motivations to harm themselves online (digital self-harm or self-cyberbullying) and help them to learn more coping strategies and resolutions to achieve their psychological needs. Furthermore, they are in accord with another study indicating how the continuous nature of cyberbullying, coupled with the potential for widespread dissemination, amplifies these negative effects. Victims may experience ongoing distress due to the persistent nature and wide reach of the attacks (Chainwong, Skulphan, & Thapinta, 2020).

1. The effect of participatory workshops on students' knowledge of cyberbullying prevention

Analysis revealed a statistically significant improvement ($p < .01$) in cyberbullying knowledge and understanding following the workshop. Pre-workshop mean scores on a knowledge assessment were 28.65 ($SD = 6.75$), while post-workshop scores increased to 42.48 ($SD = 7.20$). This aligns with research by Surat (2018), which highlighted emotional coping (seeking support, engaging in distracting activities, managing stress, and suicide prevention) and avoidant coping (blocking online interactions, temporarily disconnecting, shifting focus, distancing oneself from the bully, and ignoring the behavior) as effective strategies for addressing bullying. This study's results are consistent with those of Doungthai and Promsit (2022), who suggested that prevention and intervention strategies should include digital literacy training for users, strong parent-child relationships, school-based discussions and presentations, verification of online user identities

by internet service providers, and public awareness campaigns by media outlets regarding the impact of cyberbullying. Moreover, the findings are in line with another previous study which revealed that resilience was a protective factor in preventing cyberbullying. This study also found that resilience training and intervention was helpful in identifying the possibility of cyberbullying and boosting the students' wellbeing (Gabrielli et al., 2021).

2. Protective networks against Cyberbullying within higher education institutions
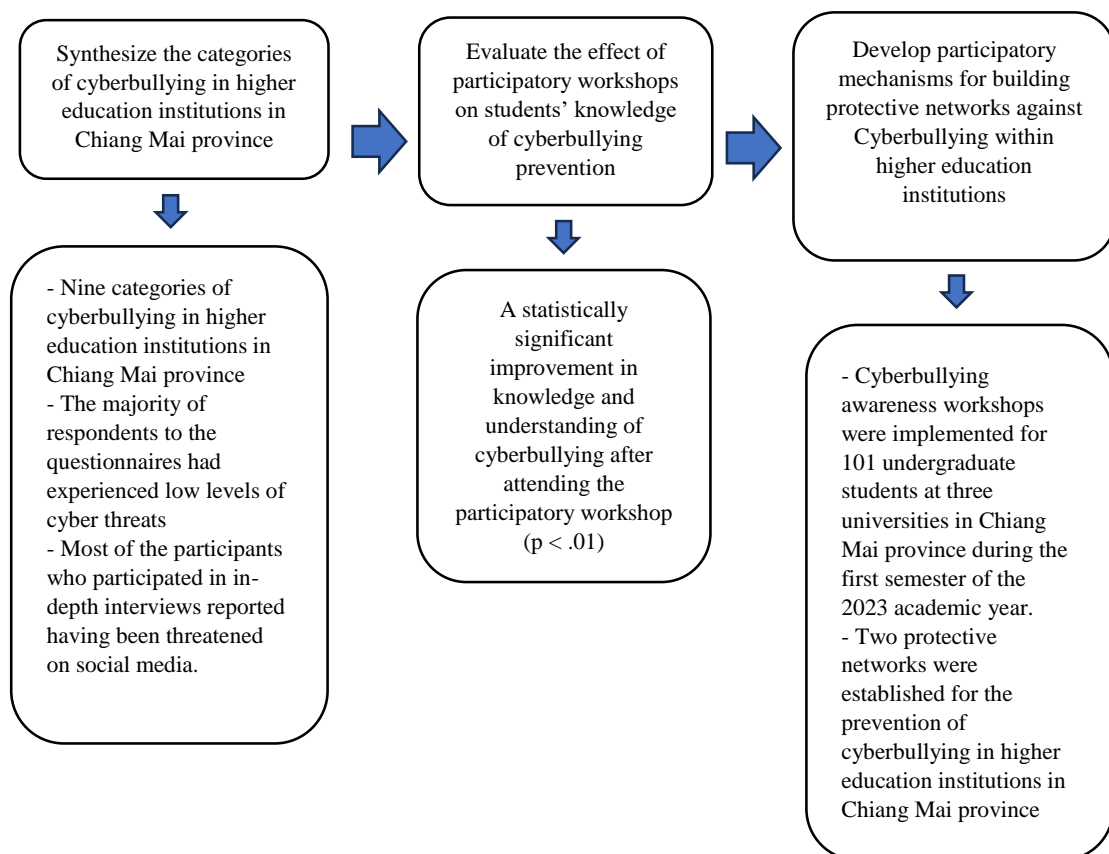
The cyberbullying awareness workshops were implemented for 101 undergraduate students at three universities in Chiang Mai province (Rajamangala University of Technology Lanna, Chiang Mai University, and North-Chiang Mai University) during the first semester of the 2023 academic year. Post-workshop scores on a cyberbullying knowledge assessment ($M = 42.48$, $SD = 7.20$) were significantly higher ($p < .01$) than pre-workshop scores ($M = 28.65$, $SD = 6.75$). As a result of these actions, two collaborative networks were established for the prevention of cyberbullying in higher education institutions. These networks consist of groups of students and faculty members from North-Chiang Mai University and Chiang Mai University who participated in the program. These findings corroborate Saengcharoensap's research (2020), which emphasized the broad impact of cyberbullying and underscored the need for multi-sectoral collaboration (government, private sector, civil society, educational institutions, and families) to raise awareness, promote digital literacy, foster empathy and respect, and develop emotional regulation and ethical digital citizenship skills. This is further supported by the work of Archaphet (2017), which advocates for institutional policies (regulations), training programs, and curriculum integration to promote empathy, respect, and digital safety among students and staff. Kuankaew et al. (2021) similarly emphasized the development of digital literacy skills through innovative pedagogical approaches to improve digital learning environments and to prevent cyberbullying. This aligns with Hinduja and Patchin's (2019) recommendations for fostering respect, empathy, self-regulation, emotional management, and digital literacy skills to empower individuals to protect themselves from and respond to cyberbullying, and also with Hinduja and Patchin (2024) who mentioned that the digital resilience could help youth to deal with cyberbullying successfully.

Figure 2 presents the summary findings for this study. Interestingly, the majority of respondents to the questionnaires had experienced low levels of cyber threats, while most of the participants who participated in the in-depth interviews reported having been threatened on social media. The findings further support Seligman's 3Ps Model of Resilience due to the fact that participants responded to cyberbullying differently. To clarify, some participants believed that they were a main cause of cyberbullying or it happened because of their characteristics (Personalization), whereas some of them believed that cyberbullying affected their relationships with other people and personal lives (Pervasiveness). Some participants also thought that the cyberbullying had not really ended and would happen again (Permanence). The findings are also in agreement with Bandura's Social Cognitive Theory (1986), which proposed that both personal and environmental factors impact and are influenced by a person's behavior (Reciprocal Determinism). Firstly, the behavior of cyberbullying victims was a result of the interaction among

emotions, cognition and the online environment. Secondly, through both observational and enactive learning, some participants tended to respond with anger, whereas others developed self-regulation skills to manage their emotions productively. Overall, these findings illustrate a form of social learning that reflects the growth of self-regulation and prosocial behavior within the online context.

Figure 2

Conceptual Diagram to illustrate integrated findings

Finally, it is worth noting that most students who participated in the in-depth interviews had protective mechanisms because they received social support from friends and family members when they were cyberbullied. They also adopted avoidance coping strategies or sought to disengage from conflict.

According to Barlett and Chamberlin (2017), interventions could be developed or reformulated to prevent cyberbullying behavior by comprehending the mechanisms by which it arises. In this study, the researchers used these fundamental findings to develop a psychological workshop due to the fact that some students bullied other people unintentionally, while some of them were bullied by the others and did not know how to deal with the situation. It is vital to develop productive strategies to prevent cyberbullying and encourage students to respond to these negative circumstances appropriately. The

data analysis showed that after attending the participatory workshops, students' knowledge and comprehension of cyberbullying increased significantly at the $p = 0.01$ level. After that, the researchers developed participatory mechanisms for building protective networks against cyberbullying within higher education institutions. Finally, two protective networks were established for the prevention of cyberbullying in higher education institutions in Chiang Mai province.

Conclusion and Recommendations

The findings indicate that even though a majority of participants obtained low scores in the cyberbullying victimization scale and cyberbullying offending scale, some participants had experienced cyberbullying in their lives and realized the negative effects of cyberbullying. The empirical findings in this study contribute to our understanding of the phenomenon of cyberbullying in university students and how they become involved in cyberbullying (perpetrators or victims). Moreover, there was a statistically significant difference ($p < .01$) in cyberbullying knowledge scores between the pre- and post-workshop assessments. In addition, two protective networks against cyberbullying within higher education institutions were established for the prevention of cyberbullying in higher education institutions in Chiang Mai province. These findings were the empirical evidence to emphasize the importance of applying Resilience Theory and Social Cognitive Theory to deal with cyberbullying. They also provide the applicable and practical participatory workshops and meaningful network to prevent cyberbullying in higher education students in Chiang Mai province.

This study is one of the first mixed-methods studies to develop participatory digital-resilience workshops for Thai undergraduates. The current data highlights the importance of psychological programs and students' protective networks to facilitate having the digital literacy for dealing with cyberbullying appropriately and creatively. In addition, these findings suggest several courses of action for scholars, principals, and lecturers to develop the curriculum to enhance students' digital wellbeing and set varied activities which are based on the Resilience Theory for helping the students who suffer from cyberbullying as well as preventing the students who tend to be new cyberbullies. These findings can be beneficial to develop university-wide reporting and peer-support networks. Another important practical implication is the dissemination of this workshop in educational institutions (incorporating the digital resilience workshop into first-year orientation programs) and the expansion of the network to other provinces in Thailand (cross-institutional collaboration).

Limitations

The study's findings are limited to undergraduate students in Chiang Mai province. Therefore, caution should be exercised when generalizing these results to other populations or contexts. An additional uncontrolled factor is the possibility that some participants had a self-report bias when they participated in this study.

Future Research

Future research should expand the sample to include diverse populations and geographical settings to assess the generalizability of these findings. Longitudinal studies or cross-provincial comparisons are also needed to evaluate the long-term effectiveness of the interventions employed in this research and to refine these approaches. Additionally, a further study could evaluate the long-term effectiveness of protective programs in preventing cyberbullying behaviors. Such studies would be beneficial for improvements or refinements of the programs in the future.

Acknowledgement

References

Ali, S. I., & Shahbuddin, N. B. (2022). The relationship between cyberbullying and mental health among university students. *Sustainability, 14*(11), 1 – 14. https://doi.org/10.3390/su14116881

Aparisi, D., Delgado, B., Bo, R. M., & Martínez-Monteagudo, M. C. (2021). Relationship between cyberbullying, motivation and learning strategies, academic performance, and the ability to adapt to university. *International Journal of Environmental Research and Public Health, 18*(20). Article 10646. https://doi.org/10.3390/ijerph182010646

Archaphet, N. (2017). Cyberbullying: Aggressive misbehavior and innovation for solution. *Academic Journal of Social Communication Innovation, 5*(1), 100–106. https://ejournals.swu.ac.th/index.php/jcosci/article/view/9119

Asnicar, S. (2024). Martin Seligman's framework for resilience 'The 3 Ps – A framework for Resilience. https://www.diversityaustralia.com.au/martin-seligmans-framework-for-resilience-the-3-ps-a-framework-for-resilience/

Bandura, A., & Walters, R. H. (1977). *Social Learning Theory* (Vol. 1). Prentice Hall.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall.

Barlett, C. P. (2023). Cyberbullying as a learned behavior: Theoretical and applied implications. *Children, 10*(2), Article 325. https://doi.org/10.3390/children10020325

Barlett, C. P., & Chamberlin, K. (2017). Examining cyberbullying across the lifespan. *Computers in Human Behavior*, *71*, 444–449. https://doi.org/10.1016/j.chb.2017.02.009

Carver, C. S., & Scheier, M. F. (1994). Situational coping and coping dispositions in a stressful transaction. *Journal of Personality and Social Psychology, 66*(1), 184–195. https://doi.org/10.1037/0022-3514.66.1.184

Chainwong, P., Skulphan, S., & Thapinta, D. (2020). Being cyberbullied and suicide risk among youths. *The Journal of Psychiatric Nursing and Mental Health, 34*(3), 133–151. https://he02.tci-thaijo.org/index.php/JPNMH/article/view/241401

Child and Youth Media Institute. (2018). *Cyberbullying* (3rd ed.). Walk On Cloud Company Limited.

Dhoray, D. (2023). *10 types of cyberbullying.* Cybersafe TT. https://cybersafett.com/10-types-of-cyberbullying/

Doungthai, T., & Promsit, S. (2022). Cyberbullying. *Journal of Management Science Nakhon Ratchasima Rajabhat University, 1*(1), 1–15. https://so08.tci-thaijo.org/index.php/jmsnrru/article/view/173

Gabrielli, S., Rizzi, S., Carbone, S., & Piras, E. M. (2021). School interventions for bullying-cyberbullying prevention in adolescents: Insights from the upright and creep projects. *International Journal of Environmental Research and Public Health, 18*(21). Article 11697. https://doi.org/10.3390/ijerph182111697

Gohal, G., Alqassim, A., Eltyeb, E., Rayyani, A., Hakami, B., Al Faqih, A., Hakami, A., Qadri, A., & Mahfouz, M. (2023). Prevalence and related risks of cyberbullying and its effects on adolescent. *BMC Psychiatry, 23*(1), 1-10. https://doi.org/10.1186/s12888-023-04542-0

Hinduja, S., & Patchin, J. W. (2019). *2019 cyberbullying data.* Cyberbullying Research Center.

Hinduja, S., & Patchin, J. W. (2021). *Cyberbullying and online aggression survey instrument.* Cyberbullying Research Center.

Hinduja, S., & Patchin, J. W. (2024). *Cyberbullying fact sheet: Identification, prevention, and response* (2024 ed.). Cyberbullying Research Center. https://cyberbullying.org/Cyberbullying-Identification-Prevention-Response-2024.pdf

Kowalski, R. M., Giumetti, G. W., & Feinn, R. S. (2023). Is cyberbullying an extension of traditional bullying or a unique phenomenon? A longitudinal investigation among college students. *International Journal of Bullying Prevention, 5*(3), 227–244. https://doi.org/10.1007/s43545-023-00689-0

Kuankaew, W., Phongkhunakorn, N., & Robkob, W. (2021). The development of learning innovation for cyberbullying prevention and cyberbullying victimization among Thai youth. *Journal of Nursing and Health Research, 22*(2), 28–40. https://he01.tci-thaijo.org/index.php/bcnpy/article/view/247264

Luthar, S. S., Ebbert, A. M., & Kumar, N. L. (2021). Risk and resilience during COVID-19: A new study in the Zigler paradigm of developmental science. *Development and Psychopathology, 33*(2), 565–580. https://doi.org/10.1017/S0954579420001339

National Institute for Child and Family Development, Mahidol University. (2019). *Did you know that 59% of Thai children have been a victim of cyberbullying? Eventpop.* https://www.eventpop.me/blogs/200-cyberbullying

Patchin, J. W., & Hinduja, S. (2024). Adolescent digital self-harm over time: Prevalence and perspectives. *Journal of School Violence, 23*(4), 542–554. https://doi.org/10.1080/15388220.2024.2349566

Richardson, G. E. (2002). The metatheory of resilience and resiliency. *Journal of Clinical Psychology*, *58*(3), 307–321. https://doi.org/10.1002/jclp.10020

Saengcharoensap, K. (2020). *Cyberbullying among university students in Thailand.* [Unpublished Doctoral Dissertation]. Mahidol University.

Surat, P. (2018). *Cyberbullying in socio-cultural dimensions: Case study of generation Z among Thai youths* [Unpublished Doctoral Dissertation]. Srinakharinwirot University.

Tanta-atipanit, S. (2020). *A survey on the situation of Thai children and online threats 2020.* Internet Foundation for the Development of Thailand. https://inetfoundation.or.th

The DQ Institute. (2022). *DQ competencies.* https://live.dqinstitute.org/dq-framework/

UNESCO Office Bangkok and the Regional Bureau for Education in Asia and the Pacific. (2023). *Digital citizenship in Asia-Pacific: Translating competencies for teacher innovation and student resilience.* The United Nations Educational, Scientific and Cultural Organization and UNESCO Multisectoral Regional Office. https://doi.org/10.54675/NNVF6123

Beyond the Binary: Non-Native English-Speaking Teachers' Cognitions and Practices Corresponding to the EFL and EIL Approaches

Pariwat Thararuedee[1]
ปริวัฒน์ ธาราฤดี

Abstract

Acknowledging English's role as an international communicative tool, scholars have called for a paradigm shift in ELT from the English as a foreign language (EFL) approach to the English as an international language (EIL) approach. Despite much discussion on EIL in theory, teachers' voices are severely underrepresented and little is known about the impact such discussion has on teachers' cognitions and practices. To address this gap, this study explored four non-native English-speaking teachers' (NNESTs) cognitions and practices that corresponded to EFL and EIL approaches. Observations, stimulated recall interviews and semi-structured interviews were employed to collect the data. It was found that the teachers exhibited both monocentric (EFL) and pluricentric (EIL) conceptions of English. Although native English speaker (NES) norms serve as dominant pedagogical norms, EIL principles were drawn on to redefine non-native features in a positive light and build confidence of teachers as competent English users in their own right. EFL principles and practices were found to be held and practiced by these teachers alongside EIL principles and practices. While theorists often present binary EFL/EIL models, this study has shown that local enactments destabilize such binaries by incorporating elements of both. EIL models, therefore, should be viewed not as prescriptions but rather as options within teachers' repertoires.

Keywords: teachers' knowledge, teaching practices, EFL approach, EIL approach

---

[1] *Affiliation:* Faculty of Liberal Arts, Prince of Songkla University, Thailand
หน่วยงาน: คณะศิลปศาสตร์ มหาวิทยาลัยสงขลานครินทร์ ประเทศไทย

Corresponding Author: Pariwat Thararuedee
E-mail: pariwat.t@psu.ac.th

Introduction

The global spread of English and its status as an international language has prompted scholarly calls for a paradigm shift from the English as a foreign language (EFL) approach to the English as an international language (EIL) approach. The term EFL approach refers to instruction that sets the idealized native English speaker (NES) as the ultimate target and pedagogical model, whereas the term EIL approach refers to instruction that questions the exclusive use of NES models and promotes linguistic and cultural diversity embedded in English uses (Jenkins, 2009; Seidlhofer, 2011). While much discussion about EIL has taken place, little is known about the impacts such discussion has on language teachers' cognitions and practices. This is because "the voices of teachers remain severely underrepresented in this movement" (Rose & Montakantiwong, 2018, p. 88). A number of scholars (e.g., Rose & Montakantiwong, 2018; Young & Walsh, 2010) have called for pedagogical-situated studies that examine teachers' perspectives on the issues raised by the EIL approach. To bridge this research gap, the present study explores four non-native English-speaking teachers' (NNESTs) cognitions and practices that correspond to the EFL and EIL approaches in Thai tertiary contexts. Investigating teacher perspective is important not only because teachers are key stakeholders, but because they are in a better position to determine the relevance of the EFL and EIL approaches to their local classroom contexts (Berns, 2006; Brown, 2012; Jenkins, 2012; Seidlhofer, 2011).

Literature Review

This section first describes the EFL and EIL approaches. It then summarizes existing research exploring teachers' cognitions on the two approaches.

2.1 The EFL and EIL approaches

English is truly an international language and its global spread is unprecedented and unparalleled in terms of geographical spread and various purposes it serves (Dewey & Jenkins, 2010), with non-native English speakers (NNESs) now outnumbering native English speakers (NESs) (Crystal, 2012; Selvi & Yazan, 2017). In light of the changing sociolinguistic profile of English where learners are more likely to engage in communication with English users from diverse linguistic and cultural backgrounds rather than NESs, many scholars have called for a move away from the EFL approach based on NES models towards the EIL approach that acknowledges and represents to learners linguistic and cultural diversity embedded in English in today's globalized world. Unlike the EFL approach which promotes a monocentric view of English based on the inner circle varieties, the EIL approach promotes a pluricentric view and an egalitarian philosophy towards English variations with assumptions that "English no longer has one single base of authority, prestige and normativity" (Mesthrie & Bhatt, 2008, p.3); that English belongs to anyone who uses it; and that hybrid and dynamic uses of English are as legitimate as the conventional stable norms. In short, "the literature of EIL, however diverse in opinion, is united in the desire to move away from teaching for native-speaker competence" and towards bi-/multilingual competence (Alsagoff, 2012, p.116).

Principles of EIL have been proposed (e.g., Alptekin, 2002; Brown, 2012; Kirkpatrick, 2012; Kubota & Ward, 2000; Matsuda, 2012; McKay, 2012). Unlike the EFL approach which relies on the idealized NES models, the EIL approach sets the competent bi-/multilingual English user as the target and pedagogical models. Therefore, the ability to negotiate meanings and communicate successfully across Englishes and cultures is emphasized over the mastery of a single NES norm (Marlina, 2014, 2018). Relevant non-native English speaker (NNES) varieties and NNES-NNES interactions are included alongside NES counterparts to represent the diversity of English, which benefits learners who can improve their receptive skills in processing different varieties, learn communication strategies employed by NNES users, and have realistic expectations of their English interlocutors with different linguistic and cultural backgrounds (McKay & Bokhorst-Heng, 2008). While the EFL approach exposes students to NES cultural norms, the EIL approach exposes students to relevant NES and NNES cultures, and intercultural communicative competence is the goal. That is, learners should be encouraged to express their cultural identities and critically reflect on both their own and others' cultures to foster mutual cross-cultural understanding, rather than being pressured to conform to NES cultural norms (McKay, 2003). Lastly, the political and social dimensions of language use need to be acknowledged in the EIL approach. This ranges from a questioning of a teaching approach at odds with multilingualism and local cultures of learning; an awareness-raising that fosters a tolerant and egalitarian attitude toward English and cultural diversity; and a critical appraisal of the discourse of native speakerism.

Various explanations have been offered as to why the EFL approach is problematic. The EFL approach treats language and cultures as monolithic entities and is therefore culturally and socially insensitive, since diverse communicative competence in different socio-cultural contexts exists in today's globalized English communications (Alptekin, 2002; Berns, 2006; Leung, 2005). The standard NES norms not followed by all NESs are a partial representation and may foster stereotypes (Alptekin, 2002; Leung, 2005). The NES model is largely irrelevant to L2 users who use English for instrumental reasons (mainly with NNESs) and downplays bi-/multilingual competence (Alptekin, 2002). Limitations of the EIL approach have also been suggested. Unlike NES models, there is a scarcity of teaching resources (Galloway & Rose, 2014) and insufficient codifications of NNES English norms (Kirkpatrick, 2006). Moreover, the nature of classroom context is prescriptive (Mauranen, 2012; Seidlhofer, 2011). That is, learner identity overrides other social identities, and learners are committed to acquire proficiency in given standards, unlike English uses outside class where other social identities are foregrounded (Mauranen, 2012).

2.2 English language teachers' cognitions regarding the EFL and EIL approaches

While teachers have long been regarded as central figures in the classroom, teacher cognitions have only been recognized as a significant factor in shaping teaching practices within the past few decades (Burns et al, 2015). Teacher cognition is defined as "what teachers know, believe and think" (Borg, 2015, p.1). The term teacher cognition is an inclusive term that subsumes various constructs such as teacher knowledge, beliefs and thinking. Based on this literature, teachers are no longer viewed as implementors of external prescriptions, but as thinking and decision-making individuals (Borg, 2015; Freeman, 2002; Johnson, 2006). Several studies have examined English language teachers' cognitions about their preferred English varieties and EIL approaches.

A recent systematic review on teachers' beliefs about varieties of English has identified 44 related studies conducted between 2000 to 2023 (Manzouri et al., 2024). Due to space limitations, a number of studies examining teachers' views on pedagogical norms are included here, with participants ranging from native English-speaking teachers (NESTs) and NNESTs from 45 countries (Timmis, 2002), NNESTs from different European, African, and Asian countries (Young & Walsh, 2010), Chinese NNESTs (Hall et al., 2015; He & Zhang, 2010) and Iranian NNESTs (Tajeddin, Alemi, & Pashmforoosh, 2018). Questionnaires and/or interviews were employed in these studies. A shared finding of all studies is that participants expressed clear preference for NES norms as pedagogical models. The most cited reason was that NES norms served as a standard benchmark with perceived desirable characteristics such as "standard", "perfect" and "pure". These norms were believed to have high prestige and granted more access to education and careers (Tajeddin et al., 2018; Timmis, 2002; Young & Walsh, 2010). Some participants believed that NESs were owners of the language (Tajeddin et al., 2018). Contextual factors were also reported. That is, these norms were presented in textbooks they used, endorsed by language institutions they worked at, or gained political influences in their local contexts (Tajeddin et al., 2018; Young & Walsh, 2010).

However, participants in the above studies also pointed out the limitations of NES models, stating that they were unrealistic and unattainable targets (He & Zhang, 2010; Timmis, 2002). They expressed similar views that effective communication could be successfully achieved without adherence to NES norms (Hall et al., 2015; He & Zhang, 2010; Tajeddin et al., 2018; Young & Walsh, 2010). Local NNES varieties were perceived as legitimate expression of identity (He & Zhang, 2010; Timmis, 2002), and students would feel more confident and relaxed if they were allowed to use their own localized varieties (He & Zhang, 2010). These findings resonate with Hall et al's (2015) conclusion that participants exhibited a mixture of monolithic (EFL) and pluricentric (EIL) views of English. The recent systematic review by Manzouri et al. (2024) arrived at the same conclusion that "English teachers show positive attitudes toward the legitimacy of the non-native varieties of English, while they still prioritize native varieties of English" (p.12).

A few studies explored teachers' cognitions on EIL or ELF (English as a Lingua Franca) approaches and the challenges in implementing them. Through focus-group interviews with Malaysian educators, Ali (2014) found that the vast majority had positive attitudes towards the teaching of EIL. However, there is some resistance due to the need to rely on a NES variety as a model and benchmark during assessment. A challenge in EIL implementation is that the existence of standard Malaysian English has not been recognized. Luo (2016) used interviews and a questionnaire survey with Taiwanese university English language teachers. It was found that most of the respondents agree that their approach is based on NES norms. However, they are aware of the concept of ELF and the communicative values of ELF-related skills. The teachers also think that teaching ELF-related skills is challenging due to their lack of knowledge of ELF, students' preference for standard English and lack of teaching materials. Through in-depth joint autoethnography, Rose and Montakantiwong (2018) identified factors that lead to successful implementation of EIL practices, ranging from teacher education that forms impetus for change, collaboration among teachers, and autonomy to implement innovation to reflective practice that nurtures growth.

2.3 The current study

In their recent systematic review, Manzouri et al (2024) point out that studies exploring teachers' cognitions on English varieties relied heavily on interview and questionnaire data without incorporating direct observation of actual teaching practices. Examination of teaching practices is crucial because, as Pajares (1992) points out, teacher beliefs must be inferred from what teachers "say, intend and do" (p.314). Borg (2017) adds that what teachers do (i.e., teaching practices) can reveal teachers' enacted beliefs in addition to their espoused beliefs. To address this research gap, this study draws on interview and observational data to investigate four tertiary NNESTs' cognitions and practices with regard to the EFL and EIL approaches in Thai EFL contexts. The research questions that guided this study were:

1) What cognitions do language teachers have that correspond to the EFL and EIL approaches?
2) What teaching practices are guided by their cognitions regarding the EFL and EIL approaches?

Research Methodology

This study is part of a larger study that explores four NNESTs' cognitions and practices in Thai tertiary EFL contexts. The interpretivist, qualitative research method therefore suited this enquiry because the aim is to discover the subjective meanings individuals place onto their actions and the social world they exhibit through the eyes of these individuals (Bryman, 2004; Cohen, Manion, & Morrison, 2011). Case study (Stake, 1995; Yin, 2009) was adopted to study the particularity and complexities of cases that took place in real-life contexts. Observations, stimulated-recalled interviews and semi-structured interviews were used to collect data for this study. Multiple case studies were employed to gather intensive, holistic and complex descriptions

of each teacher's cognitions and practices regarding the topic of interest, which, for this study, their cognitions and practices corresponding the EFL and EIL approaches.

3.1 Participants and context

Four NNESTs from two public universities in the south of Thailand participated in this study. Convenience and purposeful sampling strategies were used to recruit participants as the researcher had access to the teachers and that the participants met minimum criteria including self-identification as NNESs, having a postgraduate degree related to language teaching and teaching credit bearing courses with prescribed syllabus. These criteria reflected typical portrayal of NNESTs (Anderson, 2016). A maximum variation sampling strategy was also employed to ensure the inclusion of diverse perspectives from participants with different experiences and backgrounds (Dörnyei, 2007; Miles & Huberman, 2014). Table 1 shows participants' personal information, qualifications and teaching experience. The participants varied in their first language, teaching experience and country of origin. All hold MA degree related to English language teaching or education. All names are pseudonyms.

Table 1

Participant profile

Participant	Sex	Age	Nationality	Languages	Degree	Experience
Pimchanok	F	Early 30s	Thai	Thai (L1)	MA	7 yrs
				English		
Fadel	M	Late 20s	Thai	Malay (L1)	MA	2 yrs
				Thai		
				English		
Sok	M	Late 30s	Cambodian	Cambodia (L1)	MA	14 yrs
				English		
Ranjit	M	Late 30s	Indian	Aphung (L1)	MA	16 yrs
				Tangkhul Muripuri		
				Hindi		
				English		

Different courses were selected for this study. Most of the courses emphasized listening and speaking skills, except one course with the focus on intercultural communication. The course syllabuses were prescribed to the teachers who taught around 30 to 40 freshmen or sophomore students of mixed English abilities per section. Table 2 provides an overview of these courses.

Table 2

Courses selected for the study

Participant	Course	Lesson length	Textbook
Pimchanok	English 2	3 hours/week	Four corners: Level 2
	English conversation	3 hours/week	Teacher's own compilations
Fadel, Sok, Ranjit	Foundation English: Listening and speaking	1 hour/week	Talk Time 2
Sok	English conversation 1	2 hours/week	Speak Now: Level 3
Ranjit	Intercultural communication	1.30 hours/week	Teacher's own compilations

3.2. Instruments and data collection

For the most part, data were drawn largely from several classroom observations and stimulated recall interviews which elicited teachers' cognition underlying their teaching practices. Three to five video-recorded observations (OB) of actual lessons lasting between one to three hours were conducted with each participant, which allowed direct concrete evidence of the participants' teaching practices to be elicited and this allowed the study to move beyond perception-based data (Borg, 2015; Cohen et al., 2011; Patton, 2002). The number of observations were negotiated with the participants based on their willingness and availability and therefore saturation was not the aim of this study. To elicit teachers' cognitions that guided their observed teaching behaviors, three to five stimulated recall (SR) interviews of 30-50 minutes each were conducted immediately after observations. Participants watched the video recording of their lessons and were freely allowed to choose any teaching episode they wanted to discuss. Questions were used to elicit participants' reflections on the cognitions influencing their actions. When it was found from the first stimulated recall interview that participants' views on NES models also influenced their practices, this became one of the emerging themes the researcher followed up in subsequent stimulated recall interviews. The decision to employ stimulated recall interviews was influenced by development in language teacher cognition research, which highlights the importance of teachers' reflections upon actual instances of teaching practices to capture the cognitions that closely guided their actual practices (Basturkmen, 2012; Breen et al., 2001; Borg, 2015). Lastly, a semi-structured interview (SS) was conducted once with each teacher to explore participants' self-perceptions as NNES and their experience as English learners and users.

3.3. Data analysis

Thematic analysis was adopted to analyze the data (Braun & Clarke, 2006; Mann, 2016; Roulston, 2010), which included four main steps including data preparation, coding, theme generation and interpretation. To prepare the data, all interviews were transcribed in full. For observational data, the researcher wrote the narrative summaries (Barron & Engle, 2007) summarizing what happened in the classroom and transcribed portions of what the teachers said that conveyed their cognitions. The data analysis was primarily inductive (Braun & Clarke, 2006).

Interview transcripts and narrative summaries were read several times to increase familiarity with the data. Portions of interviews and narrative summaries related to NES norms and the EIL and EFL approaches were first identified. Open coding was then applied to analyze the data without any pre-determined codes. Coding was done manually and with *Nvivo (Version 11)*. Codes were then organized into potential themes that captured the essence of the data set. Four themes were derived: EFL cognitions, EIL cognitions, EFL practices and EIL practices. Coded interviews were repeatedly compared with narrative summaries to find the connection between teachers' cognitions and observed teaching practices. Cross-case analysis was performed to compare and contrast between cases. To ensure trustworthiness, a peer with a PhD in applied linguistics was asked to perform blind coding based on a developed coding scheme and some samples of interview and observation data. At the end, it was found that the coding scheme adequately captured the essence of the sample data sets. Throughout the research processes, ethical guidelines as approved by the University of Auckland Human Participants Ethics Committee were followed.

Findings

This section compares teacher cognitions associated with the EFL and EIL approaches. It then explores how these principles underpin teaching practices.

4.1 Teacher cognitions regarding EFL and EIL approaches

All participants held cognitions corresponding to both EFL and EIL approaches, which suggests eclecticism rather than a rigid adherence to a single paradigm. It can be seen as evidence of contradictions or tensions between monocentric and pluricentric views of English language.

4.1.1 Teacher cognitions associated with the EFL approach

All participants believed that a NES norm could serve as a model for learners. For instance, Ranjit asserted that "it's their mother tongue. They [NESs] should be the right person to modelize [be the accepted model for accuracy and fluency]" (SR1). Sok added that "we cannot avoid native speakers. They can serve as a model" (SR3). All teachers also implied they held this view when they reflected that they perceived their own English to be deficient to some extent in relation to some NES norms. For example, Pimchanok stated that "it's not 100% native-like. I am not as fluent, and sometimes I do not place my tongue and so on 100% correctly" (SR3). Likewise, Fadel believed that teachers should aim for "80 to 90% accuracy", but stated that "there may be some aspects that I fall short in because I do not speak English all the time" (SR1). Participants also revealed a belief that English and the native language should not be integrated. For example, Sok stated that some of his past NNESTs' pronunciations were not good because of L1 interference, while Ranjit believed that most Asian speakers had "mother tongue weaknesses", and that a good language teacher should know the main L1 versus L2 differences in order to effectively address L1 negative transfer (SR1). Ranjit and Sok both were of the opinion that those who were able to speak English with a high degree of accuracy made a better impression on listeners. Ranjit stated that inaccurate grammar and accent could be a source of mockery (SR3), while Sok believed that making a lot of grammatical mistakes might cause listeners to think: "Oh, you don't really learn much English" (SR4). All participants viewed NES varieties as more "natural", "original",

and "authentic" than NNES varieties. Ranjit was most explicit when he argued that NES varieties should be selected as pedagogical norms because of their originality and accuracy:

> We have to respect and admit native are native; non-native are non-native. We should not act smart and take the credit for the native speakers…We have to consider that native speakers are the original speakers of English…We have to first look or check out those pioneers so as to learn the originality. It's important for us to direct students to the native speakers because that's how they should learn. When you learn, learn it right in the first place… (SR1)

Pimchanok and Ranjit revealed that they did not consider NES norms to be monolithic. Pimchanok raised the issue of selecting a standard accent as a model: "There are various accents. I am not sure which one should be a standard. Even in England, there are northern and southern accents, right?" (SR3) Ranjit made the same point: that NESs spoke differently due to different geographical locations and cultures and stated that NNESs "should aim for the best option, but not just focus on only one" (SR4). This option could be both a personal and political choice. Ranjit and Pimchanok expressed personal preferences for certain NES norms due to their exposure to these varieties through media or NES friends. For instance, Ranjit reflected that he preferred American English when it came to speaking because "I feel more receptive to their way of communicating" when he listened to his American friends and Christian sermons, but he preferred British English for writing due to his past experience as a learner in the Indian educational system (SS). Pimchanok stated that she particularly liked Hilary Clinton and Oprah Winfrey's accents because "it is clear and easy to understand" (SS). Politically-speaking, Ranjit preferred American English because "Americans have kind of globalized when it comes to language and business so I think their English stands out from the rest" (SS). Likewise, Sok believed that most Cambodian teachers preferred American English over British English because of American influences on Cambodia: "In Cambodia, Americans now try to influence. They send a lot of Peace Corps [and] the team to train people, and they fund some organizations, and get students to study" (SS). Ranjit went on to caution against the sweeping generalization that NNESs were always less proficient than NESs: "I'm not saying all. Even there are many Asians who can speak native-like English. Even some are clearer and better than native speakers" (SR1). This statement shows that the NES can be an idealized construct. In other words, teachers may use the term NES to represent an ideal standard English norm from an ideal NES based on their personal preference, even though some NESs may not achieve that level of accuracy and fluency. If this is true, teachers may view some NESs' English competence as somewhat deficient to this standard norm the same way they did with regard to some NNESs.

4.1.2 Teacher cognitions associated with the EIL approach

All participants suggested the need to go beyond NES models. Sok was most explicit, reflecting that NNESs had agency in decisions about to what extent they wanted to approximate a NES model:

> This is a kind of model students can choose to follow or not. We cannot avoid the native speakers' voices, conversation features, or accents…[but] we cannot depend on it all the time. We cannot follow 100%...I could say that native speaker is a model, but we can choose to follow or not follow. It's our choice (SR3).

Prioritizing intelligibility over accuracy in speaking, Sok (SR2; SR3), Pimchanok (SR2; SR3; SR4) and Fadel (SR2; SR3) all believed that successful communication could be achieved without adherence to NES norms. Pimchanok stated that "it is unnecessary to pronounce like native speakers" as long as "it is mutually understandable" (SR2). Similarly, Sok was of the opinion that "we are non-native speakers – no need to follow 100%, but make sure it's intelligible" (SR3). Sok and Ranjit suggested that accuracy was relative. That is, Sok believed that NNES variations were not wrong, but different (SR5), while Ranjit stated that "English is a funny language. We don't say this is the only way – the absolute way. Maybe [it's correct] for me, but maybe not for the Thais, the Latins, the Philippines and the Singaporeans" (SR4). For Pimchanok (SR3) and Fadel (SR3), acquiring an NES accent was an unrealistic goal for their students and themselves. Fadel added that having a localized NNES accent was a natural process of L2 acquisition and was now quite acceptable:

> It [accent] may play some roles [in maintaining intelligibility], but I think it does not matter much now because everyone has their own unchangeable accent like Singlish, Tinglish [accents]. This is acceptable in a global context. This is natural (SR3).

Referring to the current globalized world, Fadel stated that "it's the 21st century. There are English speakers from different countries and races". Sok drew on this same view to legitimize his Cambodian English. He argued that since NNESs had become the majority of English speakers, NESs no longer had the sole ownership of the English language (SR1; SR2; SR3), and "English is a global language so it belongs to anyone" (SR3). He also asserted his right to maintain his Cambodian identity in English: "I still maintain my identity – my [Cambodian] accent. I don't want to follow any native speaker accent" (SR3). While Ranjit believed NNESs should respect NESs as English speakers from birth, he viewed that excessive admiration of NES norms could lead to NNESs' self-marginalization:

> …some of us, especially the Asians, we thought that, oh, native speakers. Then, we become small, you see? We look up to them, and we can't speak like them…we should not build a wall by saying that we are not native speakers and so we cannot (SR1).

4.2 EFL and EIL influenced teaching practices

Some teaching practices were underpinned by the participants' cognitions regarding the EFL and EIL approaches. This section integrates observed practices with participants' interview statements to show how specific practices were guided by the participants' cognitions.

4.2.1 Practices associated with the EFL approach

Teachers believed that the prescribed textbooks represented an NES norm. Sok (SR1) and Fadel (SR1) considered that the English language used in these textbooks was accurate, and served as a good model for learners. Pimchanok commented: "I made use of this teaching material. We are not native speakers, right? We may not pronounce correctly and clearly" (SR1). Ranjit (SR4), Sok (SR2), and Pimchanok (SR3) pointed out that listening tasks familiarized students with NES varieties. Ranjit maintained that "when they're used to listening to native speakers, it will help them in understanding", while Pimchanok added that these texts gave students opportunities to listen to NES accents. Pimchanok brought in the feature film *Rio* (OB3; OB4) because she believed that its language was authentic, natural, and real. She also stated that "they [characters] don't speak like a teacher in the classroom. *Farangs* (a Thai word for European foreigners) speak quite fast. I want them to get used to those accents". Her allusion to NESs (i.e. *farangs*) was confirmed by her definition of authentic material: "some people define authentic materials as those created not for a teaching purpose, made in the native speakers' countries, and using natural language in real situations" (SR3).

All participants revealed having made attempts to adhere to NES norms when they modelled the language themselves, especially pronunciation. For instance, Ranjit reflected on listen-and-repeat and said that "I want them to know that even I, the teacher, should pronounce like, if not close, just near the native speaker" (SR1). It is within this context that participants expressed the view that they believed their own English was deficient compared to that of native English speakers as these quotations from Pimchanok and Sok show:

> They [students] imitate our pronunciations because they don't know any other source. I try to pronounce as correctly as possible so they can learn from my pronunciation ….students may not hear real native speakers' accents, but I tried to pronounce correctly (Pimchanok, SR2).

> I was trained in teaching pronunciation and I know [how I should pronounce]. But sometimes, I cannot pronounce correctly in the exact same ways as native speakers do. But I try to (Sok, SR2).

Ranjit (SR3) and Pimchanok (SR2) believed that, as teachers, they could at times model spoken English better than teaching materials because they could adjust features of their speech to be more intelligible to learners. Sok expressed his confidence in modelling NES pronunciation when he reflected that "I'm positive when I can pronounce them [target words] well so no need to listen to native speakers [from the recording]" (SR1). Interestingly, Pimchanok reported intentionally adding a stronger Thai accent to her English to help low-proficient Thai students understand better (SR2). All participants did not explain explicitly what NES varieties they were

teaching except in one episode where Sok compared the American word "soccer" with the British word "football" (OB3). Only Ranjit and Sok were observed to explicitly endorse NESs as a model in the classroom once. Ranjit wanted to inspire students to overcome the fear of public speaking, while Sok taught reduced vowels:

> Slowly and surely, you can skip script, and you learn how to speak with eye contacts without any fear, alright? Thai people; Thai country, you need such people who can turn up and speak without script just like a native speaker, right? (Ranjit, OB2)

> Because we are non-native speakers of English, we often have problems with pronunciations. So here, normally, we pronounce let me. Ok? But native speakers tend to reduce it to lemme…we find it confusing. We cannot understand it so now you know (Sok, OB5).

Sok reported that he consulted dictionaries and elicited feedback from a NES colleague for conversation models he wrote himself and believed that he lacked pragmatic competence: "For me as a non-native speaker, I have this problem. I lack pragmatic competence. Some words I cannot use in the right situations. I often ask her [the American colleague] if I can use these words" (SR3).

4.2.2 Practices associated with the EIL approach

In comparison to their view of NNESs being in some respects deficient in their proficiency in English, all participants legitimized their own NNES features by describing them as different rather than errors. Fadel (SR1), Pimchanok (SR1), and Sok (SR3) believed that they represented varieties of NNES English, and that it was beneficial to expose students to different English varieties – that is, NES varieties used in teaching materials, as well as NNES varieties from their own speech. For instance, Fadel explained that students should be exposed to different accents as the first quotation shows, while Sok argued that NNSs especially from ASEAN nations were the main interlocutors for his students, and therefore his Cambodian English varieties/variations were relevant as the second quotation shows:

> I think that both sides are needed – from teachers themselves and from tapes [recordings from the textbooks]…we can compare them to colours…Today, they listen only to native speakers. They collect the purple colour. If they listen to teachers, they get the red colour. When we can understand different accents, it's like we have collected different colours. British people speak one accent. American people speak with another accent. Japanese people speak with another accent (Fadel, SR1).

> English has become a global language and it belongs to everyone. It's the right time for students to change their mindsets. They have to listen to non-native speakers like me…I represent one of ASEAN accents and students have to get accustomed to ASEAN, non-native accents (Sok, SR3).

Ranjit, Sok, and Fadel reported raising students' awareness of English diversity, including telling students that NNESs outnumbered NESs and were main interlocutors (Sok, SR5) and that English variations were normal and not incorrect usage (Sok, SR5; Fadel, SR2; Ranjit, SR4), as well as showing a video clip with English speakers from different linguistic backgrounds to demonstrate that intelligibility could be achieved with different accents and to deter learners' negative views toward accent variations (Fadel, SR2). However, only Ranjit was observed to express these beliefs explicitly to students. He pointed out NNES variations for the word "director" and told students not to judge the variations: "People may say dʌɪˈɹɛktɚ. It's okay. It depends on a country where they belong like the Philippines. Don't judge them, but the right way is dʌɪˈɹɛktɚ" (OB3). His reflection reveals the interesting interaction between a monocentric belief that there was a "correct" and "near best" way to pronounce the word, and a pluricentric belief that there was no absolute correctness in English, and that different English speakers spoke the word differently "based on the country where they belong". He therefore wanted to deter students from judging others based on their own accuracy criteria (SR3). Prompted by the textbook (Stempleski, 2006) mentioning a film depicting the life of Gandhi, Ranjit told a story of Gandhi who overcame the fear of public speaking and challenged British colonizers. He first portrayed Gandhi as "such an introverted shy person" who was afraid of public speaking until, determined to overcome his fear of public speaking, he practiced alone in the jungle and finally became a great orator. He ended with "a moral lesson", which challenged the students' fear of speaking with NESs:

> My point here is if you think you are weak and cannot speak, I can't practice, my talking is wrong, [and] I'm afraid, you are like Mohatma Gandhi. Practice. Don't be afraid. Don't worry about *farangs*…When the westerners, native speakers come, don't be afraid. You face them and talk…Practice. Practice makes perfect…(OB3)

Ranjit revealed his intention was to inspire weak students who were scared to speak and worried by relating "their weaknesses to the worst [weakness] of Gandhi" who overcome his fear with "hard work, dedication, and commitment". He also wanted to challenge the NES–NNES demarcation so that students "should not look up to people too high" (SR3). In addition, Ranjit reported using a project that was video recorded and required students to interview foreigners, especially NESs, about their cultures. His emphasis on NESs arose from his beliefs that cultural and racial differences could create fear:

> We have Singaporeans, Malaysians, and Indians who speak English. But they're closer to us like you and me, right? So, we talk in a much more relaxed way. When we have a real native speaker, we would check our words our cultures…Not only cultures, but your skin and my skin. We are Mongolian, right? So even though I speak good English as good as, say, westerners, you feel close to me so you feel like speaking to your brother than when you speak with those from Europe, Australia or the US. We need to break through that (SR2).

All teachers localized parts of taught content by setting it in the Thai or ASEAN context. They often based their decisions on the principle of relating to students' background knowledge. For instance, Pimchanok asked students to compare Singapore and Thailand due to learners' familiarity with these countries (OB2; SR2), and pointed out a disadvantage of authentic material that it might contain unfamiliar cultural content (SR3). It was not uncommon for teachers to mention local places such as local beaches and parks; for instance, to explain vocabulary and set up role-play scenarios. Sok explicitly stressed the need to adjust the textbook produced in other sociocultural contexts to suit the local context as the first quotation shows, while Ranjit complimented the same textbook for having characters from the Expanding Circle Countries (e.g. Thailand and Japan) as the second quotation shows:

> Every textbook has bright sides and bad sides. We cannot assume that this book is the best…because this book is published in England [and] in America, how can we use it in Thailand effectively? We can, but we have to supplement it – add content to spice it up. It's like food. American taste is like this, but we have to (re-)cook it and put more favours to make it more interesting… Some parts match the Thai context, some don't. (Sok, SR2)

> When it comes to the first part of every unit, it's a native speaker, but you find in the conversation [sections] they mix up with any speaker so I think it's a good idea that they mix up with any speaker from the outside circles [the Outer and Expanding circle countries]…They mix up to encourage students who are not native speakers, but who can be part of those in the expanding circle (Ranjit, SR4).

For most observed lessons, teachers rarely taught students about specific cultures, but when they did, they discussed areas of pragmatic knowledge such as politeness and formality. Unlike other teachers, Ranjit's intercultural course lessons discussed cultures of different nation states (OB2; OB4). Ranjit reflected why he put much emphasis on Thai, Vietnam, and other ASEAN nations' cultures: "it's important that they understand very well their culture – Thailand, and the rest of the countries beside Thailand, that is, ten ASEAN nations" so that they were accustomed to these cultures. He also reported contrasting Eastern and Western cultures in the first lesson to ensure students had "comprehensive ideas about the world cultures" (SR2). Ranjit added that he brought in Vietnam War to highlight cultural and political conflicts, and to foster moral values of sympathy, love and care. He believed that "cultural understanding" helped ease conflicts in today's globalized world where different cultures came into contact. His view corresponds to the aim of intercultural communicative competence:

> Unless you accept other cultures, you will have cultural clashes or conflicts… …accepting doesn't mean that I become one of them. Accepting means you let them do as they like in their cultures. You don't disrespect them…It will let us have a broad mindset about the world cultures so wherever you go, you need to adapt. We wouldn't be surprised or shocked because we learn it [other cultures]…we need to accept other people as who they are as you want others to accept you as who you are (SR2).

Discussion

The study has provided detailed evidence of teacher cognitions and practices with regard to the EFL and EIL approaches. It was found that teachers exhibit both monocentric (EFL) and pluricentric (EIL) conceptions of English. Their teaching practices seemed to be based primarily on the NES models as dominant pedagogical norms. However, EIL principles were drawn on to redefine NNES features in a positive light and to argue for the relevance of exposing students to NNES varieties/variations present in teachers' speech.

With regard to a monocentric (EFL) view of English, the teachers regarded NES varieties favorably, to which NNES English variations were compared negatively to a varying degree. NES norms were associated with higher social prestige, wider social acceptance and increasing political influences observed in their local contexts. Therefore, this study echoes past studies which found that participants expressed clear preference for NES norms as pedagogical models (Hall et al., 2015; He & Zhang, 2010; Luo, 2016; Tajeddin et al., 2018; Timmis, 2002; Young & Walsh, 2010). However, the teachers also expressed views corresponding to a pluricentric (EIL) view of English. This adds to emerging evidence that the questioning of NES models in EIL scholarship may have begun to take root in the minds of NNESTs. Their views, which echo previous findings, ranged from the acknowledgement of NES models as unrealistic targets (He & Zhang, 2010; Timmis, 2002), an awareness that comprehensibility and intelligibility can be achieved without strict adherence to NES norms (Hall et al., 2015; He & Zhang, 2010; Tajeddin et al., 2018; Young & Walsh, 2010), an emphasis on learners' and users' agency to approximate NES models and to retain their NNES identities (He & Zhang, 2010; Timmis, 2002), and the conceptualization of accuracy as relative and plural to the acknowledgement of the legitimacy of NNES varieties (Hall et al., 2015). This echoes the main finding in the recent systematic review (Manzouri et al., 2024) that teachers can hold both monocentric and pluricentric beliefs regarding English varieties.

Some plausible explanations can account for the co-existence of monocentric and pluricentric conceptions of English. In a sense, this may be viewed as a manifestation of conflicting belief systems (Ellis, 2012). Another reason may lie in the perceived purpose of language teaching within an educational EFL context. That is, participants' support for NES norms reflects a norm-bound orientation in language teaching that sets language accuracy and standardness as an important component of language competence. This echoes the scholarly view that the classroom context is prescriptive since learners are committed to acquire proficiency of given standards (Mauranen, 2012; Seidlhofer, 2011). In the EFL context of Thailand where there are no other alternative localized norms, NES norms then serve as norm-providing pedagogical models to such an extent that Sok viewed them as unavoidable. This may be true in ELT globally as Jenkins (2012) observes: "the prevailing orientation in English language teaching and testing, and ELT materials remain undoubtedly towards ENL [English as a native language] with correctness and appropriateness still widely driven by NES use" (p.487). With this wide acceptance and gate-keeping roles of NES norms, it is unsurprising that participants still view these NES norms as relevant. Nevertheless, they also showed support for a pluricentric view of English by acknowledging the limitations of NES models to a varying degree. Their views then concur with

a weak version of EFL or EIL approaches, which endorse that localized (NNES) varieties are presented to learners in addition to, not in a replacement of (NES) standard norms.

While it is beyond the scope of this study to evaluate the participants' teaching effectiveness, it is evident from the findings that the participants are English language teachers with complex cognitions that shape their practices in complex and dynamic ways. One source of dynamism and complexity came from the teachers' eclecticism (Hall, 2011; Kumaravadivelu, 2006a; Widdowson, 2003). That is, the cognition and practices that seemed contradictory could co-exist side by side. As can be seen, teacher cognitions and practices regarding EFL and EIL co-existed, which led the participants to endorse and oppose the relevance of NES models and to negotiate their professional credibility. While EIL theorists often present binary EFL/EIL models, this study shows that local enactment destabilized these binary models by incorporating the elements of both. EIL models therefore should be viewed not as prescriptions but rather as options in teachers' repertoires. Teachers should have the autonomy to determine the extent to which EFL and EIL models are relevant to their learners within their specific contexts.

Conclusion

This study explores four NNESTs' cognitions and practices corresponding to EFL and EIL approaches. It was found that the teachers held both monocentric (EFL) and pluricentric (EIL) beliefs that influenced their practices in complex ways. Corresponding to the EFL approach, all participants saw their roles as facilitators and role models who helped learners gained access to NES norms. As facilitators, participants exposed learners to NES norms through commercial and authentic teaching materials. As role models, they exemplified NES norms themselves and provided instruction. Although participants reported attempts to model English as closely as possible to their NES targets, they were conscious of NNES features especially in their speech. Their cognitions corresponding to the EIL approach helped redefine these features in a positive light. Not only were these NNES features deemed legitimate differences, but also exposure to them was regarded as beneficial to learners since it facilitated English communication with English users from various linguistic backgrounds.

This study therefore provides several implications. First, this study argues that unlike theorists that often present binary EFL and EIL models, the teacher participants destabilize such binaries by combining both approaches. EIL models, therefore, should be viewed as options within teachers' repertoires rather than prescriptions. This position corresponds to that of Jenkins (2012) who argues that "we do not believe that it is our place to tell teachers what to do, but that it is for ELT practitioners to decide whether/ to what extent ELF is relevant to their learners in their context (p.492)". Second, participants' cognitions and practice in this study can be described as eclectic. Therefore, one way to develop language teachers' autonomy might be to promote discourse around the post-method condition (Kumaravadivelu, 2006b) or enlightened eclectic approach (Brown, 2007), which encourage teachers to theorize their own practices. Therefore, exposure to both EFL and EIL approaches during teacher education would be beneficial and would serve as a knowledge base for teachers to draw on when making eclectic pedagogical decisions. Third, language teacher education should include EIL

approaches in their curriculum. As this study has shown, the non-native teacher participants drew on EIL models to build their professional credibility and negotiate the roles of NES models.

The study has two limitations. First, this study was based on a relatively small number of observations and interviews. Future studies can incorporate a greater number of observations and interviews so that more breadth and depth of data can be obtained. Second, stimulated recalled interviews might encourage the teachers to provide post-hoc rationalizations of their teaching behaviors (Basturkmen, 2012; Borg, 2015). Despite these limitations, it is hoped that this study shed light on the limited relevance of NES models in the Thai EFL context and how EFL and EIL models play out in local enactments. Future research that investigates the impacts of teachers' knowledge about EFL and EIL approaches on actual teaching practices would be a fruitful research endeavor, given that existing research has rarely examined teaching practices.

References

Alsagoff, L. (2012). Identity and the EIL learner. In L. Alsagoff, S.L. Mckay, G. Hu, & W. A. Renandya (Eds.), *Principles and practices for teaching English as an international language* (pp. 104-122). Routledge.

Ali, F. (2014). Implementing EIL paradigm in ELT classrooms: Voices of experienced and pre-service English language educators in Malaysia. In R. Marlina, & R. Giri (Eds.), *The pedagogy of English as an international language* (pp. 95-109). Springer.

Alptekin, C. (2002). Towards intercultural communicative competence in ELT. *ELT Journal, 56*(1), 57-64. https://doi.org/10.1093/elt/56.1.57

Anderson, J. (2016). Initial teacher training courses and non-native speaker teachers. *ELT Journal, 70*(3), 261-274. https://doi.org/10.1093/elt/ccv072

Barron, B., & Engle, R. (2007). Analyzing data derived from video records. In S. J. Derry (Ed.), *Guidelines for video research in education: Recommendations from an expert panel* (pp. 24-33). The University of Chicago.

Basturkmen, H. (2012). Review of research into the correspondence between language teachers' stated beliefs and practices. *System, 40*(2), 282-295. https://doi.org/10.1016/j.system.2012.05.001

Berns, M. (2006). World Englishes and communicative competence. In B. Kachru, Y. Kachru, & C.L. Nelson (Eds.), *The handbook of World Englishes* (pp. 718-730). Blackwell.

Borg, S. (2015). *Teacher cognition and language education: Research and practice.* Bloomsbury.

Borg, S. (2017). Teachers' beliefs and classroom practices. In P. Garrett, & J.M. Cots (Eds), *The Routledge handbook of language awareness* (pp. 75-91). Routledge.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101. https://doi.org/10.1191/1478088706qp063oa

Breen, M. P., Hird, B., Milton, M., Oliver, R., & Thwaite, A. (2001). Making sense of language teaching: Teachers' principles and classroom practices. *Applied Linguistics, 22*(4), 470-501. https://doi.org/10.1093/applin/22.4.470

Brown, H. D. (2007). Teaching by principles: An interactive approach to language pedagogy (2nd ed.). Longman.

Brown, J. D. (2012). EIL curriculum development. In L. Alsagoff, S.L. McKay, G. Hu, & W.A. Renandya (Eds.), *Principles and practices for teaching English as an international Language* (pp. 147-167)*.* Routledge.

Burns, A., Freeman, D., & Edwards, E. (2015). Theorizing and studying the language-teaching mind: Mapping research on language teacher cognition. *The modern language journal, 99*(3), 585-601. https://doi.org/10.1111/modl.12245

Bryman, A. (2004). *Social research methods* (2nd ed.). Oxford University Press.

Cohen, L., Manion, L., & Morrison, K. (2011). *Research methods in education* (7th ed.). Routledge.

Crystal, D. (2012). *English as a global language*. Cambridge University Press.

Dewey, M., & Jenkins, J. (2010). English as a Lingua Franca in the global context: Interconnectedness, variation and change. In M. Saxena, & T. Omoniyi (Eds.), *Contending with Globalization in World Englishes* (pp.72-92). Multilingual Matters.

Dörnyei, Z. (2007). *Research methods in applied linguistics: Quantitative, qualitative, and mixed methodologies*. Oxford University Press.

Ellis, R. (2012). *Language teaching research and language pedagogy*. Wiley-Blackwell.

Freeman, D. (2002). The hidden side of the work: Teacher knowledge and learning to teach. A perspective from North American educational research on teacher education in English language teaching. *Language Teaching*, *35*(1), 1-13. https://doi.org/10.1017/S0261444801001720

Galloway, N., & Rose, H. (2014). Using listening journals to raise awareness of global Englishes in ELT. *ELT Journal, 68*(4), 386-396. https://doi.org/10.1093/elt/ccu021

Hall, G. (2011). *Exploring English language teaching: Language in action*. Routledge.

Hall, C. J., Wicaksono, R., Liu, S., Qian, Y., & Xu, X. (2015). Exploring teachers' ontologies of English: Monolithic conceptions of grammar in a group of Chinese teachers. *International Journal of Applied Linguistics, 27*(1), 87-109. https://doi.org/10.1111/ijal.12107

He, D., & Zhang, Q. (2010). Native speaker norms and China English: From the perspective of learners and teachers in China. *TESOL Quarterly, 44*(4), 769-789. https://doi.org/10.5054/tq.2010.235995

Jenkins, J. (2009). Exploring attitudes towards English as a Lingua Franca in the East Asian context. In K. Murata, & J. Jenkins (Eds.), *Global Englishes in Asian contexts: Current and future Debates* (pp. 40-58). Palgrave Macmillan.

Jenkins, J. (2012). English as a lingua franca from the classroom to the classroom. *ELT Journal, 66*(4), 486-494. https://doi.org/10.1093/elt/ccs040

Johnson, K. E. (2006). The sociocultural turn and its challenges for second language teacher education. *TESOL Quarterly*, *40*(1), 235-257. https://doi.org/10.2307/40264518

Kirkpatrick, A. (2006). Which model of English: Native-speaker, nativized or Lingua Franca?. In R. Rubdy, & M. Saraceni (Eds.), *English in the World: Global Rules, Global Roles* (pp. 71-83). Continuum.

Kirkpatrick, A. (2012). *English as a lingua franca in ASEAN: A multilingual model*. Hong Kong University Press.

Kubota, R., & Ward, L. (2000). Exploring linguistic diversity through World Englishes. *English Journal, 89*(6), 80-86. https://doi.org/10.2307/821267

Kumaravadivelu, B. (2006a). TESOL methods: Changing tracks, challenging trends. *TESOL Quarterly, 40*(1), 59-81. https://doi.org/10.2307/40264511

Kumaravadivelu, B. (2006b). *Understanding language teaching: From method to postmethod*. Lawrence Erlbaum Associates.

Leung, C. (2005). Convivial communication: Recontextualizing communicative competence. *International Journal of Applied Linguistics, 15*(2), 119-144. https://doi.org/10.1111/j.1473-4192.2005.00084.x

Luo, W. (2016). Teacher perceptions of teaching and learning English as a lingua franca in the expanding circle: A study of Taiwan; what are the challenges that teachers might face when integrating ELF instruction into English classes?. *English Today, 33*(1), 2-11. https://doi.org/10.1017/S0266078416000146

Mann, S. (2016). *The research interview: Reflective practice and reflexivity in research processes*. Palgrave Macmillan.

Marlina, R. (2014). The pedagogy of English as an international language (EIL): More reflections and dialogues. In R. Marlina, & R. A. Giri (Eds.), *The pedagogy of English as an international language* (pp. 1-19). Springer.

Marlina, R. (2018). Revisiting the pedagogy of English as an international language. *RELC Journal, 49*(1), 3-8. https://doi.org/10.1177/0033688218765831

Matsuda, A. (2012). Teaching materials in EIL. In L. Alsagoff, S. McKay, G. Hu, & W. Renandya (Eds.), *Principles and practices for teaching English as an international language* (pp. 168-185). Routledge.

Mauranen, A. (2012). *Exploring ELF: Academic English shaped by non-native speakers*. Cambridge University Press.

McKay, S. (2003). Toward an appropriate EIL pedagogy: Re-examining common ELT assumptions. *International Journal of Applied Linguistics, 13*(1), 1-22. https://doi.org/10.1111/1473-4192.00035

McKay, S. (2012). Principles of teaching English as an international language. In L. Alsagoff, S. L. McKay, G. Hu, & W. A. Renandya (Eds.), *Principles and practices for teaching English as an international language* (pp. 28-46). Routledge.

McKay, S., & Bokhorst-Heng, W. (2008). *International English in its sociolinguistic contexts: Towards a socially sensitive EIL pedagogy*. Routledge.

Mesthrie, R., & Bhatt, R. M. (2008). *World Englishes: The study of new linguistic varieties*. Cambridge University Press.

Miles, B. M., & Huberman, A. M. (2014). *Qualitative data analysis: A methods sourcebook* (3rd ed.). Sage.

Manzouri, H. A., Tajeddin, Z., & Kiany, G. R. (2024). Teachers' and learners' beliefs about World Englishes, EIL, and ELF: A systematic review. *Asian Englishes*, *26*(2), 513–529. https://doi.org/10.1080/13488678.2023.2292427

Pajares, M. F. (1992). Teachers' beliefs and educational research: Cleaning up a messy construct. *Review of Educational Research*, *62*(3), 307-332. https://doi.org/10.3102/00346543062003307

Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Sage.

Rose, H., & Montakantiwong, A. (2018). A tale of two teachers: A duoethnography of the realistic and idealistic successes and failures of teaching English as an international language. *RELC Journal, 49*(1), 88-101. https://doi.org/10.1177/0033688217746206

Roulston, K. (2010). *Reflective interviewing: A guide to theory and practice*. Sage.

Seidlhofer, B. (2011). *Understanding English as a lingua franca*. Oxford University Press.

Selvi, A. F., & Yazan, B. (2017). English as an international language pedagogy: A sustainable alternative for teaching English in the GCC region. In A. Mahboob, & T. Elyas (Eds.), *Challenges to education in the GCC during the 21st century* (pp. 65-91). Gulf Research Centre Cambridge.

Stake, R. E. (1995). *The art of case study research*. Sage

Tajeddin, Z., Alemi, M., & Pashmforoosh, R. (2018). Idealized native-speaker linguistic and pragmatic norms in English as an international language: Exploring the perceptions of nonnative English teachers. *Language and Intercultural Communication, 18*(3), 300-314. https://doi.org/10.1080/14708477.2017.1413105

Timmis, I. (2002). Native-speaker norms and international English: A classroom view. *ELT Journal, 56*(3), 240-249. https://doi.org/10.1093/elt/56.3.240

Widdowson, H. (2003). Defining issues in English language teaching. Oxford University Press.

Yin, R. K. (2009). *Case study research: Design and methods* (4th ed.). Sage.

Young, T. J., & Walsh, S. (2010). Which English? Whose English? An investigation of 'non-native' teachers' beliefs about target varieties. *Language, Culture and Curriculum, 23*(2), 123-137. https://doi.org/10.1080/07908311003797627

Rattana Klinjuy[1]
รัตนา กลิ่นจุ้ย

Abstract

The increasing demand for proficient English communication competencies in elementary education highlights the need for instructional approaches that support flexible and focused learning. This study aimed to (1) examine the needs of elementary education student teachers regarding microlearning integrated with gamification, (2) develop a microlearning–gamification learning model to enhance English communication competencies of elementary education student teachers, and (3) evaluate the effects of the developed learning model on attitudes and English communication competencies of elementary education student teachers. A mixed-methods design was employed across three phases: needs assessment, model development, and implementation, involving ten student teachers at Suan Dusit University, Lampang Center. The research instruments consisted of a needs assessment questionnaire, semi-structured interview protocols, a model quality evaluation form, an English achievement test, and an attitude questionnaire. Quantitative data from the needs assessment and attitude questionnaire were analyzed using descriptive statistics, while learning achievement was examined through the Wilcoxon Signed-Rank Test. Qualitative feedback from the needs assessment, attitude questionnaire, and semi-structured interviews was subjected to content analysis to inform model refinement. Findings revealed strong preferences for communicative and task-based approaches emphasizing primary-level content, pronunciation, vocabulary, and realistic classroom scenarios. Participants valued microlearning features such as topic segmentation and frequent comprehension checks, along with gamification elements including goal clarity, scoring, and self-directed progression. The Wilcoxon analysis indicated significant

---

[1] **Affiliation:** Faculty of Education, Suan Dusit University, Thailand
หน่วยงาน: คณะครุศาสตร์ มหาวิทยาลัยสวนดุสิต ประเทศไทย

Corresponding Author: Rattana Klinjuy
E-mail: rattana_kli@dusit.ac.th

improvement in English communication competencies after model use (Σranks = 55.00, p < .01). Attitude results showed very high satisfaction and motivation (M = 4.68, SD = 0.55), particularly regarding accessibility, goal clarity, and rewards. Overall, the microlearning-gamification model demonstrated strong feasibility and effectiveness in enhancing communication skills and positive attitudes among elementary education student teachers.

Keywords: microlearning, gamification, English communication competencies, elementary education student teachers

บทคัดย่อ

ความต้องการสมรรถนะการสื่อสารภาษาอังกฤษที่มีประสิทธิภาพในระดับประถมศึกษาที่เพิ่มขึ้น สะท้อนให้เห็นถึงความจำเป็นในการมีแนวทางการจัดการเรียนการสอนที่สนับสนุนการเรียนรู้อย่างยืดหยุ่นและ มีจุดเน้นที่ชัดเจน การวิจัยครั้งนี้มีวัตถุประสงค์เพื่อ (1) ศึกษาความต้องการของนักศึกษาครูสาขา การประถมศึกษาเกี่ยวกับการจัดการเรียนรู้แบบไมโครเลิร์นนิงที่บูรณาการเกมมิฟิเคชัน (2) พัฒนารูปแบบ การจัดการเรียนรู้แบบไมโครเลิร์นนิงร่วมกับเกมมิฟิเคชันเพื่อเสริมสร้างสมรรถนะการสื่อสารภาษาอังกฤษของ นักศึกษาครูสาขาการประถมศึกษา และ (3) ประเมินผลของรูปแบบการจัดการเรียนรู้ที่พัฒนาขึ้นต่อทัศนคติ และสมรรถนะการสื่อสารภาษาอังกฤษของนักศึกษาครูสาขาการประถมศึกษา โดยการวิจัยนี้ใช้ระเบียบวิธีแบบ ผสมผสาน 3 ระยะ ได้แก่ การประเมินความต้องการ การพัฒนารูปแบบ และการนำไปใช้จริง โดยมีผู้เข้าร่วม คือ นักศึกษาครูสาขาการประถมศึกษา จำนวน 10 คน จากมหาวิทยาลัยสวนดุสิต ศูนย์ลำปาง เครื่องมือวิจัยที่ ใช้ประกอบด้วย แบบสอบถามประเมินความต้องการ แนวคำถามสัมภาษณ์กึ่งโครงสร้าง แบบประเมินคุณภาพ รูปแบบ แบบทดสอบผลสัมฤทธิ์ทางภาษาอังกฤษ และแบบสอบถามทัศนคติ ข้อมูลเชิงปริมาณที่ได้จากการ ประเมินความต้องการและแบบสอบถามทัศนคติถูกวิเคราะห์โดยใช้สถิติเชิงพรรณนา ในขณะที่ผลสัมฤทธิ์ ทางการเรียนได้รับการตรวจสอบด้วย Wilcoxon Signed-Rank ข้อมูลเชิงคุณภาพที่ได้จากการประเมินความ ต้องการ แบบสอบถามทัศนคติ และการสัมภาษณ์แบบกึ่งโครงสร้าง ถูกนำมาวิเคราะห์เนื้อหาเพื่อนำไปใช้ใน การปรับปรุงรูปแบบ

ผลการวิจัยพบว่าผู้เรียนมีความต้องการในระดับสูงต่อแนวทางการจัดการเรียนการสอนเชิงสื่อสารและ เชิงภาระงาน โดยให้ความสำคัญกับเนื้อหาในระดับประถมศึกษา การออกเสียง คำศัพท์ และสถานการณ์ในชั้น เรียนที่มีความสมจริง ผู้เข้าร่วมการวิจัยให้ความสำคัญกับคุณลักษณะของไมโครเลิร์นนิง เช่น การแบ่งเนื้อหา ออกเป็นหัวข้อย่อยและการตรวจสอบความเข้าใจอย่างสม่ำเสมอ ควบคู่กับองค์ประกอบของเกมมิฟิเคชัน ได้แก่ ความชัดเจนของเป้าหมาย การให้คะแนน และการดำเนินการเรียนรู้ด้วยตนเอง การวิเคราะห์ Wilcoxon พบว่า สมรรถนะการสื่อสารภาษาอังกฤษดีขึ้นอย่างมีนัยสำคัญหลังใช้รูปแบบ (**Σ**ranks = 55.00, p < .01)

ผลทัศนคติแสดงความพึงพอใจและแรงจูงใจในระดับสูงมาก (M = 4.68, SD = 0.55) โดยเฉพาะด้านการเข้าถึงความชัดเจนของเป้าหมาย และรางวัล โดยภาพรวม รูปแบบการจัดการเรียนรู้แบบไมโครเลิร์นนิงร่วมกับเกมมิฟิเคชันแสดงให้เห็นถึงความเป็นไปได้ในการนำไปใช้และประสิทธิผลในระดับสูงในการเสริมสร้างสมรรถนะการสื่อสารและทัศนคติเชิงบวกของนักศึกษาครูสาขาการศึกษาประถมศึกษา

คำสำคัญ: ไมโครเลิร์นนิง เกมมิฟิเคชัน ความสามารถด้านการสื่อสารภาษาอังกฤษ นักศึกษาครูประถมศึกษา

Introduction

In recent years, researchers have increasingly explored gamified microlearning as an approach to support how modern learners process information and sustain motivation. By combining brief, focused learning segments with game-based features, this approach provides instruction that is cognitively manageable and emotionally engaging. Research shows that microlearning reduces cognitive overload by segmenting complex content (Leong et al., 2021), while gamification elements such as challenges and reward systems enhance motivation, engagement, and persistence (Sailer & Homner, 2020). Despite growing evidence of its effectiveness across various educational and professional context, its potential for developing pre-service teachers' English communication competencies has received limited scholarly attention. This gap is particularly relevant in English as a Foreign Language (EFL) context, where communication competence is essential for accessing academic resources and carrying out classroom instruction. Yet many learners struggle with academic vocabulary, complex syntax, and converting input into meaningful oral output (Nation, 2022). These challenges affect routine classroom communication tasks and are often intensified by cognitive overload, anxiety, and low confidence (Plass & Kalyuga, 2019), underscoring the need for approaches that address both linguistic and emotional demands.

Emotional factors also play a central role in teacher education. Anxiety, fear of evaluation, and limited communicative confidence have been shown to constrain pre-service teachers' willingness to use English. Traditional, theory heavy instruction often provides insufficient preparation for real-time communication, leaving student teachers underconfident during teaching demonstrations (Phan, 2020). Even with adequate knowledge, many struggle to apply English spontaneously, indicating a need for learning environments that foster practice and resilience. These challenges are especially pronounced in the Thai EFL context, where learners continue to report persistent difficulties in English communication despite prolonged exposure to formal instruction (National Statistical Office of Thailand [NSO], 2022). Low national proficiency rankings, together with research linking exam-oriented pedagogy to weak communicative outcomes, point to systemic limitations in prevailing instructional approaches (Khamkhien, 2010; Wongsothorn et al., 2002). For pre-service teachers, communicative tasks such as giving instructions, presenting content, and managing classroom interaction in English often trigger heightened anxiety due to limited access to authentic and supportive practice contexts (Boonchum et al., 2022; Songsirisak, 2022). These conditions suggest that pedagogical approaches should address communicative competence and affective readiness, rather than prioritizing linguistic knowledge alone.

Microlearning demonstrates considerable potential for addressing these needs, particularly through its segmented structure, which supports self-paced progression, repeated exposure, and the gradual development of learner confidence (Latorre-Cosculluela et al., 2024; Prasittichok & Smithsarakarn, 2024). When combined with gamification, microlearning may further enhance engagement by incorporating incremental rewards and low-stake challenges that encourage sustained participation. Studies conducted in EFL contexts have reported benefits such as vocabulary gains, reduced cognitive load, and improvements in speaking performance, together with high levels of learner satisfaction (Prasittichok & Smithsarakarn, 2024). However, much of the existing evidence is derived from short-term interventions or focuses on isolated language skills, often within controlled or technology-rich settings. Recent systematic reviews and meta-analyses caution that while gamification can positively influence motivation, participation, and achievement, its effectiveness is highly contingent on pedagogical alignment, contextual appropriateness, and careful management of cognitive load (Al-Khresheh et al., 2025; Luo et al., 2023; Zhang & Hasim, 2023). These findings suggest that gamification is not universally effective and that its impact depends largely on instructional design and contextual factors. Within teacher education, this concern is particularly salient, as student teachers must simultaneously manage language learning demands and professional performance expectations. Although gamification has been shown to support key language skills and higher-order learning (Su & Cheng, 2019), empirical evidence demonstrating its sustained effectiveness for developing communicative competence in pre-service teachers remains limited. To ensure systematic pedagogical alignment and contextual relevance, the development of the instructional approach in this study was conceptually guided by the ADDIE model-comprising Analysis, Design, Development, Implementation, and Evaluation, which provides a structured framework for aligning learner needs, instructional design, and learning outcomes. Overall, existing studies suggest that a gamified microlearning approach is theoretically well suited to addressing the linguistic, cognitive, and affective challenges faced by elementary education student teachers. Despite this potential, empirical studies applying this approach in Thai teacher education contexts are still limited, and few studies have systematically examined its impact on both English communication competencies and affective outcomes such as motivation and confidence. Moreover, existing studies often overlook classroom-specific communicative tasks that are central to pre-service teachers' professional practice. To address these gaps, the present study aims to (1) investigate the needs of elementary education student teachers regarding a microlearning approach integrated with gamification for developing English communication competencies, (2) design and develop a microlearning-gamification model grounded in these identified needs and explicitly aligned with classroom-based communicative tasks, and (3) evaluate the effects of the implemented model on student teachers' attitudes, motivation, and English communication performance.

Research Questions

1.What are the needs of elementary education student teachers regarding a microlearning approach integrated with gamification?

2. How can a microlearning–gamification model be developed to effectively support student teachers' English communication competencies for classroom-based communicative tasks?

3. What are the effects of the implemented microlearning–gamification model on student teachers' attitudes, motivation, and English communication competencies?
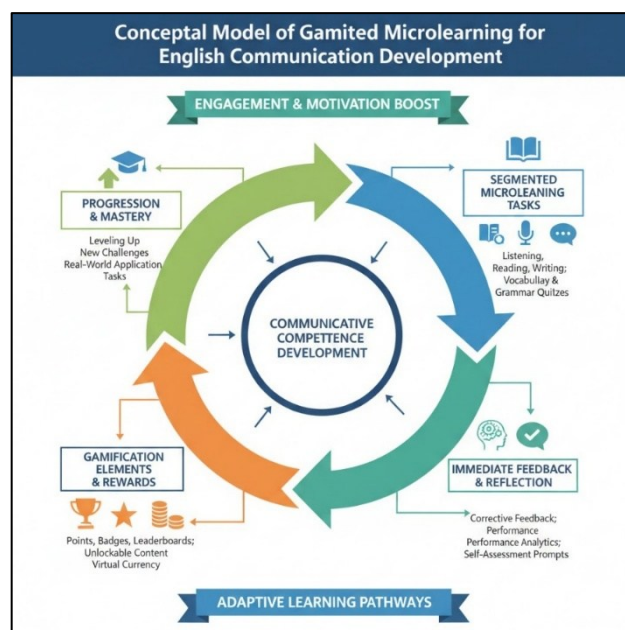
Literature Review

Gamified Microlearning

Microlearning has been increasingly adopted as a pedagogical response to how contemporary learners process information and manage cognitive load. Grounded in Cognitive Load Theory, microlearning reduces extraneous cognitive burden by presenting content in small, focused segments that support attention, retention, and self-paced review (Buchem & Hamelmann, 2010; Sweller, 2011). In language learning contexts, this approach allows learners to engage with manageable units of content, revisit key concepts, and gradually build confidence through repeated exposure. Empirical evidence supports its effectiveness in EFL settings. For example, Zhang (2024) reported improvements in learners' language performance and satisfaction when microlearning modules were designed to allow frequent review and immediate application. Similarly, studies on mobile-based microlearning have demonstrated positive effects on learner engagement and self-directed learning behaviors (Bruck et al., 2012). These characteristics make microlearning particularly suitable for elementary education student teachers, who often require flexible, accessible learning formats that can be integrated into their academic and professional routines.

Gamification further enhances the effectiveness of microlearning by embedding game-based elements such as points, badges, levels, and feedback mechanisms to support motivation, persistence, and emotional engagement. Drawing on Self-Determination Theory, gamification is understood to promote learners' sense of autonomy, competence, and relatedness, thereby sustaining participation and reducing anxiety (Deterding et al., 2011; Kapp, 2012). Prior studies have shown that gamified learning environments can lower communication anxiety and encourage repeated practice, which is particularly valuable in EFL contexts where learners often hesitate to use English spontaneously (Gee, 2015; Hamari et al., 2014). When combined, microlearning and gamification offer complementary benefits, as microlearning simplifies complex language tasks into achievable steps, while gamification reinforces motivation and encourages ongoing engagement. In this study, gamified microlearning is defined as a structured instructional model consisting of four interrelated components: (1) segmented learning tasks (e.g., short vocabulary or speaking activities), (2) game-based elements (e.g., points, levels, and rewards), (3) immediate feedback and reflection opportunities, and (4) progressive challenges aligned with classroom-based communicative tasks. This model is illustrated in Figure 1, which depicts the cyclical learning process in which student teachers engage in short communicative tasks, receive feedback and rewards, and progress through increasingly challenging activities to support the development of English communication competencies, confidence, and sustained motivation.

Figure 1

Conceptual Model of Gamified Microlearning for English Communication Development

Review of Relevant Studies

Empirical research increasingly supports the use of microlearning and gamification in language learning. Studies in EFL contexts show that short, focused learning units can improve learning gains, retention, and learner satisfaction compared with traditional instruction (Zhang, 2024), while mobile-based microlearning promotes learner autonomy and flexible, self-directed learning (Bruck et al., 2012). Research on gamification likewise highlights positive effects on motivation and affective outcomes. Gamified English instruction has been found to increase intrinsic motivation and speaking proficiency (Su & Cheng, 2019) and to reduce anxiety while strengthening confidence in oral communication (Al-Azawi et al., 2016). When game elements are meaningfully aligned with instructional goals, they can also foster sustained engagement and willingness to communicate in EFL classrooms (Hamari et al., 2014; Sailer & Homner, 2020).

Although studies integrating microlearning and gamification remain limited, emerging evidence is promising. Gamified microlearning has been shown to enhance engagement and critical thinking (Caporarello et al., 2019) and to improve communication confidence and fluency among EFL learners (Wang et al., 2024). However, important gaps persist, particularly in teacher education and the Thai EFL context. Thai learners continue to report high communication anxiety and limited opportunities for spontaneous English use, often linked to exam-oriented instruction (Songsirisak & Leung, 2022; Wongsothorn et al., 2002). Research focusing on pre-service elementary teachers is especially scarce, despite their need for classroom-specific communication skills. Few studies have examined how integrated microlearning and gamification can address both linguistic development and pedagogical readiness. To address these gaps, the present study investigates learner needs and evaluates a gamified microlearning model designed to enhance English communication skills, attitudes, and motivation among Thai pre-service elementary teachers.

1. Research Design

This study employed a mixed-methods research design to examine learner needs and evaluate the effectiveness of the developed learning model. Mixed-methods research is appropriate in educational studies that require both measurable outcomes and in-depth learner perspectives, as it allows quantitative and qualitative data to be interpreted together (Creswell & Plano Clark, 2018; Johnson & Onwuegbuzie, 2004). To strengthen validity, data were triangulated using surveys, achievement tests, and semi-structured interviews (Denzin, 2012).

A sequential exploratory design was used, comprising three phases: (1) needs and problem analysis, (2) model design and development, and (3) implementation and evaluation. This design is suitable when qualitative findings inform model development prior to quantitative evaluation (Creswell, 2014). The study was guided by established instructional design frameworks, including the Analysis-Design-Development-Implementation-Evaluation model (ADDIE) (Branch, 2009) and design-based research principles, which emphasize iterative development, expert review, and field testing in authentic educational settings (Reeves, 2006; Wang & Hannafin, 2005)

2. Research Context and Participants

This study was conducted at Suan Dusit University, Lampang Center, within the Elementary Education program. Participants were selected using purposive sampling to ensure alignment with the study's objectives and instructional context. The implementation phase involved ten second-year elementary education student teachers enrolled in the course *English Language for Elementary Education Classroom Teaching*, reflecting the actual class size in which the intervention was implemented. Small sample sizes are considered appropriate in pilot studies and instructional model development, as they allow close observation of learning processes and provide detailed feedback for model refinement (Hertzog, 2008; Van Teijlingen & Hundley, 2001). Nevertheless, the limited number of participants may constrain statistical power and generalizability; therefore, the findings should be interpreted as preliminary evidence to inform subsequent studies with larger samples. The research was conducted in multiple phases.

Phase 1 involved undergraduate elementary education student teachers enrolled in the elementary education program, who participated in the needs assessment through questionnaires and semi-structured interviews.

Phase 2 involved ten second-year elementary education student teachers enrolled in English Language for Elementary Education Classroom Teaching.

This context is particularly meaningful, as elementary education student teachers in Thailand often face limited opportunities to use English communicatively making it an ideal setting to explore microlearning and gamification innovations.

3. Design and Implementation

Phase 1: Needs and Problem Analysis

A needs assessment questionnaire and semi-structured interviews were used to examine student teachers' English proficiency, communication challenges, and learning needs. Needs analysis is a key step in learner-centered instructional design, particularly in EFL contexts, as it ensures that instructional decisions are grounded in learners' actual difficulties (Brown, 2016; Long, 2005). The questionnaire collected demographic information, self-perceived proficiency, and learning needs, while interviews provided deeper insight into communicative obstacles, affective factors, and learner expectations. Findings from this phase informed the subsequent design of the microlearning–gamification model.

Phase 2: Model Design and Development

The instructional model was developed based on microlearning principles and gamification frameworks. Microlearning emphasizes short, focused learning units that reduce cognitive load, while gamification incorporates motivational elements to sustain engagement (Hug, 2005; Landers, 2014). The instructional components consisted of:

- **Short instructional videos** that introduced key language concepts in concise, manageable segments

- **Interactive tasks** that allowed learners to apply concepts through immediate, hands-on practice

- **Formative quizzes** that provided instant feedback and opportunities for self-assessment

- **Pronunciation and vocabulary mini-lessons** that targeted specific communication skills through focused micro-activities

To support motivation, game mechanics such as points, levels, and optional leaderboards were integrated, as these elements have been shown to encourage participation when aligned with instructional goals (Deterding et al., 2011; Sailer & Homner, 2020).

The design process followed four iterative steps commonly described in instructional design research: storyboarding, content production, internal testing, and systematic revision (Branch, 2009). This iterative cycle ensured that both instructional components and gamified features were refined for clarity, usability, and pedagogical alignment.

Expert review was conducted with three specialists two in English language teaching and one in educational technology. They evaluated the content using the Index of Item Objective Congruence (IOC), a widely accepted method for ensuring content validity. Items scoring below 0.50 were revised accordingly.

Phase 3: Implementation and Evaluation

The validated model was implemented with ten student teachers. Evaluation focused on both learning achievement and learner attitudes.

- A **30-item achievement test** (four-option MCQ format) assessed English communication competencies.
- A **20-item attitude questionnaire** measured learners' perceptions of usability, engagement, and effectiveness.
- **Semi-structured interviews** captured learners' reflections and experiences.

The psychometric properties of the tools were strong:

- Achievement test: IOC = .67–1.00; KR-20 = .87, indicating high reliability.
- Attitude questionnaire: Cronbach's alpha = .92, reflecting excellent internal consistency (Hair et al., 2019).

Such multi-instrument evaluations are recommended for examining technology-enhanced learning interventions.

4. Research Instruments

Five primary instruments were employed in this study, each developed and validated according to the principles of classical test theory (Anastasi & Urbina, 1997). The needs assessment questionnaire consisted of three essential sections: demographic information, English proficiency, and learners' needs or obstacles.

It used a five-point Likert scale, with content validity confirmed through an expert IOC review, and demonstrated acceptable reliability (Cronbach's α = .80) (DeVellis, 2017).

The semi-structured interview protocols were developed based on relevant literature in EFL communication and teacher education and were reviewed by experts to ensure clarity, relevance, and alignment with the research objectives. Semi-structured interviews are widely used in educational research to capture in-depth perspectives while maintaining consistency across participants (Kvale & Brinkmann, 2009). The Microlearning-Gamification instructional materials, including storyboards, instructional videos, quizzes, and gamified reward systems, were also evaluated by experts using IOC procedures to verify content appropriateness and alignment with intended learning outcomes, following established practices in instructional design research (Branch, 2009).

The achievement test comprised 30 multiple-choice items aligned with course learning outcomes and English communication competencies. Content validity was confirmed through expert IOC review (IOC = .67-1.00), and test reliability was high (KR-20 = .87), indicating strong internal consistency for achievement measurement (Fraenkel et al., 2012). Finally, the attitude questionnaire, consisting of 20 Likert-scale items, was used to assess learners' perceptions of usability, engagement, and instructional effectiveness. The questionnaire demonstrated excellent reliability (Cronbach's α = .92), exceeding commonly accepted standards for attitudinal measures (Hair et al., 2019).

Collectively, these validation and reliability procedures provide empirical support for the quality of all research instruments and their suitability for addressing the study's research objectives.

Table 1 outlines the step-by-step procedures used to develop the research instruments. These procedures were designed to ensure that all instruments were theoretically grounded, content-valid, and statistically reliable prior to their implementation in the data collection phase.

Table 1

Instrument Development Procedures

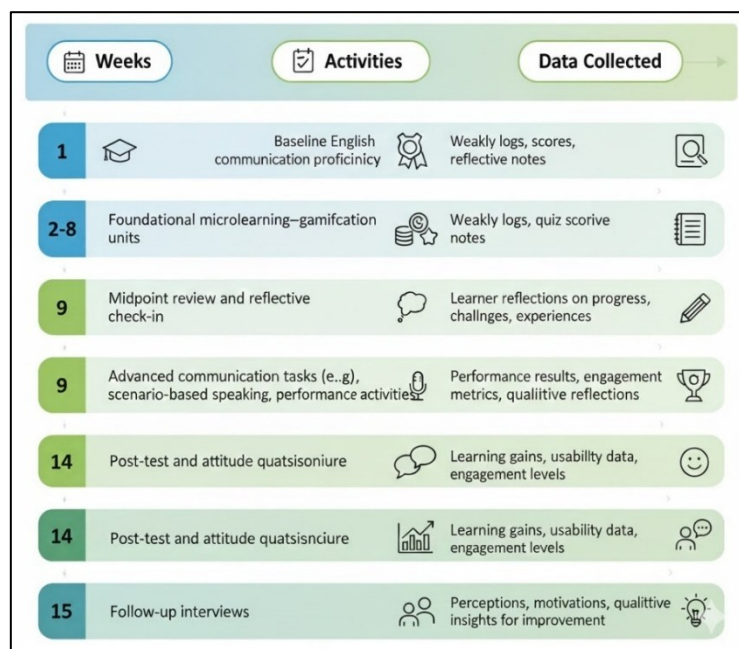| Step	Description
1. Literature Review	Reviewed relevant studies on English as a Foreign Language (EFL) communication, teacher education, microlearning, and gamification to establish the conceptual framework for instrument development.
2. Specification of Structure and Indicators	Analyzed variables, research objectives, and theoretical foundations to determine the structure, content domains, and indicators for all five instruments.
3. Development of Draft Instruments (Draft 1)	Created initial versions of the instruments needs assessment questionnaire, semi-structured interview protocols, microlearning-gamification materials, achievement test, and attitudes questionnaire.
4. Content Validity Review (IOC)	Three experts evaluated the congruence between items and objectives using the Index of Item-Objective Congruence (IOC) and provided suggestions for improvement.
5. Revision Based on Expert Feedback	Revised wording, content, item structures, and media components to ensure clarity, appropriateness, and alignment with expert recommendations.
6. Reliability Analysis	Calculated reliability coefficients Cronbach's alpha for questionnaires and KR-20 for the achievement test to ensure internal consistency and measurement accuracy.
7. Finalization of Instruments	Compiled and refined the validated instruments for the actual data collection phase.

Data Collection

Prior to the 15-week intervention, two preparatory stages were conducted to ensure that the microlearning-gamification model was grounded in learner needs and pedagogically validated. First, a needs assessment questionnaire and semi-structured interviews were administered to identify student teachers' English communication challenges, learning expectations, and preferred instructional formats. Needs analysis is a well-established procedure in instructional and EFL research, providing an empirical basis for designing learner-centered interventions (Brown, 2016; Long, 2005). The findings indicated key needs related to speaking confidence, pronunciation development, and classroom communication skills, which directly informed the instructional design.

The second preparatory stage involved the development and validation of the instructional materials. Draft microlearning videos, interactive tasks, formative quizzes, and gamified components were reviewed by three experts using the Index of Item Objective Congruence (IOC), a commonly used method for content validation in educational research (Rovinelli & Hambleton, 1977). Materials with IOC values below .50 were revised to ensure conceptual accuracy, pedagogical relevance, and alignment with the intended learning outcomes.

Following these stages, data collection was embedded within a 15-week instructional implementation aligned with the mixed-methods and sequential design of the study. Weekly instructional activities incorporated formative assessments and systematic data collection to monitor learners' progress, engagement, and perceptions over time. Integrating data collection into the instructional process is recommended in technology-enhanced and design-oriented research, as it allows both learning outcomes and learner experiences to be examined concurrently (Creswell & Plano Clark, 2018; Reeves & Hedberg, 2014). This approach enabled a comprehensive evaluation of the effectiveness of the microlearning-gamification model through both quantitative and qualitative evidence. Accordingly, Figure 2 summarizes the overall instructional timeline and illustrates how data collection points were systematically embedded throughout the 15-week implementation of the microlearning-gamification model.

Figure 2

15-Week Gamified Microlearning Intervention

Data Analysis

Data analysis was conducted in accordance with each research objective. For Research Question 1, which addressed learners' needs, questionnaire data were analyzed using descriptive statistics, including mean, standard deviations, and percentage, to summarize patterns in English proficiency and learning needs. Interview data were analyzed using thematic content analysis, following systematic coding procedures to identify recurring themes related to communication challenges and contextual factors (Braun & Clarke, 2006; Miles et al., 2014).

For Research Question 2, focusing on the development of the microlearning-gamification model, results from the needs analysis and expert evaluations were used to refine the model's structure and instructional components. Quantitative IOC values along with qualitative expert feedback, informed these revisions to ensure alignment between learning objectives, instructional activities, and assessment components, consistent with recommended practices in instructional design research (Branch, 2009; Rovinelli & Hambleton, 1977).

For Research Question 3, which examined the effectiveness of the instructional model, both quantitative and qualitative analyses were conducted. Pre- and post-test achievement scores were compared using the Wilcoxon Signed-Rank Test. This nonparametric procedure is appropriate for small samples and non-normally distributed data (Field, 2018; Pallant, 2020). Learner attitude questionnaire data were analyzed using descriptive statistics. Interview data were further examined through thematic analysis to capture participants' perceptions of usability, motivation, and support for English communication competencies.

To enhance the trustworthiness of the qualitative findings, methodological triangulation and expert validation were employed, following established criteria for credibility and dependability in qualitative research (Creswell & Poth, 2018; Lincoln & Guba, 1985). Together, these procedures ensured analytical rigor and consistency across all phases of the study.

Findings

RQ1: What are the needs of elementary education student teachers regarding a microlearning approach integrated with gamification?

The needs analysis of ten elementary education student teachers indicated a clear pattern of high-priority requirements across all domains, with reported percentages representing the proportion of participants (out of 10) who rated each item at the highest level (Level 5). Overall, the participants emphasized the importance of content grounded in primary-level teaching practice, particularly English materials related to pronunciation, vocabulary instruction, and realistic classroom scenarios (60%). This practical focus extended to the preferred microlearning format, as dividing content into micro-units and incorporating interactive comprehension-check activities received the strongest support (60%), followed by learner-controlled sequencing and self-paced learning (50%). In terms of learning design, gamification was perceived as an effective means of sustaining engagement, especially through points and rewards (50%) and the inclusion of pre-lesson quizzes and enjoyable activities (40%). These design preferences aligned with reported skill development needs, which centered on strengthening speaking confidence, listening to native accents, classroom questioning, and reading from diverse sources (40%). Expected learning outcomes further reinforced this pattern, with most participants prioritizing the application of acquired knowledge in real teaching contexts (60%) and expressing support for a microlearning–gamification approach that promotes enjoyable and continuous language development (40%). Notably, no items were rated at low levels (Levels 1–2).

RQ2: How can a microlearning–gamification model be developed to effectively support student teachers' English communication competencies for classroom-based communicative tasks?

The development of the microlearning-gamification model followed an iterative process grounded in learner needs, expert input, and instructional design principles. Needs assessment data identified key areas of English communication for classroom-based tasks, including pronunciation, contextual vocabulary use, listening comprehension, classroom discourse patterns, role-play, and professional communication.

The model organized content into short 5-10-minute modules with clear objectives, targeted practice cycles, and review opportunities. These modules were aligned with communicative functions that elementary education student teachers must perform in real classrooms, such as giving instructions, asking questions, scaffolding responses, and managing student interaction. Gamification strategies, including points, badges, rewards, levels, and leaderboards were incorporated to enhance engagement, persistence, and motivation across learning cycles.
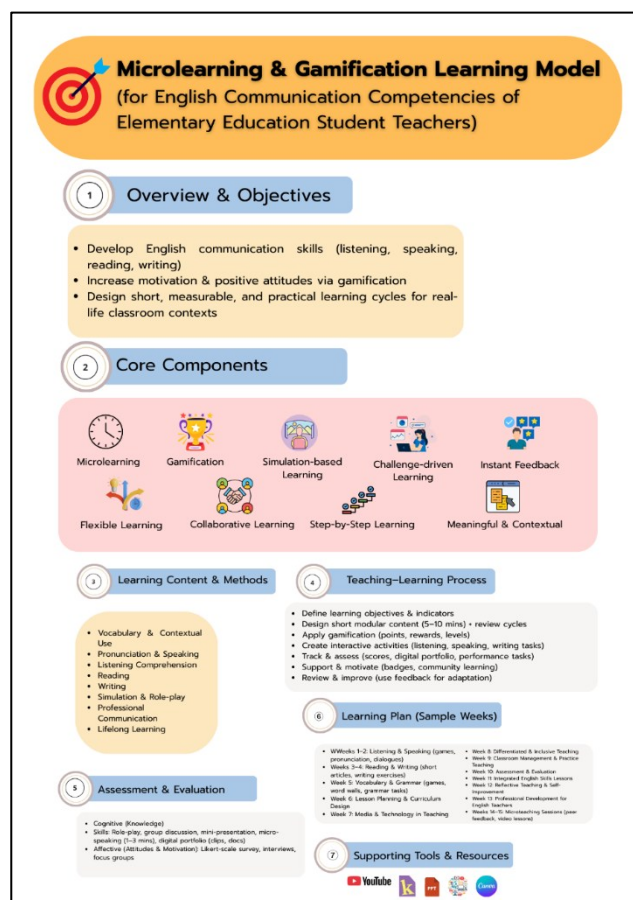
Simulation-based and challenge-driven activities were integrated to mirror authentic teaching scenarios, enabling learners to rehearse communicative tasks in controlled mini-lessons and practical situations. Core components of the model included microlearning modules, gamified tasks, collaborative activities, instant feedback mechanisms, and flexible learning pathways. Interactive exercises (e.g., listening tasks, speaking drills, contextual writing tasks, and mini-presentations) supported the development of communication competencies across listening, speaking, reading, and writing domains.

Expert validation using IOC confirmed the content validity of the model, with components below .50 revised to improve alignment with communicative teaching requirements. The finalized model incorporated step-by-step learning sequences, digital portfolios for monitoring progress, micro-speaking tasks (1-3 minutes), and performance-based assessments addressing cognitive, skill-based, and affective outcomes.

A structured 15-week learning plan operationalized the model into practice, progressing from foundational communication skills to integrated-skills lessons, classroom simulation tasks, reflective practice, and microteaching with peer feedback. This systematic progression ensured that the model effectively supported the development of student teachers' English communication competencies for classroom-based communicative tasks, as illustrated in Figure 3.

Figure 3

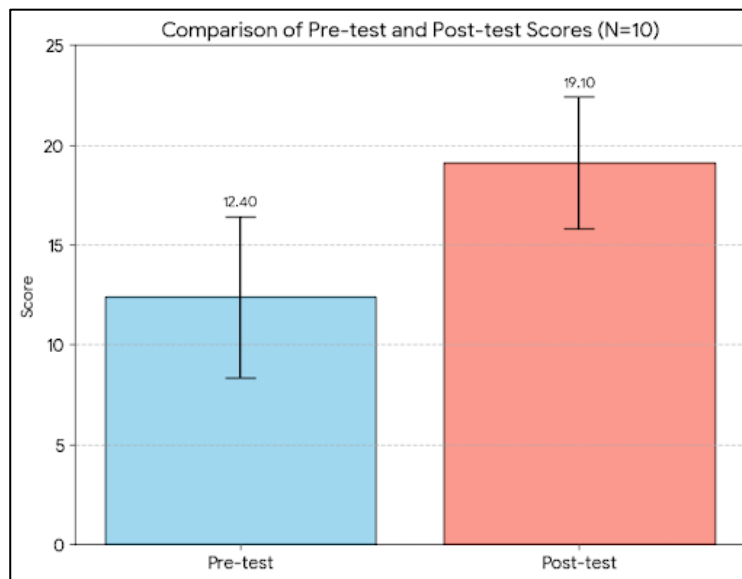*Microlearning and Gamification Learning Model*

RQ3: What are the effects of the implemented microlearning-gamification model on student teachers' attitudes, motivation, and English communication competencies?

To evaluate the impact of the microlearning-gamification model on learning achievement, pre-test and post-test scores were compared. Figure 4 illustrates the changes in participants' English communication performance before and after the intervention.
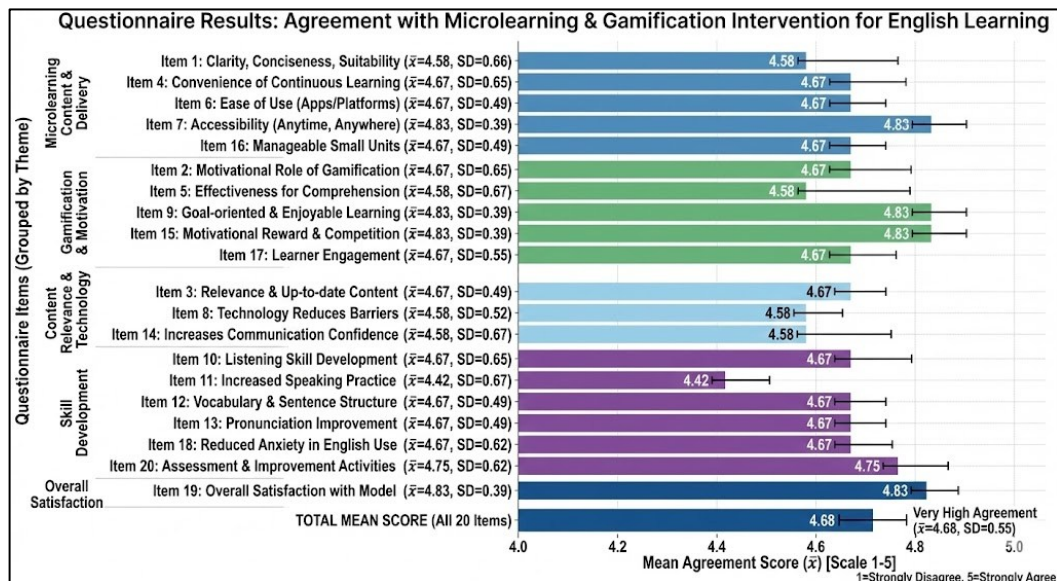
Figure 4

Comparison of Pre-test and Post-test Scores

The implementation of the validated model with ten elementary education student teachers yielded strong positive effects. Learning achievement improved significantly, with post-test scores ($\bar{x}$ = 19.10, SD = 3.31) substantially higher than pre-test scores ($\bar{x}$ = 12.40, SD = 4.03). The Wilcoxon Signed-Rank Test confirmed statistically a significant improvement ($p < .01$), with all participants showing positive gains and no negative ranks. Students demonstrated better grammatical accuracy, increased confidence, and improved responsiveness in simulated classroom communication tasks, especially in speaking and listening.

Figure 5

Analysis of Student Attitudes, Opinions, and Motivation toward the Gamified Microlearning Model

As shown in Figure 5, the figure shows very high levels of agreement with the microlearning and gamification intervention across all items, with mean scores ranging from 4.42 to 4.83. The highest ratings were given to learning accessibility, goal-oriented and enjoyable learning, motivational rewards, and overall satisfaction ($\bar{x}$ = 4.83). Content quality, ease of technology use, learner engagement, and skill development were also rated very highly. Overall, the total mean score ($\bar{x}$ = 4.68) indicates strong acceptance of the microlearning-gamification approach for English learning.

To complement the quantitative results, semi-structured interviews explored the students' experiences with the microlearning–gamification model, as summarized in Table 2.

Table 2

Qualitative Findings from Semi-Structured Interviews

Theme	Key Description	Representative Quotes
Increased Confidence in English Communication	Microlearning activities reduced anxiety and supported gradual confidence building in speaking English.	*"The short speaking activities made me feel more confident because I could practice step by step."* (P3)
Improvement in Pronunciation and Speaking Practice	Focused micro-activities and repeated practice helped learners notice and correct pronunciation errors.	*"I could repeat the words many times until I felt confident."* (P1)

Theme	Key Description	Representative Quotes
Enhanced Motivation through Gamification	Game elements such as points and levels increased engagement and encouraged task completion.	*"It felt like a challenge, not an assignment."* (P4)
Usability and Learning Support	Short, flexible lessons supported self-paced learning and easy review.	*"I could study anytime, even when I didn't have much time."* (P2)
Relevance to Classroom Teaching Practice	Activities reflected real classroom communication tasks relevant to future teaching roles	*"It focused on real classroom situations, not just grammar."* (P10)
Positive Attitudes toward the Learning Model	Learners reported high satisfaction, enjoyment, and positive learning experiences.	*"I enjoyed learning this way and felt motivated throughout the course."* (P6)
Suggestions for Improvement	Learners suggested increasing the variety and enjoyment of activities to sustain motivation and speaking practice.	*"I would like more fun and varied activities, especially more speaking practice."* (P8)
Instructor Strengths	Teaching techniques and instructor personality contributed to a supportive learning environment	*"The teacher's techniques and personality made the class supportive and enjoyable."* (P9)

Qualitative content analysis supported the patterns presented in Table 2. Overall, participants described the gamified microlearning model as enjoyable, motivating, and effective in supporting English communication. They valued the variety of activities and the supportive teaching approach, which helped create a positive and low-pressure learning environment. Participants also highlighted opportunities to apply communication skills in authentic or simulated teaching contexts, particularly for speaking and classroom interaction.

At the same time, learners suggested further increasing the variety of enjoyable activities and expanding speaking practice opportunities to sustain motivation over time. Taken together, these findings indicate that the model enhanced English communication competencies, foster sustained motivation, and provided a positive learning experience aligned with the needs and learning characteristics of pre-service teachers.

Discussion

This study sets out to address a clear gap in the systematic design of technology-enhanced learning models for elementary education student teachers. Although prior work has emphasized the benefits of communicative, task-based, and motivational approaches in second-language learning (Nunan, 2004; Richards, 2006; Ryan & Deci, 2000), few studies have explored how these elements can be intentionally combined within a structured virtual microlearning model specifically tailored for elementary education student teachers. To respond to this gap, the present research pursued three objectives: (1) identifying student teachers' needs for English used in classroom communication, (2) developing a microlearning-gamification model aligned with those needs, and (3) examining its effects on their communication competencies and attitudes. The following discussion integrates these findings with the theoretical and empirical foundations reviewed earlier.

Building upon this overall aim, the results from the needs analysis revealed that student teachers placed high value on primary-level content, vocabulary and pronunciation practice, and realistic classroom scenarios. These preferences closely align with communicative language teaching principles that emphasize meaningful interaction (Richards, 2006). More importantly, they also correspond with previous studies showing that pre-service teachers consistently request materials rooted in real-world classroom discourse, particularly scenarios involving giving instructions and managing student interactions (e.g., Farrell, 2018; Lee, 2020). Students' interest in tasks such as giving directions and asking questions also reflects core concepts of Task-Based Language Teaching (Nunan, 2004), and parallels findings from Lai and Li (2011), who reported that task authenticity significantly predicts L2 learners' willingness to participate. The expressed need for confidence-building and exposure to native accents mirrors prior research emphasizing the importance of reducing affective barriers to facilitate comprehensible input (Krashen, 1987) and aligns with studies reporting that microlearning's brief, low-pressure format reduces anxiety (Alghamdi, 2022). Qualitative feedback further reinforced these patterns, highlighting the preference for flexible, self-paced modules, a trend widely observed in microlearning research (Buchem & Hamelmann, 2010). Collectively, these findings depict learner expectations that closely correspond to theoretical and empirical insights on functional language use, task manageability, and autonomy-supportive learning.

In response to these identified needs, the development of the microlearning-gamification model followed a systematic, needs-driven process aligned with recommendations from instructional design authorities (Van Merriënboer & Kirschner, 2018). When compared to prior microlearning-based interventions, the structure of 5-10-minute units is consistent with prior research demonstrating that brief instructional episodes enhance retention and reduce cognitive load (Hug, 2005; Mayer, 2009). Importantly, the present findings extend this line of research by showing that embedding communicative functions into micro-units improves not only knowledge recall but also practical classroom communication skills, an area that has received limited attention in earlier microlearning studies. Likewise, the inclusion of game mechanics (points, badges, and levels) aligns with studies showing that gamification supports learner persistence (Landers, 2014; Sailer et al., 2017). However, the present model contributes further evidence that such mechanics are particularly beneficial when embedded within authentic,

profession-oriented tasks. The integration of simulation-based tasks further strengthens the model, echoing findings that simulations enhance the transferability of teaching skills (Brown & Lee, 2015; Shank, 2016). Expert validation using IOC provided empirical support for content validity, and the structured 15-week progression reflects established scaffolding principles (Reiser & Tabak, 2014). Taken together, these features position the model both a skill-development tool and a practicum-oriented preparation framework bridging, theory and classroom application.

Furthermore, the effects of the model on learning achievement and learner attitudes provide additional evidence of its effectiveness. The statistically significant improvement in communication skills, reflected in higher post-test scores, aligns with studies indicating that microlearning combined with frequent low-stakes assessments enhances long-term retention (Cepeda et al., 2006; Roediger & Karpicke, 2006). While the inclusion of effect sizes measures (e.g., Cohen's d) would allow direct comparison with prior gamification and microlearning interventions, the consistent improvement across participants nonetheless suggests a robust learning impact. The motivational benefits observed parallel findings by Sailer and Homner (2020) and Hamari et al. (2014), who emphasize that well-aligned game mechanics enhance persistence and engagement. High satisfaction ratings regarding flexibility and reward clarity are also consistent with studies showing that mobile-supported microlearning enhances learner autonomy and goal orientation (Crompton & Burke, 2022). Qualitative reflections, including increased confidence and enjoyment, reinforce this positive trajectory, At the same time, comparative lower satisfaction with speaking-based gamification features reflects findings from L2 anxiety research indicating that communication apprehension may persist even in supportive learning environments (Krashen, 1987; MacIntyre, 1999).This suggests that gamified speaking tasks may benefit from additional scaffolding or anxiety-reducing strategies.

Overall, the findings show that the microlearning-gamification model effectively operationalized the theoretical frameworks underpinning in this study. Unlike previous research that examined microlearning or gamification in isolation, the integrated model enhanced both cognitive efficiency (Mayer, 2020) and learner motivation through autonomy, competence, and feedback (Ryan & Deci, 2000, 2020; Sailer et al., 2017). The inclusion of communicative and task-based activities ensured authentic practice, consistent with evidence that context-rich tasks support skill transfer (Nunan, 2004; Richards, 2006).

The convergence of quantitative gains and qualitative feedback suggests improvements in both performance and learner attitudes, echoing prior work in technology-enhanced teacher education (e.g., Seung, 2021). These results suggest that integrated microlearning-gamification models represent a practical and scalable approach for strengthening English communication competencies in teacher preparation programs. Visual summaries of learning gains and attitudes may further support instructional decision-making by clarifying the magnitude of change.

Conclusion

This study developed and implemented a microlearning-gamification model based on short, goal-driven learning cycles integrating presentation, interaction, practice, and rapid formative checks across listening, speaking, reading, and writing. Needs analysis revealed priorities consistent with communicative and task-based pedagogy, including primary-level content, pronunciation and vocabulary practice, realistic classroom scenarios, and microlearning features such as content segmentation, interactive checks, clear goals, learner choice, and self-paced progression.

Evaluation results showed significant gains in English communication competencies, supported by improvements in pre-and post-test assessments and highly positive learner attitudes. Participants valued flexible access, clear and enjoyable learning goals, and the motivational effects of rewards and low-stakes competition. Speaking practice emerged as a comparatively weaker area, indicating the need for additional structured support to translate motivation into sustained oral participation.

Several limitations should be noted. The small sample size and relatively short intervention period limit generalizability and may not capture long-term effects. In addition, the model was implemented in a single institutional context, which may differ from other teacher education settings.

Despite these limitations, the findings suggest important pedagogical implications. Communicative, task-focused learning delivered through short microlearning cycles and supported by carefully designed gamification can enhance pre-service elementary teachers' English communication competencies. Teacher education programs may benefit from integrating microlearning modules, gamified feedback, and flexible learning pathways, with further emphasis on low-pressure speaking tasks, peer support, and personalized feedback. Future research should involve larger and more diverse samples, examine long-term classroom impacts, and explore adaptive or AI-supported features to refine the model, particularly for speaking development.

References

Al-Azawi, R., Al-Faliti, F., & Al-Blushi, M. (2016). Educational gamification vs. game based learning: A comparative study. *International Journal of Innovation, Management and Technology, 7*(4), 132–136. https://doi.org/10.18178/ijimt.2016.7.4.659

Alghamdi, A. (2022). Microlearning as an approach to reduce foreign language learning anxiety: A systematic review. *Journal of Language and Education, 8*(3), 45–58. https://doi.org/10.1234/jle.2022.83.45

Al-Khresheh, M. H., Al-Rawashdeh, A., & Alzahrani, M. (2025). The cognitive and motivational benefits of gamification in English language learning: A systematic review. *Education and Information Technologies, 30*(1), 45–67. https://doi.org/10.1007/s10639-024-12345-6

Anastasi, A., & Urbina, S. (1997). *Psychological testing* (7th ed.). Prentice Hall.

Boonchum, H., Sinsurin, K., Kunanusornchai, W., Richards, J., & Bovonsunthonchai, S. (2022). The effect of a home-based stretching exercise on the ground reaction force generation and absorption during walking in individuals with plantar fasciitis. *Physical Therapy in Sport, 58*, 58–67. https://doi.org/10.1016/j.ptsp.2022.09.006

Branch, R. M. (2009*). Instructional design: The ADDIE approach*. Springer.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Brown, H. D., & Lee, H. (2015). *Teaching by principles: An interactive approach to language pedagogy* (4th ed.). Pearson Education ESL.

Brown, J. D. (2016). *Introducing needs analysis and English for specific purposes*. Routledge.

Bruck, P. A., Motiwalla, L., & Foerster, F. (2012). Mobile learning with micro-content: A framework and evaluation. In *Proceedings of the 25th Bled eConference* (pp. 527–543). University of Maribor Press. https://aisel.aisnet.org/bled2012/

Buchem, I., & Hamelmann, H. (2010). Microlearning: A strategy for ongoing professional development. *eLearning Papers, 21*, 1–15. https://www.elearningpapers.eu

Caporarello, L., Magni, M., & Pennarola, F. (2019). One game does not fit all: Gamification and learning. *Journal of e-Learning and Knowledge Society, 15*(2), 27–38. https://doi.org/10.20368/1971-8829/1633

Cepeda, N. J., Pashler, H., Vul, E., Wixted, J. T., & Rohrer, D. (2006). Distributed practice in verbal recall tasks: A review and quantitative synthesis. *Psychological Bulletin, 132*(3), 354–380. https://doi.org/10.1037/0033-2909.132.3.354

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). SAGE Publications

Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). SAGE.

Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). SAGE Publications.

Crompton, H., & Burke, D. (2022). Mobile microlearning: The effectiveness of mobile microlearning for improving learner motivation and performance. *Journal of Computer Assisted Learning, 38*(5), 1332–1348. https://doi.org/10.1111/jcal.12725

Denzin, N. K. (2012). *Triangulation 2.0. Journal of Mixed Methods Research*, *6*(2), 80–88. https://doi.org/10.1177/1558689812437186

Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011). From game design elements to gamefulness: Defining "gamification." In *Proceedings of the 15th International Academic MindTrek Conference* (pp. 9–15). ACM. https://doi.org/10.1145/2181037.2181040

DeVellis, R. F. (2017). *Scale development: Theory and applications* (4th ed.). SAGE Publications.

Farrell, T. S. C. (2018). *Reflective practice in ESL teacher education*. Equinox.

Field, A. (2018). *Discovering statistics using IBM SPSS statistics* (5th ed.). SAGE Publications.

Fraenkel, J. R., Wallen, N. E., & Hyun, H. H. (2012). *How to design and evaluate research in education* (8th ed.). McGraw-Hill.

Gee, J. P. (2015). *Literacy and education*. Routledge.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Cengage Learning.

Hamari, J., Koivisto, J., & Sarsa, H. (2014). Does gamification work? A literature review of empirical studies on gamification. In *2014 47th Hawaii International Conference on System Sciences* (pp. 3025–3034). IEEE. https://doi.org/10.1109/HICSS.2014.377

Hertzog, M. A. (2008). Considerations in determining sample size for pilot studies. *Research in Nursing & Health*, *31*(2), 180–191. https://doi.org/10.1002/nur.20247

Hug, T. (2005). Micro learning and narration: Exploring possibilities of utilization of narrations and storytelling for the designing of "micro-units" and didactical micro-learning arrangements. In *Proceedings of the 4th Media in Transition Conference*. Innsbruck University Press. http://web.mit.edu/comm-forum/legacy/mit4/papers/hug.pdf

Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational Researcher, 33*(7), 14–26. https://doi.org/10.3102/0013189X033007014

Kapp, K. M. (2012). *The gamification of learning and instruction: Game-based methods and strategies for training and education*. Pfeiffer.

Khamkhien, A. (2010). Teaching English speaking and English-speaking tests in the Thai context: A reflection from Thai perspective. *English Language Teaching, 3*(1), 184–190.

Krashen, S. D. (1987). *Principles and practice in second language acquisition*. Prentice Hall.

Kvale, S., & Brinkmann, S. (2009). *InterViews: Learning the craft of qualitative research interviewing* (2nd ed.). SAGE Publications.

Lai, C., & Li, X. (2011). Technology and task-based language teaching: A critical review. *CALICO Journal, 28*(2), 493–518. https://doi.org/10.11139/cj.28.2.493-518

Landers, R. N. (2014). Developing a theory of gamified learning: Linking serious games and gamification of learning. *Simulation & Gaming, 45*(6), 752–768. https://doi.org/10.1177/1046878114563660

Latorre-Cosculluela, C., Sierra-Sánchez, V., & Rivera-Torres, P. (2024). ICT efficacy and response to different needs in university classrooms: Effects on attitudes and active behaviour towards technology. *Journal of Computing in Higher Education*, *36*(1), 350-367. https://doi.org/10.1007/s12528-023-09357-2

Lee, J. (2020). Pre-service teachers' needs in English communication: Insights from classroom-based observations. *Journal of Language Teaching and Research, 11*(4), 512–520. https://doi.org/10.17507/jltr.1104.05

Leong, L.-Y., Sung, A., & Au, Y. (2021). Microlearning via short digital media: A meta-analytic review of learning achievement. *Educational Technology & Society, 24*(4), 1–15.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. SAGE.

Luo, Z., Chen, L., Li, Y., & Wang, Y. (2023). The effectiveness of gamified tools for foreign language learning: A meta-analysis. *Sustainability, 15*(2), 1234. https://doi.org/10.3390/su15021234

MacIntyre, P. D. (1999). Language anxiety: A review of the research for language teachers. In D. J. Young (Ed.), *Affective factors in foreign language learning* (pp. 24–45). McGraw-Hill.

Mayer, R. E. (2009). *Multimedia learning* (2nd ed.). Cambridge University Press.

Mayer, R. E. (2020). *Multimedia learning* (3rd ed.). Cambridge University Press.

Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook* (3rd ed.). SAGE Publications

Nation, I. S. P. (2022). *Learning vocabulary in another language* (3rd ed.). Cambridge University Press. https://doi.org/10.1017/9781009093873

National Statistical Office of Thailand. (2022). *Survey of English proficiency among Thai university students*. National Statistical Office of Thailand. https://www.nso.go.th

Nunan, D. (2004). *Task-based language teaching*. Cambridge University Press.

Pallant, J. (2020). *SPSS survival manual* (7th ed.). McGraw-Hill.

Phan, L. H. (2020). *Teacher agency and professional learning in international education*. Springer. https://doi.org/10.1007/978-3-030-46945-9

Plass, J. L., & Kalyuga, S. (2019). Four ways of considering emotion in cognitive load theory. *Educational Psychology Review, 31*(3), 339–359. https://doi.org/10.1007/s10648-019-09473-5

Prasittichok, P., & Smithsarakarn, P. N. (2024). The effects of microlearning on EFL students' English speaking: A systematic review and meta-analysis. *International Journal of Learning, Teaching and Educational Research, 23*(4), 525–546. https://doi.org/10.26803/ijlter.23.4.27

Reeves, T. C. (2006). Design research from a technology perspective. In J. van den Akker, K. Gravemeijer, S. McKenney, & N. Nieveen (Eds.), *Educational design research* (pp. 52–66). Routledge.

Reeves, T. C., & Hedberg, J. G. (2014). *Interactive learning systems evaluation*. Educational Technology Publications.

Reiser, B. J., & Tabak, I. (2014). Scaffolding. In R. K. Sawyer (Ed.), *The Cambridge handbook of the learning sciences* (2nd ed., pp. 44–62). Cambridge University Press.

Richards, J. C. (2006). *Communicative language teaching today*. Cambridge University Press.

Roediger, H. L., & Karpicke, J. D. (2006). Test-enhanced learning: Taking memory tests improves long-term retention. *Psychological Science, 17*(3), 249–255. https://doi.org/10.1111/j.1467-9280.2006.01693.x

Rovinelli, R. J., & Hambleton, R. K. (1977). On the use of content specialists in the assessment of criterion-referenced test item validity. *Dutch Journal of Educational Measurement*, *2*, 49–60.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*(1), 68–78. https://doi.org/10.1037/0003-066X.55.1.68

Ryan, R. M., & Deci, E. L. (2020). *Intrinsic and extrinsic motivation from a self-determination theory perspective*. Routledge.

Sailer, M., Hense, J. U., Mayr, S. K., & Mandl, H. (2017). How gamification motivates: An experimental study of the effects of specific game design elements on psychological need satisfaction. *Computers in Human Behavior, 69*, 371–380. https://doi.org/10.1016/j.chb.2016.12.033

Sailer, M., & Homner, L. (2020). The gamification of learning: A meta-analysis. *Educational Psychology Review, 32*(1), 77–112. https://doi.org/10.1007/s10648-019-09498-w

Seung, E. (2021). Technology-enhanced simulation for pre-service teacher training: Effects on communication and pedagogical readiness. *Teaching and Teacher Education, 101*, Article 103327. https://doi.org/10.1016/j.tate.2021.103327

Shank, P. O. (2016). *Practice and feedback for deeper learning: 26 evidence-based and easy-to-apply tactics that promote deeper learning and application.* CreateSpace Independent Publishing Platform.

Songsirisak, P., Jitpranee, J., Lisec, A., Boonjanawiroj, P., Wetpichetkosol, B., & Kantamas, K. (2022). *Chinese students' metaphorical descriptions of Thai teachers at a Thai university*. *Malaysian Journal of Learning & Instruction, 19*(1), 213–241. https://doi.org/10.32890/mjli2022.19.1.8

Su, C.-H., & Cheng, C.-H. (2015). A mobile gamification learning system for improving students' learning achievement and motivation in English courses. *Journal of Computer Assisted Learning, 31*(3), 268–286. https://doi.org/10.1111/jcal.12088

Sweller, J., Ayres, P., & Kalyuga, S. (2011). *Cognitive load theory*. Springer.

Van Merriënboer, J. J. G., & Kirschner, P. A. (2018). *Ten steps to complex learning: A systematic approach to four-component instructional design* (3rd ed.). Routledge.

Van Teijlingen, E., & Hundley, V. (2001). The importance of pilot studies. *Social Research Update, 35*, 1–4. https://sru.soc.surrey.ac.uk/SRU35.html

Wang, F., & Hannafin, M. J. (2005). Design-based research and technology-enhanced learning environments. *Educational Technology Research and Development*, *53*(4), 5–23. https://doi.org/10.1007/BF02504682

Wang, Y., Zhang, X., & Li, H. (2024). Integrating gamification with microlearning to foster learners' confidence and willingness to communicate in EFL. *British Journal of Educational Technology, 55*(3), 1021–1040. https://doi.org/10.1111/bjet.13345

Wongsothorn, A., Hiranburana, K., & Chinnawongs, S. (2002). English language teaching in Thailand today. *Asia Pacific Journal of Education, 22*(2), 107–116. https://doi.org/10.1080/0218879020220210

Zhang, S., & Hasim, Z. (2023). Gamification in EFL/ESL instruction: A systematic review of empirical research. *Frontiers in Psychology, 14*, Article 1134567. https://doi.org/10.3389/fpsyg.2023.1134567

Zhang, Y. (2024). Microlearning in English language education: Effects on achievement and satisfaction. *System, 121*, Article 102986. https://doi.org/10.1016/j.system.2023.102986

Zhang, Z., & Hasim, Z. (2023). Gamified mobile-assisted language learning and L2 outcomes: A systematic review. *Language Learning & Technology, 27*(1), 1–24. https://doi.org/10.10125/73410

Teamwork and Communication among Healthcare Professionals in Thailand: Perspectives of Organizational Psychology on Socio-Cultural Challenges

การทำงานเป็นทีมและการสื่อสารของผู้ประกอบวิชาชีพด้านสุขภาพในประเทศไทย: มุมมองเชิงจิตวิทยาองค์การต่อความท้าทายทางสังคมและวัฒนธรรม

Porntep Chantarakamol[1]

พรเทพ จันทรกมล

Abstract

Despite the importance of teamwork and communication for work effectiveness of healthcare professionals, studies examining how socio-cultural factors influence teamwork and communication remain limited. This review article examines how cultural dimensions influence teamwork and communication among Thai healthcare professionals by reviewing peer-reviewed studies published within the past five years. The review integrates organizational psychology's Input-Mediator-Outcome-Input (IMOI) model with Health Systems Science (HSS) to provide a dual-lens perspective for understanding both system-level conditions and team-level behavioral mechanisms. Three socio-cultural determinants are illustrated: deference to hierarchy and power differentials, group harmony, and perseverance and self-sacrifice rooted in a sense of duty. Although these determinants drive compliance, group cohesion, and resilience at work, they may also hinder all-channel communication, constructive dialogues, shared decision-making, and psychological safety and well-being over the long term. To address these challenges, the review proposes three future agendas: flattening hierarchical barriers, reinforcing multidisciplinary teams (MDTs) and multi-team systems (MTSs) collaboration, and cultivating team emotional intelligence (EI). By combining organizational psychology perspectives with the HSS framework while considering Thai socio-cultural contexts, the article offers an integrated direction to guide future research and interventions aimed at strengthening teamwork and communication in Thai healthcare organizations.

Keywords: teamwork, communication, healthcare professionals, organizational psychology, Thai socio-cultural challenges

---

[1] *Affiliation:* Faculty of Social Sciences, Kasetsart University, Thailand

หน่วยงาน: คณะสังคมศาสตร์ มหาวิทยาลัยเกษตรศาสตร์ ประเทศไทย

Corresponding Author: Porntep Chantarakamol
E-mail: porntep.chan@ku.th

บทคัดย่อ

แม้การทำงานเป็นทีมและการสื่อสารจะเป็นปัจจัยสำคัญต่อประสิทธิผลการทำงานของผู้ประกอบวิชาชีพ
ด้านสุขภาพ แต่การศึกษาว่าปัจจัยทางสังคมและวัฒนธรรมจะส่งผลต่อการทำงานเป็นทีมและการสื่อสารอย่างไร
นั้นยังคงมีอย่างจำกัด บทความนี้มีวัตถุประสงค์เพื่อสำรวจอิทธิพลของสังคมและวัฒนธรรมที่มีต่อการทำงานเป็น
ทีมและการสื่อสารของผู้ประกอบวิชาชีพด้านสุขภาพ โดยทบทวนวรรณกรรมที่ตีพิมพ์ในช่วงห้าปีที่ผ่านมา
บทความนำแบบจำลอง Input-Mediator-Outcome-Input (IMOI) ของจิตวิทยาองค์การและกรอบคิด
วิทยาศาสตร์ระบบสุขภาพมาใช้ทำความเข้าใจโครงสร้างของระบบสุขภาพและพฤติกรรมของทีม บทความระบุถึง
สามปัจจัยทางสังคมและวัฒนธรรมที่มีผลต่อการทำงานเป็นทีมและการสื่อสาร ได้แก่ การให้ความสำคัญกับลำดับ
ชั้นและอำนาจ ความกลมเกลียวภายในกลุ่ม และความเพียรพยายามกับการเสียสละที่ตั้งอยู่บนสำนึกในหน้าที่
แม้ปัจจัยทั้งสามจะทำให้เกิดการปฏิบัติตาม ความสามัคคี และการฟื้นคืนกลับในการทำงาน แต่ก็ขัดขวางการ
สื่อสารแบบทุกทิศทาง การสนทนาอย่างสร้างสรรค์ การตัดสินใจร่วม และความปลอดภัยทางจิตใจกับความผาสุก
ในระยะยาว บทความจึงเสนอแนวทางการสามแนวทาง ได้แก่ ลดลำดับชั้นในการทำงาน เสริมสร้างความร่วมมือ
ในทีมแบบสหสาขาวิชาชีพและระบบการทำงานแบบหลายทีม และพัฒนาความฉลาดทางอารมณ์ของทีม
บทความนี้ได้เสนอแนวทางการผสานมุมมองระหว่างกรอบคิดจิตวิทยาองค์การและวิทยาศาสตร์ระบบสุขภาพโดย
คำนึงถึงบริบททางสังคมและวัฒนธรรมไทย เพื่อใช้เป็นแนวทางในการวิจัยและการพัฒนาการทำงานเป็นทีมและ
การสื่อสารในองค์การบริการด้านสุขภาพไทยต่อในอนาคต

คำสำคัญ: การทำงานเป็นทีม การสื่อสาร ผู้ประกอบวิชาชีพด้านสุขภาพ จิตวิทยาองค์การ
ความท้าทายทางสังคมและวัฒนธรรมของไทย

Introduction

Effective teamwork and communication are necessary components for high-quality
healthcare services. This could be reflected in patient cases, especially complex cases that require
both comprehensive and coordinated inputs from multidisciplinary health professionals, family
members, and patients themselves to evaluate and treat patients holistically (Rosen et al., 2018).
In contrast, when collaboration does not work well, a range of difficulties occurs (Rabøl et al.,
2011), resulting in diagnostic errors, mistreatment, complications during treatments, and lower
well-being for both healthcare staff and patients (Zajac et al., 2021). Communication breakdowns,
such as using hierarchical and unclear top-down communication styles, resulted in cultivating
emotional discomfort (Baek et al., 2023), role ambiguity, and conflict among healthcare
professionals (Saxena et al., 2018). To confront these challenges, international organizations, for
instance, World Health Organization (WHO) and Organization for Economic Co-operation and
Development (OECD), have highlighted teaming and teamworking, systematic information
sharing, and training among healthcare workers to collaborate effectively across disciplines (World

Health Organization et al., 2019). Despite this recognition, effective teamwork and communication remain persistent challenges in the healthcare context. According to OECD (2025), for example, approximately 25% of chronic condition patients were engaged in goal setting and empowerment by healthcare professionals. These figures underline the difficulties of team members' inclusivity and cooperation to foster patient-centered care.

Thailand is also facing these global challenges, especially since several socio-cultural values strongly impact teamwork and communication behaviors. Similar to Thai society, the healthcare ecosystem operates within a high power distance and collectivism (Hofstede Insights, 2021), which eventually shapes healthcare providers' interactions with colleagues, patients, and patient's families (Greer et al., 2023). In addition, teamwork and communication in the Thai healthcare setting are influenced by systemic constraints such as workload pressures, staffing limitations (Areemit et al., 2021), and professional hierarchies (Naothavorn et al., 2023). Together, these factors further foster challenges in communication and teamwork. Despite the fact that much of the existing literature on teamwork and communication in healthcare was developed within Western contexts and primarily focused on formal team design (Lemieux-Charles & McGuire, 2006), structural coordination (Steinmann et al., 2022), and individual communication skills (Heier et al., 2024), socio-cultural factors that shape everyday interactions in non-Western healthcare settings remain underexplored (Lazaro et al., 2024; Wang et al., 2023). Applying Western-based models without cultural adaptation risks ineffectiveness (Panchuay et al., 2023).

Thus, this review article adopts organizational psychology as an analytical lens to provide a theory-driven framework for understanding how socio-cultural determinants shape behaviors related to teamwork and communication and their outcomes in Thai healthcare organizations. Accordingly, this review examines literatures published since 2020 to identify key cultural dimensions affecting team and communication behaviors among healthcare professionals in Thailand. By applying organizational psychology as analytical lens, this review article aims to create a theory-driven understanding of socio-cultural factors shaping healthcare teams and to highlight implications for improving collaborative practice and guiding future research in Thai healthcare organizations.

Conceptual Foundations: Applying Organizational Psychology Lens to HSS

HSS has emerged as the third pillar of medical education alongside basic and clinical sciences. It emphasizes viewing healthcare as an interconnected system and mastering principles of quality improvement and outcomes in patient and population care (Gonzalo et al., 2017). Key HSS domains comprise (1) ethics and legal, (2) change agency, management, and advocacy, (3) leadership, (4) teaming, and (5) systems thinking, the latter connecting all domains together (Skochelak et al., 2021). Communication is also an essential competency for driving interprofessional collaboration (Hopkins, 2010). This perspective underscores that effective teamwork and communication are fundamentals to safe and coordinated patient care. Within the HSS framework, teaming is conceptualized at the system level as dynamic, cross-boundary coordination across roles and units within system linkages to accomplish shared goals. HSS highlights that teamwork effectiveness is shaped by system-level structures that create conditions for clear

communication and coordinated action. Systems-based frameworks, such as Team Strategies and Tools to Enhance Performance and Patient Safety (TeamSTEPPS), Crew Resource Management (CRM), and Ask, Advocate, Assert (AAA), provide structured tools that enhance shared situational awareness and coordination among healthcare professionals (Higginson et al., 2021).

From an organizational psychology perspective, teamwork is recognized as a multilevel and dynamic system that evolves across time and contexts. It is influenced not only by structural features at the team and organizational levels, but also by individual-level inputs, processes, and outcomes (Mathieu et al., 2019). To explain how these components interact, Ilgen et al. (2005) proposed the Input-Mediator-Outcome-Input (IMOI) model to illustrate how teamwork operates. Recent studies (Kozlowski, 2015; Marlow et al., 2018; Mathieu et al., 2017) suggest that teamwork mediators can be grouped into cognitions, affects, and behaviors, which shape how teams interact and perform. Across the team processes, communication serves as a mechanism that allows sharing information, coordinate tasks, and adjustment in responses to changing demands (Kozlowski & Chao, 2018).

Using the IMOI model as an analytical lens introduced three major points of view. First, the model provides guidance to explore potential factors affecting effective healthcare team performance. Since healthcare teams serve specific purposes, they require different combinations of members' skills, task interdependence, authority distribution, and personality composition (Salas et al., 2018). Understanding distinct factors influencing team interactions could be beneficial. Secondly, the model emphasizes mediators, which are incorporated between team emergent states and processes. This means that rather than solely relying on team interaction, team processes could be shaped by team inputs, which in turn may lead to proximal outcomes (Marks et al., 2001). Finally, the IMOI model recognizes that the team performance is recursive, whereby team outcomes can feed back to members and further impact their development and future performance (McGuier et al., 2024). This IMOI lens provides a mechanism for understanding teamwork and communication behaviors, which are strongly shaped by Thai socio-cultural norms such as authority relations, psychological safety, and trust, and which eventually influence healthcare delivery.

In summary, HSS and IMOI offer complementary perspectives for understanding teamwork in healthcare settings. While HSS explains how system-level structures and workflows can create optimal conditions for collaboration, the IMOI explores the behavioral and psychological perspectives of how team members actually interact within these structures. Applying an organizational psychology lens therefore allows a more precise understanding of how socio-cultural determinants influence teamwork inputs, mediators, and ultimately drive healthcare outcomes. Together, these models provide fruitful frameworks to investigate how socio-cultural factors influence specific IMOI components. The following section discusses Thai socio-cultural norms that affect teamwork- and communication-related behaviors in greater detail.

Thai Socio-Cultural Determinants of Teamwork and Communication in Healthcare

Throughout Hofstede's six cultural dimensions, Thai culture scores high on power distance, collectivism, and consensus, while showing moderately high levels of uncertainty avoidance, pragmatism, and indulgence. These cultural factors shape Thai-preferred interaction styles, including healthcare professionals' views of teamwork and communication with colleagues, patients, and patient's families (Hofstede Insights, 2021). Three socio-cultural determinants are particularly important to consider: deference to hierarchy and power differentials, group harmony, and perseverance and self-sacrifice rooted in a sense of duty. The following section examines how these determinants appear in and how they affect healthcare workers' teamwork and communication.

1. Deference to hierarchy and power differentials

Deference to hierarchy and power differentials stems from Thai culture's high level of power distance, in which unequal power distribution between individuals and groups of different status is widely accepted (Hofstede Insights, 2021). Health professionals are expected to behave with respect within a strict hierarchical structure: senior physicians hold the highest status and are addressed as *Ajarn* (an honorific title used to address someone as highly educated or an expert), followed by junior physicians (usually referred to by *Ajarn* as *Mhór* or Doctor), nurses, and other healthcare workers (usually addressed by *Ajarn* as *staff*), respectively. With this seniority mindset, communication and decision-making tend to flow in a top-down direction. Lower hierarchical-level healthcare workers are encouraged to politely follow instructions instead of confronting authority and raising concerns such as mistreatment, for fear of being perceived as troublemakers and risking their future careers (Naothavorn et al., 2023; Oon-arom et al., 2024). Furthermore, research shows that nurses also frequently dismiss their questions related to treatment orders, which reduces their engagement in specialized care (Van Gulik et al., 2021).

In the context of teamwork, the cultural norm of *Kreng jai* (suppressing personal opinions and feelings to sustain harmony) encourages lower-order members to take on heavy workloads without complaint, even when they privately disagree (Areemit et al., 2021). In stressful situations, healthcare professionals often rely on nonverbal gestures, such as smiling or remaining silent, to de-escalate tensions rather than directly confronting the authority. These practices make the root causes of ongoing problems less visible, limit opportunities for learning and improvement through problem solving, and instill latent conflicts (Panchuay et al., 2023). Overall, the acceptance of hierarchy and power differentials among Thai healthcare professionals tends to reinforce a top-down, one-way communication style that leaves little room for feedback and constructive dialogue (Areemit et al., 2021).

2. Group harmony

The Thai socio-cultural setting is deeply connected to collectivism, where individuals tend to see themselves as part of a group and place high value on group harmony (Hofstede Insights, 2021). Family is the core unit for cultivating this value. From an early age, children are taught to respect parents and elders and to consider others, which shapes a sense of gratitude and obligation

(Panthachai & Kakkaew, 2024). These values also influence healthcare professionals' teamwork and communication in both positive and challenging ways.

On the positive side, collectivism enhances group cohesion and mutual support. Thai healthcare teams often describe their interaction among team members as "working together like family". Specifically, senior nurses mentor juniors, and all members are willing to give up their own interests for collective success (Srichalerm et al., 2024). However, on the negative side, collectivism can make open discussion and shared decision-making more challenging. For example, healthcare providers often concede to family wishes in sensitive decisions, especially in advance care planning (ACP) for palliative cases (Ketchaikosol et al., 2024). From the family perspective, strong social expectations that families should protect their loved ones could lead to a behavior known as a "conspiracy of silence", where families soften, withhold, or distort vital health information from patients, resulting in treatments that go against healthcare professionals' recommendations and patients' preferences (Saimmai et al., 2022). These behaviors demonstrate that collectivist values can foster group cohesion and mutual support, yet could also hamper transparency of communication and patient-centered care. Recognizing both sides of group harmony is significant for developing more culturally sensitive approaches to care planning in Thailand (Pairojkul et al., 2023).

3. Perseverance and self-sacrifice rooted in a sense of duty

Perseverance and self-sacrifice are deeply intertwined Thai virtues that influence how healthcare professionals work and communicate. These values are partly linked to Buddhist doctrines that emphasized *Khanti*, or patience and bearing hardship with calmness. Since childhood, Thais are socialized to restrain their emotions, discouraging open displays of negative feelings, including frustration and fatigue, while reinforcing the belief that enduring hardship is a moral deed (Girish et al., 2025). In healthcare work settings, this tolerance for adversity translates into fulfilling responsibilities without complaint.

This can be observed in the Ministry of Public Health (2011) national policy, which emphasize that village health workers (VHWs) should "behave with diligence, endurance, determination, and sacrifice... in carrying out voluntary work". Ethnographic research further illustrates this ideal of perseverance and self-sacrifice in the field of healthcare. One VHW interviewee continued to work during the COVID-19 pandemic despite her family's pleas to quit, explaining that she felt bound by a sense of duty to the community (Cohen & Cohen, 2024). At the same time, these values also help explain why some problems remain hidden. A study found that while 74.5% of Thai medical students experienced mistreatment, only 8.2% formally reported it, fearing that doing so might be seen as selfish (Naothavorn et al., 2023).

A similar pattern is observed among Thai physicians driven by a sense of duty toward patients and colleagues. One study found that 63.8% of physicians worked despite being sick, and the percentage rose to 74.8%, 83.5%, and 94.9% under conditions of insufficient resources, high workload, and staffing shortages, respectively. Therefore, perseverance and self-sacrifice can support work resilience and commitment, yet over time, these values may contribute to exhaustion, burnout, and lower well-being and job satisfaction (Surawattanasakul et al., 2024).

In summary, teamwork and communication among Thai healthcare professionals are partly shaped by socio-cultural norms of deference to power differentials, group harmony, and perseverance and self-sacrifice rooted in a sense of duty. Deference may improve group compliance but also hinder constructive feedback between team members. Group harmony supports cohesion and unity, yet it can also reduce openness in communication and shared decision-making. Lastly, perseverance and self-sacrifice enhance work resilience in the short term, but often at the cost of presenteeism and well-being in the long run. Building on these insights, the following section outlines policy recommendations and directions for organizational psychology research.

Future Agendas for Thailand's Teamwork and Communication in Healthcare Professions

Drawing from the proposed theoretical frameworks and socio-cultural considerations, several future agendas could guide improvements in teamwork and communication among Thai healthcare professionals.

1. Flattening hierarchy

From an organizational psychology perspective, a team is defined as two or more individuals who have specific roles, perform interdependently, and adaptively interact to achieve shared goals. To complete tasks effectively, teams must possess both (1) the necessary knowledge, skills, and attitudes for working in teams (Baker et al., 2006) and (2) task interdependence, so that team members coordinate with one another, allowing them to access critical resources and produce coordinated workflows (McGuier et al., 2023). This means that healthcare professions could improve teamwork characteristics and communication by flattening hierarchical barriers to support an all-channel communication style. As a result, all team members are able to collaboratively deliver care and share responsibility at the team level (Fiscella & McDaniel, 2018). Moreover, endorsing psychological safety for team members is essential. Team leaders need to create a working climate in which each member's expertise is respected and novel input from less experienced junior professionals is trusted and welcomed (Edmondson & Bransby, 2023).

2. Strengthening multidisciplinary collaboration and team integration

Healthcare in Thailand remains challenged by siloed working practices, where departments and professions tend to operate in parallel rather than as integrated teams. Strengthening MDTs and collaboration requires adjustments, such as improved referral systems, cultural shifts that promote shared responsibility, and interprofessional training to prepare professionals to work collaboratively (Zajac et al., 2021). For instance, a study found that a shared decision-making model that integrates perspectives from multiple disciplines can provide coordinated and holistic care, eventually improving patients' quality of life (Kongkar et al., 2025). Teamwork must also extend across multi-team systems to ensure the continuity of care (Ingels et al., 2023). To further support collaboration, a useful starting point may be to nurture more positive perceptions toward collaborating with other professions, since how healthcare professionals perceive interprofessional collaboration often shapes how they actually engage in teamwork (Boonmak et al., 2024).

3. Fostering team emotional intelligence

A positive emotional climate is essential for cooperation, stress management, and sustained team performance. In Thailand, where emotional restraint and conflict avoidance are common, fostering team EI is particularly important because it allows healthcare professionals to address issues constructively rather than suppressing them. Team EI refers to the collective ability to recognize and regulate emotions, encourage respectful expression, and repair negative moods when they arise (Aritzeta et al., 2020). Structured forums such as Schwartz Rounds (sessions that provide staff with opportunities to reflect on the emotional and social dimensions of their work) exemplify how applying these practices fosters psychological safety, normalizes vulnerability, and strengthens compassion. Ultimately, fostering team EI enhances collaboration, staff well-being, and patient care (Ng et al., 2023).

Conclusion

This review article proposes using the IMOI model from organizational psychology alongside existing HSS frameworks to provide a stronger foundation for understanding the behavioral aspects of healthcare professionals. At the same time, the review introduces socio-cultural perspectives as a third framework to make considerations of teamwork and communication more contextually vivid. Three cultural determinants, including deference, group harmony, and perseverance and self-sacrifice, along with their strengths and challenges, are discussed. To move forward, interventions including reducing hierarchical barriers, integrating MDTs, and building team EI may offer ways to improve teamwork and communication mediators within the IMOI model, such as psychological safety, collaboration, respectful expression, and well-being. For researchers, this review highlights the importance of taking Thai socio-cultural factors into account and offers opportunities to expand understanding of teamwork and communication within healthcare contexts through organizational psychology approaches.

References

Areemit, R. S., Cooper, C. M., Wirasorn, K., Paopongsawan, P., Panthongviriyakul, C., & Ramani, S. (2021). Hierarchy, "kreng jai" and feedback: A grounded theory study exploring perspectives of clinical faculty and medical students in Thailand. *Teaching and Learning in Medicine*, *33*(3), 235-244. https://doi.org/10.1080/10401334.2020.1813584

Aritzeta, A., Mindeguia, R., Soroa, G., Balluerka, N., Gorostiaga, A., Elorza, U., & Aliri, J. (2020). Team emotional intelligence in working contexts: Development and validation of the Team-Trait Meta Mood Scale (T-TMMS). *Frontiers in Psychology*, *11*, 1-8. https://doi.org/10.3389/fpsyg.2020.00893

Baek, H., Han, K., Cho, H., & Ju, J. (2023). Nursing teamwork is essential in promoting patient-centered care: a cross-sectional study. *BMC Nursing*, *22*(1), 1-8. https://doi.org/10.1186/s12912-023-01592-3

Baker, D. P., Day, R., & Salas, E. (2006). Teamwork as an essential component of high-reliability organizations. *Health Services Research*, *41*(4p2), 1576-1598. https://doi.org/10.1111/j.1475-6773.2006.00566.x

Boonmak, P., Saensom, D., Tangpukdee, J., Ruaisungnoen, W., Chanthapasa, K., Chaibunruang, A., Kraiklang, R., Limmonthol, S., Phimphasak, C., Boonmak, P., & Boonmak, S. (2024). Perceptions and influencing factors of interprofessional collaboration in final-year health science students. *Journal of Interprofessional Care*, *38*(6), 1109-1116. https://doi.org/10.1080/13561820.2024.2401363

Cohen, A., & Cohen, P. T. (2024). Paradigm conflict: Village health volunteers and public health in Thailand. *The Asia Pacific Journal of Anthropology*, *25*(3), 251-265. https://doi.org/10.1080/14442213.2024.2357104

Edmondson, A. C., & Bransby, D. P. (2023). Psychological safety comes of age: Observed themes in an established literature. *Annual Review of Organizational Psychology and Organizational Behavior*, *10*, 55-78. https://doi.org/10.1146/annurev-orgpsych-120920-055217

Fiscella, K., & McDaniel, S. H. (2018). The complexity, diversity, and science of primary care teams. *American Psychologist*, *73*(4), 451-467. https://doi.org/10.1037/amp0000244

Girish, M., Jaroenkajornkij, N., Binson, B., & Lev-Wiesel, R. (2025). Cultural differences in revenge fantasies using drawings: A comparative study between Indians and Thais. *Asian Journal of Social Psychology*, *28*(4), Article e70051. https://doi.org/10.1111/ajsp.70051

Gonzalo, J. D., Haidet, P., Papp, K. K., Wolpaw, D. R., Moser, E., Wittenstein, R. D., & Wolpaw, T. (2017). Educating for the 21st-century health care system: An interdependent framework of basic, clinical, and systems sciences. *Academic Medicine*, *92*(1), 35-39. https://doi.org/10.1097/ACM.0000000000000951

Greer, R. C., Kanthawang, N., Roest, J., Perrone, C., Wangrangsimakul, T., Parker, M., Kelley, M., & Cheah, P. Y. (2023). The challenges and potential solutions of achieving meaningful consent amongst research participants in northern Thailand: a qualitative study. *BMC Medical Ethics*, *24*(1), 1-12. https://doi.org/10.1186/s12910-023-00991-0

Heier, L., Schellenberger, B., Schippers, A., Nies, S., Geiser, F., & Ernstmann, N. (2024). Interprofessional communication skills training to improve medical students' and nursing trainees' error communication: quasi-experimental pilot study. *BMC Medical Education*, *24*(1), 1-10. https://doi.org/10.1186/s12909-023-04997-5

Higginson, J., Hofler, L., & Hammoud, M., M. (2021). Principles of teamwork and team science. In S. Skochelak, E., M. Hammoud, M., & K. Lomis, D. (Eds.), *Health systems science* (2nd ed., pp. 127-129). Elsevier.

Hofstede Insights. (2021). *Country Comparison: Thailand*. https://www.hofstede-insights.com/country-comparison/thailand/

Hopkins, D. (2010). *Framework for action on interprofessional education and collaborative practice*. World Health Organization Geneva.

Ilgen, D. R., Hollenbeck, J. R., Johnson, M., & Jundt, D. (2005). Teams in organizations: From input-process-output models to IMOI models. *Annual Review of Psychology*, *56*, 517-543. https://doi.org/10.1146/annurev.psych.56.091103.070250

Ingels, D. J., Zajac, S. A., Kilcullen, M. P., Bisbey, T. M., & Salas, E. (2023). Interprofessional teamwork in healthcare: Observations and the road ahead. *Journal of Interprofessional Care*, *37*(3), 338-345. https://doi.org/10.1080/13561820.2022.2090526

Ketchaikosol, N., Pinyopornpanish, K., Angkurawaranon, C., Dejkriengkraikul, N., & Chutarattanakul, L. (2024). Physicians' experiences and perceptions about withholding and withdrawal life-sustaining treatment in Chiang Mai University Hospital: A cross-sectional study. *BMC Palliative Care*, *23*(1), 1-8. https://doi.org/10.1186/s12904-024-01511-6

Kongkar, R., Ruksakulpiwat, S., Phianhasin, L., Benjasirisan, C., Niyomyart, A., Ahmed, B. H., Puwarawuttipanit, W., Chuenkongkaew, W. L., & Adams, J. (2025). The impact of interdisciplinary team-based care on the care and outcomes of chronically ill patients: A systematic review. *Journal of Multidisciplinary Healthcare*, *18*, 445-457. https://doi.org/10.2147/jmdh.S497846

Kozlowski, S. W. J. (2015). Advancing research on team process dynamics:Theoretical, methodological, and measurement considerations. *Organizational Psychology Review*, *5*(4), 270-299. https://doi.org/10.1177/2041386614533586

Kozlowski, S. W. J., & Chao, G. T. (2018). Unpacking team process dynamics and emergent phenomena: Challenges, conceptual advances, and innovative methods. *The American Psychologist*, *73*(4), 576-592. https://doi.org/10.1037/amp0000245

Lazaro, I., Imanda, C., & Pranata, S. (2024). The role of cultural competence in optimizing interprofessional collaboration in older adults in Indonesia. *International Journal of Aging Health and Movement*, *6* (1), 13-22. https://www.ijahm.com/index.php/IJAHM/article/view/115

Lemieux-Charles, L., & McGuire, W. L. (2006). What do we know about health care team effectiveness? A review of the literature. *Medical Care Research and Review*, *63*(3), 263-300. https://doi.org/10.1177/1077558706287003

Marks, M. A., Mathieu, J. E., & Zaccaro, S. J. (2001). A temporally based framework and taxonomy of team processes. *The Academy of Management Review*, *26*(3), 356-376. https://doi.org/10.1111/j.1475-6773.2006.00566.x

Marlow, S. L., Lacerenza, C. N., Paoletti, J., Burke, C. S., & Salas, E. (2018). Does team communication represent a one-size-fits-all approach?: A meta-analysis of team communication and performance. *Organizational Behavior and Human Decision Processes*, *144*, 145-170. https://doi.org/10.1016/j.obhdp.2017.08.001

Mathieu, J. E., Gallagher, P. T., Domingo, M. A., & Klock, E. A. (2019). Embracing complexity: Reviewing the past decade of team effectiveness research. *Annual Review of Organizational Psychology and Organizational Behavior*, *6*, 17-46. https://doi.org/10.1146/annurev-orgpsych-012218-015106

Mathieu, J. E., Hollenbeck, J. R., Van Knippenberg, D., & Ilgen, D. R. (2017). A century of work teams in the Journal of Applied Psychology. *Journal of Applied Psychology*, *102*(3), 452-467. https://doi.org/10.1037/apl0000128

McGuier, E. A., Kolko, D. J., Aarons, G. A., Schachter, A., Klem, M. L., Diabes, M. A., Weingart, L. R., Salas, E., & Wolk, C. B. (2024). Teamwork and implementation of innovations in healthcare and human service settings: A systematic review. *Implementation Science*, *19*(1), 1-19. https://doi.org/10.1186/s13012-024-01381-9

McGuier, E. A., Kolko, D. J., Stadnick, N. A., Brookman-Frazee, L., Wolk, C. B., Yuan, C. T., Burke, C. S., & Aarons, G. A. (2023). Advancing research on teams and team effectiveness in implementation science: An application of the Exploration, Preparation, Implementation, Sustainment (EPIS) framework. *Implementation Research and Practice*, *4*, 1-16. https://doi.org/10.1177/26334895231190855

Ministry of Public Health. (2011). Regulations of the ministry of public health concerning village health volunteers B.E. 2554 (2011). Government Gazette.

Naothavorn, W., Puranitee, P., Kaewpila, W., Sumrithe, S., Heeneman, S., Van Mook, W. N. K. A., & Busari, J. O. (2023). An exploratory university-based cross-sectional study of the prevalence and reporting of mistreatment and student-related factors among Thai medical students. *BMC Medical Education*, *23*(1), 1-13. https://doi.org/10.1186/s12909-023-04462-3

Ng, L., Schache, K., Young, M., & Sinclair, J. (2023). Value of Schwartz rounds in promoting the emotional well-being of healthcare workers: A qualitative study. *BMJ Open*, *13*(4), 1-7. https://doi.org/10.1136/bmjopen-2022-064144

OECD. (2025). *Does healthcare deliver?: Results from the Patient-Reported Indicator Surveys (PaRIS)*. OECD Publishing.

Oon-arom, A., Wiwattanaworaset, P., Wiwattarangkul, T., Vadhanavikkit, P., Srifuengfung, M., Chiddaycha, M., & Wainipitapong, S. (2024). Academic difficulties, education-related problems, and discrimination among Thai gender-diverse medical students: a cross-sectional study of Thai medical schools. *BMC Medical Education*, *24*(1), 1-8. https://doi.org/10.1186/s12909-024-06018-5

Pairojkul, S., Raksasataya, A., Sorasit, C., Horatanaruang, D., & Jarusomboon, W. (2023). Thailand's experience in advance care planning. *Zeitschrift für Evidenz, Fortbildung und Qualität im Gesundheitswesen*, *180*, 85-89. https://doi.org/10.1016/j.zefq.2023.05.010

Panchuay, W., Soontorn, T., & Songwathana, P. (2023). Exploring nurses' experiences in applying AIDET framework to improve communication skills in the emergency department: A qualitative study. *Belitung Nursing Journal*, *9*(5), 464-470. https://doi.org/10.33546/bnj.2789

Panthachai, S., & Kakkaew, N. (2024). The influence of family structure on child development: A psychological study of Thai family dynamics. *Journal of Exploration in Interdisciplinary Methodologies*, *1*(6), 37–49. https://so19.tci-thaijo.org/index.php/JEIM/article/view/1185

Rabøl, L. I., Andersen, M. L., Østergaard, D., Bjørn, B., Lilja, B., & Mogensen, T. (2011). Descriptions of verbal communication errors between staff. An analysis of 84 root cause analysis-reports from Danish hospitals. *BMJ Quality & Safety*, *20*(3), 268-274. https://doi.org/10.1136/bmjqs.2010.040238

Rosen, M. A., DiazGranados, D., Dietz, A. S., Benishek, L. E., Thompson, D., Pronovost, P. J., & Weaver, S. J. (2018). Teamwork in healthcare: Key discoveries enabling safer, high-quality care. *The American Psychologist*, *73*(4), 433-450. https://doi.org/10.1037/amp0000298

Saimmai, P., Hathirat, S., & Nagaviroj, K. (2022). What challenges do Thai general practitioners and family physicians confront when discussing advance care planning with palliative care patients and families?: A qualitative study. *Journal of The Department of Medical Services*, *47*(1), 94–102. https://he02.tci-thaijo.org/index.php/JDMS/article/view/252203

Salas, E., Reyes, D. L., & McDaniel, S. H. (2018). The science of teamwork: Progress, reflections, and the road ahead. *American Psychological Association*, *73*(4), 593-600. https://doi.org/10.1037/amp0000334

Saxena, A., Davies, M., & Philippon, D. (2018). Structure of health-care dyad leadership: an organization's experience. *Leadership in Healthcare Services*, *31*(2), 238-253. https://doi.org/10.1108/lhs-12-2017-0076

Skochelak, S., E., Hammoud, M., M., Lomis, K., D., Borkan, J., M., Gonzalo, J., D., Lawson, L., E., & Starr, S., R. (2021). *Health Systems Science* (2nd ed.). Elsevier.

Srichalerm, T., Jacelon, C. S., Sibeko, L., Granger, J., & Briere, C.-E. (2024). Thai novice nurses' lived experiences and perspectives of breastfeeding and human milk in the Neonatal Intensive Care Unit (NICU). *International Breastfeeding Journal*, *19*(1), 1-10. https://doi.org/10.1186/s13006-024-00620-5

Steinmann, G., Daniels, K., Mieris, F., Delnoij, D., Van de Bovenkamp, H., & Van der Nat, P. (2022). Redesigning value-based hospital structures: a qualitative study on value-based health care in the Netherlands. *BMC Health Services Research*, *22*(1), 1-14. https://doi.org/10.1186/s12913-022-08564-4

Surawattanasakul, V., Kiratipaisarl, W., & Siviroj, P. (2024). Association between presenteeism, Associated Factors, and Outcomes among Intern Physicians in Public Hospitals during the COVID-19 Pandemic: A Cross-Sectional Study. *Medicina*, *60*(6), 1-15. https://www.mdpi.com/1648-9144/60/6/962

Van Gulik, N., Hutchinson, A., Considine, J., Driscoll, A., Malathum, K., & Botti, M. (2021). Perceived roles and barriers to nurses' engagement in antimicrobial stewardship: A Thai qualitative case study. *Infection, Disease & Health*, *26*(3), 218-227. https://doi.org/10.1016/j.idh.2021.04.003

Wang, H., Van Wijngaarden, J., Buljac-Samardzic, M., & Van de Klundert, J. (2023). Factors and interventions determining the functioning of health care teams in county-level hospitals in less affluent areas of China: a qualitative study. *Frontiers in Public Health*, *11,* 1-10. https://doi.org/10.3389/fpubh.2023.1082070

World Health Organization, OECD, & International Bank for Reconstruction and Development. (2019, Oct 10). *Delivering quality health services: A global imperative for universal health coverage*. Retrieved 8 Sep, 2025, from https://www.who.int/publications/i/item/9789241513906

Zajac, S., Woods, A., Tannenbaum, S., Salas, E., & Holladay, C. L. (2021). Overcoming challenges to teamwork in healthcare: A team effectiveness framework and evidence-based guidance. *Frontiers in Communication*, *6*, 1-20. https://doi.org/10.3389/fcomm.2021.606445

9 771906 720002

02 >