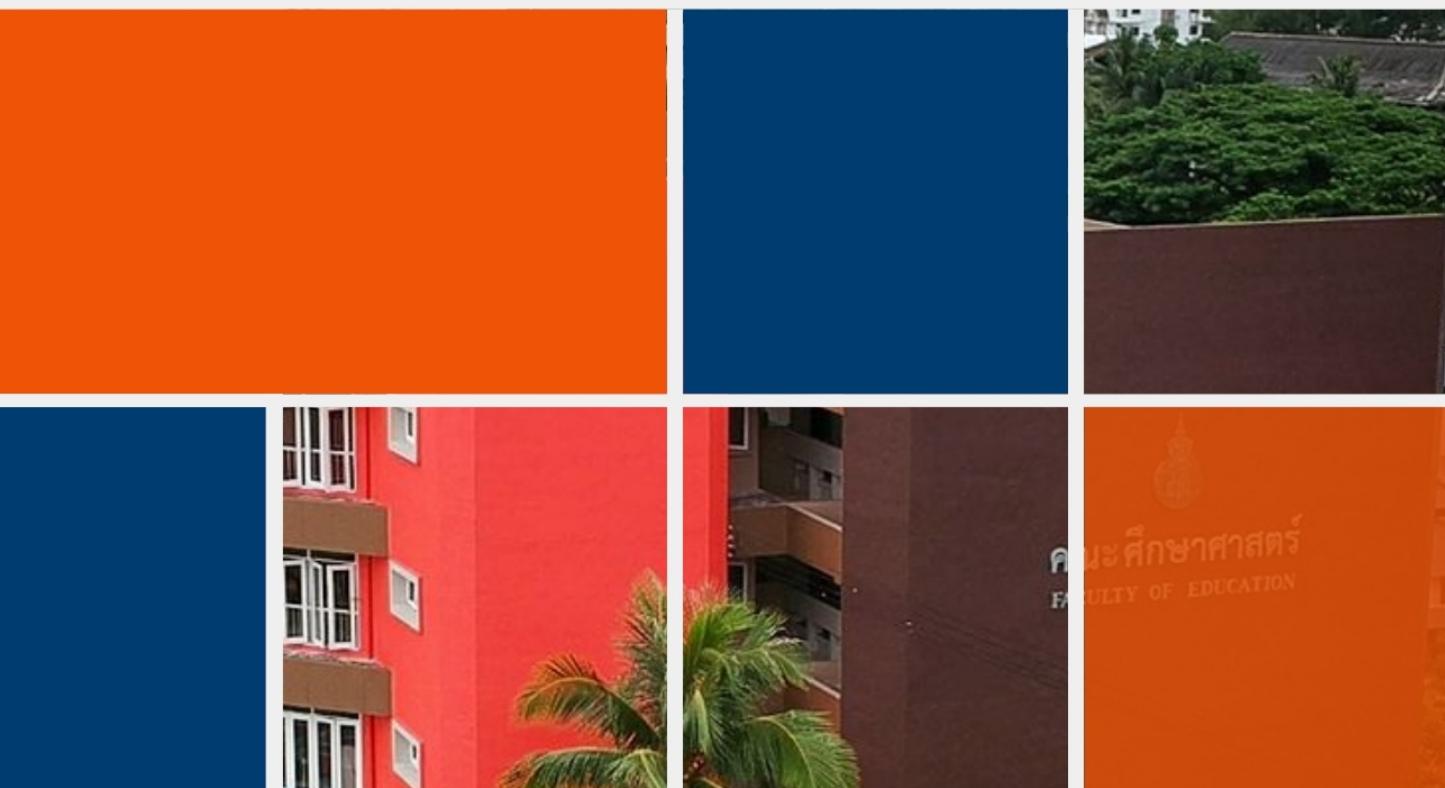




**Journal of Education, Language, and Cultural Studies  
(JELCS)**



## **Content**

### **Research Article**

#### **Learning Ecology: Using the 5MYs Learning Ecosystem Model to Enhance the Research Skills of Student Teachers at a University in the Three Southern Border Provinces of Thailand**

Tula Binlateha.....1-16

#### **Analysis of Early Childhood Education Management Perspective of Indonesian Government Regulations**

Achmad Sya'dullah, Rachma Hasibuan, Wulan Patria Saroinsong, Muhamad Sholeh.....17-30  
and Nina Aliati

#### **Intervention Fidelity and Feasibility of the Positive Psychology-Based Happiness Activity Guidebook Among Military Personnel**

Wee Mekwilai, Nichapha Rattanjan, Nachaphun Denijs and Suthee Intharachat.....31-41

#### **Effects of Input Flooding and Input Enhancement on Thai EFL Students' Essay Writing: A Mixed-Methods Study**

Saharat Laksanasut.....42-52

## Learning Ecology: Using the 5MYS Learning Ecosystem Model to Enhance the Research Skills of Student Teachers at a University in the Three Southern Border Provinces of Thailand

Tula Binlateh<sup>a</sup>

<sup>a</sup>Teaching Profession Department, Faculty of Education, Fatoni University, Thailand

Received: May 27, 2024   Revised: August 22, 2025   Accepted: September 15, 2025

### ABSTRACT

Learning ecology represents the transfer of knowledge and skills beyond traditional teacher-student interactions, engaging all elements of the learning environment. It follows the 5 stages of the 5MYS learning ecosystem model: MY CONTEXTS (identifying problems or interests based on learners' experiences), MY RESOURCES (gathering relevant knowledge and tools), MY WILL & CAPABILITY (emphasizing planning, teamwork, and work processes), MY PROCESS (applying critical thinking and assessing task feasibility), and MY RELATIONSHIPS (fostering communication and discussion in the development of research proposals). These stages support the development of authentic research skills. This study aimed to: (1) evaluate the research skills of student teachers using the 5MYS learning ecosystem model, and (2) assess their satisfaction with the learning management using the 5MYS learning ecosystem model. The participants were 17 third-year students majoring in Teaching Islamic Studies and Early Childhood Education who enrolled in the Research and Innovation Development course. The instruments included: (1) an evaluation form for assessing classroom research proposals, and (2) a satisfaction assessment form measuring perception of learning management using the 5MYS learning ecosystem model. The data were analyzed using descriptive statistics. The findings revealed that student teachers' research skills were rated at a good level, with an average score of 3.79 (0.09). The highest scores were observed in the area of data collection and planning/teamwork. Group analysis showed that 71% (5 groups) performed demonstrated a good level of performance, while 29% (2 groups) demonstrated a moderate level. Satisfaction with the 5MYS learning ecosystem model ranged from satisfied to very satisfied with the highest score of 4.82 (0.52) attributed to the instructor's role in fostering critical thinking and participation. These results highlight the effectiveness of the 5MYS learning ecosystem model in enhancing research skills and its potential for future educational applications.

**Keywords:** Ecosystem model, Learning ecology, Research skills, Student teachers, 5MYS learning

### Introduction

Learning ecology is essential for educational management, as it emphasizes not only individual components of learning but also the dynamic interactions among learners, their physical environments and social contexts. In other words, learning ecology provides a holistic perspective on education (Sangrá et al., 2019), moving beyond the traditional view of learning as a simple teacher-student interaction. Instead, it connects all the components of the learning ecosystem, fostering relationships among these components to support each other. As Assapun (2023) stated, the learning ecology involves the dynamic flow of knowledge and experiences across various elements within the system, leading to meaningful learning. This approach can create significant changes in educational management by addressing the learners' needs, allowing them to access knowledge and understand the learning process as interconnected process between individuals and their environments. It also provides opportunities for learners to recognize that learning processes vary across different contexts, encouraging them to pursue individualized learning paths and develop confidence in their own learning journeys. This contributes to promote lifelong learning and reduce educational inequality. As mentioned by the Office of the Education Council (2014), the design and development of education that involves participation from all sectors is essential for achieving comprehensive national development across all dimensions related to individuals and society.

Learning ecology is defined as a space where learning occurs (Siemens, 2007). This concept extends beyond the traditional four-walled classroom to include any environment that facilitates learning, encompassing all elements that contribute to the learning process. Research by Redecker et al., (2011), which studied the future of learning and preparing for change, found that personalized learning processes, relying on collaborative and informal learning, will be central to future education. Therefore, learning ecology addresses current learning needs by integrating all related components to facilitate knowledge creation for learners, both directly and indirectly, with teachers serving as the core of the learning ecology. A study by Kongrod (2023) on teachers' perspectives about learning ecosystems in schools found that teachers should serve as the central figures within the learning ecosystem, as they are directly responsible for managing learning process and fostering student development. However, another critical aspect of the learning ecosystem is the process itself. Resources, people, spaces, and environments, when considered in isolation, do not inherently facilitate learning. Thus, the process acts as a mechanism that enables the flow of knowledge and experiences through interactions among the various components within the ecosystem.

The 5MYs learning ecosystem model emphasizes adaptability, creativity, and collaboration, positioning it as a transformative tool in teacher education. By connecting each stage of the learning ecology to real-world teaching scenarios, the model ensures that learning outcomes are both relevant and impactful. This model is derived from Jackson's (2013) MY LEARNING ECOLOGY model, which comprises five stages: 1) MY CONTEXTS: referring to the learner's background, including education, family, preferences, and interests; 2) MY RESOURCES: encompassing the knowledge, expertise, skills, or tools that facilitate learning; 3) MY WILL & CAPABILITY: which relates to the learner's motivation and ability to develop processes through understanding and refining knowledge ; 4) MY PROCESS: involving analytical thinking to evaluate task success and manage risks, and 5) MY RELATIONSHIPS: which concerns the people, society, or living beings surrounding the learner. The research has adapted and developed the MY LEARNING ECOLOGY concept into the 5MYs learning ecosystem. In this model, learners assume the role of researchers, applying each stage of MY LEARNING ECOLOGY in alignment with the 5MYs framework to promote effective learning. According to Sawyer (2015), learning is optimized when engage in hands-on activities, actively create knowledge, collaborate with others, and employ improvisation skills.

Research skills are essential across all sectors, particularly in education, where they play a critical role in teaching and policymaking. Educators depend on research to develop effective teaching methods, while policymakers utilize it to shape educational strategies that respond to emerging trends. For example, Thailand's educational policies prioritize lifelong learning and the reduction of inequality, emphasizing research-driven approaches as a fundamental basis for educational development (Office of the Education Council, 2014). Similarly, international frameworks, such as the learning ecology model, emphasize the role of teachers as researchers, enabling them to adapt and innovate methods to address diverse classroom challenges (Redecker et al., 2011). Teachers play a critical role in meeting students' needs and aligning teaching methods with policy goals. By acting as researchers, they drive classroom transformation by identifying problems, conducting systematic investigations, analyzing data, and presenting findings (Bjorkvold & Blikstad-Balas, 2018). For student teachers, developing research skills is vital for their growth as future educators. These skills not only improve classroom management but also enhance problem-solving, adaptability, and innovation. Additionally, cultivating research skills supports the development of broader competencies such as life skills, self-esteem, communication, and collaboration (O'Donnell, 2017). This highlights the importance of integrating research training into teacher education to prepare educators for the evolving demands of the profession.

The evaluation of the research skills among student teachers at a university in the three southern border provinces of Thailand revealed unsatisfactory results, as many students did not fully recognize their dual role as both teacher and researcher. To address this gap, the application of research skills through a learning ecology approach offers multiple benefits. First, it empowers student teachers to become researchers capable of addressing real classroom issues with innovative solutions. Second, it strengthens problem-solving and critical thinking skills. Third, it promotes lifelong learning by building teachers' confidence and enabling them to continually improve their methods. Finally, it

fosters collaboration across educational ecosystems, contributing to the collective enhancement of learning environments. Thus "Learning Ecology: Using the 5MYs Learning Ecosystem Model to Enhance the Research Skills of Student Teachers at a University in the Three Southern Border Provinces of Thailand" is a classroom-based research that marks the beginning of establishing a sustainable learning ecosystem for these future educators. By assuming the role of researchers and engaging with the five-step learning ecology process, student teachers interact with all relevant component of the ecosystem, thereby strengthening their research competencies. As Fielding and Bragg (2003) stated, learning through the research process plays a crucial role in cultivating lifelong learning skills.

## **Literature review**

### *Research skills*

Translanguaging was first used pedagogically to describe a bilingual practice in the Welsh context where students receive information through the medium of one language (e.g. English) and then verbally discuss or write about this information in another language (e.g. Welsh) (García & Wei, 2009). Since then, definitions of translanguaging and translingualism have continued to evolve as scholars in various contexts employ these terms differently. Baker (2011) defined translanguaging as the "process of creating meaning, shaping experiences, gaining understanding, and acquiring knowledge through the utilization of two languages" (p. 288). However, this definition may not fully capture the complex and multifaceted nature of the concept, which extends beyond using specific languages. Canagarajah (2011) applied translanguaging to describe bilingual/multilingual encounters in language learning, highlighting how bilingual/multilingual speakers creatively improvise and interpret linguistic signs to optimize communication potential. Nevertheless, this interpretation risks reinforcing the notion of distinct languages within an individual's linguistic repertoire, potentially oversimplifying the fluidity of language use (Cenoz & Gorter, 2020). García (2009) addressed these concerns by broadening the definition of translanguaging by characterizing it as "various discursive practices in which bilinguals participate to make sense of their bilingual worlds" (p. 45). This expanded perspective emphasizes practice, with the 'trans' prefix underscoring practices that are fluid and transcend socially constructed language systems and structures. From this perspective, translanguaging is not about shuttling between the L1 and the second language (L2) as distinct entities. Instead, it focuses on the creativity of individuals deployed in navigating communication across boundaries and adapting to local situational demands.

Research skills are the ability to identify problems and the desire to solve them systematically, with clear plans and procedures to find answers and resolve issues. This aligns with Bjørkvold and Blikstad-Balas (2018), who noted that research skills involve acting like a researcher, which includes asking questions about arising problems or doubts, systematically investigating, gathering data, and analyzing and comparing findings with theoretical knowledge or initial hypotheses. Additionally, it involves presenting research or findings from studies. Thus, research skills are essential, especially for teachers, as they have a direct relationship with students, classroom, and school. Researchers have presented learning management strategies that develop research skills and promote the essence of being a researcher. Teachers play a central role in facilitating the learning process for students through the following key actions: 1) Facilitator Role: mentoring and monitoring the progress and readiness of students' work from the beginning to the end of the process. 2) Coaching and Guidance: providing guidance and recommendations, helping students construct knowledge from their own work. 3) Adaptive Teaching Methods: Teachers adjust their teaching methods by using questions that promote critical thinking and the synthesis of answers. 4) Support for Independent Research: Encouraging students to study topics of interest independently and promoting collaborative work among peers and stakeholders. 5) Promoting a Growth Mindset: Creating an atmosphere that encourages thinking and taking initiative, fostering a growth mindset, creativity, and the ability to think critically, and 6) Providing Feedback: providing reflective feedback to students on their work (Fielding & Bragg, 2003; Randall et al., 2020; Wright et al., 2019).

In Thailand, the implementation of learning management to enhance research skills is not widespread. The main approach used is research-based learning where teachers encourage students to engage in research through project work. This involves hands-on experience, direct engagement in research

processes, data analysis, synthesis of knowledge, and presentation of findings. For example, Lateh (2019) found that using research-based learning led to student achievement in statistics exceeding 80%, and significantly improved research skills post-study compared to pre-study. However, the application of learning ecology to enhance research skills remains limited. Therefore, this research attempts to expand learning management methods to foster research skills at an excellent level, requiring students to assume the role of researchers. This approach aims to develop and cultivate research skills, keeping pace with the continuously evolving body of knowledge.

### *Learning ecology*

The concept of ecology has been applied beyond the field of biology in many instances. The key aspect of the ecological perspective is its holistic view. An ecology can also be seen as a system where different subunits interact or connect with each other. Applying this ecological perspective to learning helps to visualize learning spaces, learning resources, and various components such as textbooks, teaching media, or people as parts of an ecology. Moreover, it facilitates the dynamic flow of knowledge, information, and experiences from the interactions of these components, thus forming a learning ecology (Assapun, 2023). The learning ecology represents a new dimension in learning management because the traditional perspective on learning may lead to a narrow understanding of the problems faced by students. For example, addressing students struggling with reading might focus solely on classroom teaching methods, neglecting issues stemming from family interactions (Pinitwetchakarn, 2018). Similarly, developing students to foster desirable traits might concentrate exclusively on curricular activities without considering extracurricular activities or interactions between students and parents (Nootpong, 2018). Therefore, it can be said that learning ecology opens the second, third, or fourth dimensions of learning management, moving beyond addressing learning or problem-solving in only one dimension.

A learning space is defined as a learning ecology (Siemens, 2007) that is not limited to the classroom, which consists only of teachers and students. It also encompasses information, knowledge, and experiences, which are not measured solely by outcomes or achievements. This includes knowledge about the learners themselves, philosophies, concepts, and processes of educational management, as well as resources that can motivate learning, foster positive attitudes towards learning, leadership, responsibility, socio-emotional skills, and other learner characteristics. These units enhance the competencies of learners within the learning ecology (Assapun, 2023; Jackson, 2016). Consequently, learning ecology relies on the integration and interaction of various subunits, to foster genuine learning. Research on the future of learning has found that informal collaborative learning processes, emphasizing hands-on activities, self-constructed knowledge, teamwork, and survival skills, will be crucial for future education (Redecker et al., 2011; Sawyer, 2015).

The learning ecology that supports student learning is based on Jackson's (2013) MY LEARNING ECOLOGY, which consists of five components:

- 1) MY CONTEXTS, Involves the background of the learner.
- 2) MY RESOURCES, includes knowledge, skills, or tools that facilitate learning.
- 3) MY WILL & CAPABILITY, emphasizes motivation and ability.
- 4) MY PROCESS, involves analytical thinking and task success, and
- 5) MY RELATIONSHIPS, highlights interactions with people and society.

The researcher adapted Jackson's concept into the 5MYS learning ecosystem model to comprehensively address learners' needs at each stage of the learning process. To enhance research skills, the Cheminais' (2012) four key components were integrated which included:

- 1) Searching and collecting data, which equips learners to identify and evaluate information sources.
- 2) Planning and teamwork, emphasizing collaboration in structuring research projects.
- 3) Analytical thinking, fostering critical reflection and synthesis of findings, and
- 4) Communication/ presentation, ensuring effective dissemination and application of results.

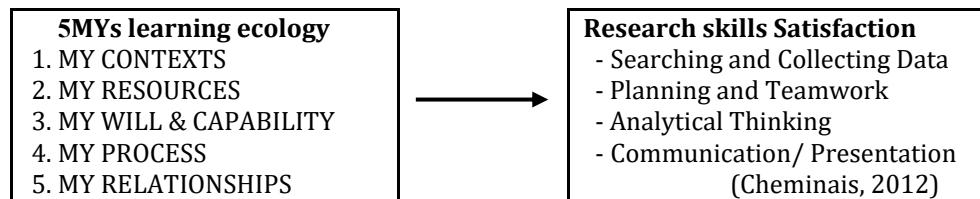
This combined approach provides a robust framework for enhancing both learning and research competencies.

## Objectives

1. To evaluate the research skills of student teachers at a university in the three southern border provinces of Thailand using the 5MYs learning ecosystem model
2. To assess the satisfaction with the learning management using the 5MYs learning ecosystem model

## Research framework

The concept of learning management using the 5MYs learning ecosystem model was studied and adapted from Jackson (2013). This model promotes students to create their own learning ecology from five components: MY CONTEXTS, MY RESOURCES, MY WILL & CAPABILITY, MY PROCESS, and MY RELATIONSHIPS, as shown in Figure 1.



**Figure 1** Research framework

## Research methodology

The research on Learning Ecology: Using the 5MYs learning ecosystem model to enhance the research skills of student teachers at a university in the three southern border provinces of Thailand classroom-based experimental research. It comprises the following details:

### Experimental design

This research utilizes a one-group posttest only design as follows:



When X represents the 5MYs learning ecosystem model

O<sub>2</sub> represents research skills

### Participants

Seventeen third-year students from majoring in Teaching Islamic Studies (13 students) and Early Childhood Education (4 students) were selected by purposive sampling to participate in this study. The participants were selected because they were enrolled in a course designed to develop research and innovation skills, aligning with the objectives of the 5MYs learning ecosystem model. Their experiences as third-year education students provided a practical context to assess the model's impact on research skill development.

### Research procedures

The researcher conducted the study in two phases: 1) the implementation phase of using the 5MYs learning ecology and 2) the post-implementation phase of the 5MYs learning ecology.

1. The implementation phase of using the 5MYs learning ecology. The researcher organized the teaching and learning process using the 5MYs learning ecosystem model, which is adapted from MY LEARNING ECOLOGY of Jackson's (2013), as shown in Figure 2. The 5MYs learning ecosystem model was created with students taking on roles similar to classroom researchers, as illustrated in Figure 3. The details are as follows:

1) MY CONTEXTS involves students' interests in events or occurrences observed during their teaching practice and experience gained from schools, classrooms, teachers, mentors, or students. This initial process in classroom research allows students to identify problems, areas of interest, or aspects they wish to develop in the classroom through their practical experiences.

2) MY RESOURCES pertains to the knowledge, information search, and data collection needed to address their interests or solve problems arising from observed events using technology, documents, textbooks, or relevant people. This is the process of gathering information related to the problem or area of interest for their research, as well as finding methods to address these issues.

3) MY WILL & CAPABILITY relates to planning, work processes, and teamwork. Students are grouped based on similar contexts and problem-solving methods, with no more than three students per group. This step involves collaborative work, division of tasks, responsibilities, and defining the research scope to address classroom issues.

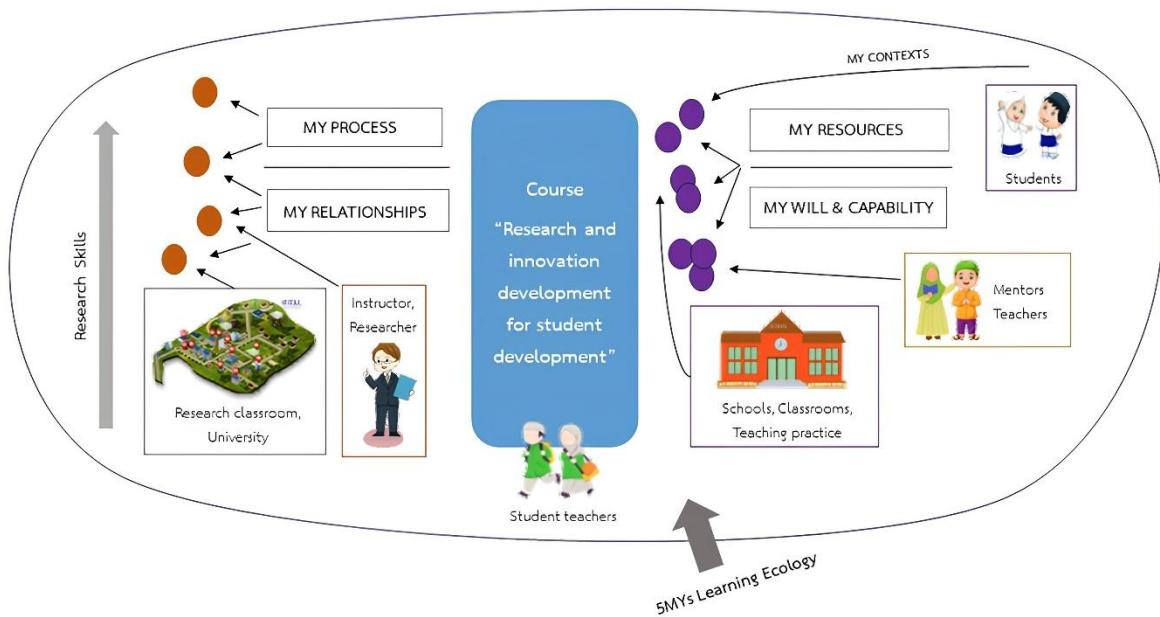
4) MY PROCESS involves analytical thinking about the feasibility of classroom research to address the identified problems, the relationship between variables, and research methodologies. This step includes brainstorming at every stage of the research to clearly outline the research direction and writing the research proposal.

5) MY RELATIONSHIPS deals with communicating or presenting classroom research to fellow students, teachers, experts, and addressing questions about the research. This step involves students presenting their research to peers, teachers, and interested parties, as well as answering any questions that arise.

All steps in learning ecology used the research classroom in the course "Research and innovation development for student development" as the center of the learning ecology, with the instructor as a researcher to observe the students' classroom research projects.



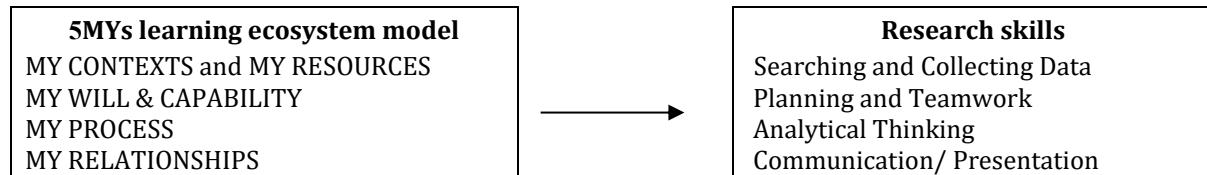
**Figure 2 MY LEARNING ECOLOGY**



**Figure 3** 5MYs learning ecosystem model

## 2. The post-Implementation phase of the 5MYs learning ecology

This phase involves evaluating the research skills of teacher students at a university in the three southern border provinces of Thailand in four areas according to Cheminais (2012), which aligns with the 5MYs learning ecosystem model as follows:



The research skills of teacher students were assessed based on their classroom research proposals, as well as their satisfaction with the learning management using the 5MYs learning ecosystem model.

### *Instruments*

The research instruments consist of two types, as follows:

1. Evaluation form for the classroom research proposals of teacher students. It includes four areas: Searching and collecting data, Planning and teamwork, Analytical thinking, and Communication/ presentation. A rubric score is used for evaluation as shown in Table 1, with a score range of 1-5 for each area, totaling 20 points.

2. Assessment form for satisfaction with learning management using the 5MYs learning ecosystem model. This form comprises two parts: part 1 is general information, and part 2 is the learning management using the 5MYs learning ecosystem model, divided into three areas: Research process, Course content and learning management, and Overall satisfaction. A 5-point Likert scale is used, with the levels being very satisfied, satisfied, neutral, unsatisfied, and very unsatisfied.

The instruments were reviewed by three experts, refined based on their feedback, and validated using the Item-Content Validity Index (I-CVI), with items selected that had a value of 1.00.

**Table 1** Rubric scoring criteria for the evaluation of classroom research proposals

| Score | Searching and collecting data  | Planning and teamwork   | Analytical thinking  | Communication/presentation  |
|-------|--|---|--|---|
| 5     | Demonstrates an excellent ability to identify relevant problems or areas of interest based on teaching experience; gathers comprehensive, credible data from diverse, reliable sources | Demonstrates exceptional planning and collaboration; organizes tasks efficiently, assigns clear responsibilities, and works seamlessly with peers to define the research scope. | Exhibits advanced analytical thinking; accurately identifies relationships between variables, develops a well-supported research proposal, and effectively defines research methodologies. | Presents research confidently and clearly, engaging the audience with well-organized and compelling content; answers questions thoroughly and thoughtfully. |
| 4     | Identifies relevant problems or areas of interest based on teaching experience; gathers mostly relevant and reliable data, though with slight gaps in sources or depth.                | Plans and collaborates effectively, but with some minor inefficiencies or unclear task delegation; the research scope is mostly defined.  | Demonstrates good analytical skills; identifies most key relationships and develops a logical research proposal, with minor issues in methodology or clarity.                              | Delivers a clear presentation with good organization, though some minor lapses in engagement or structure; responds to questions with sufficient detail.    |
| 3     | Identifies problems or areas of interest but may struggle to gather sufficient or fully relevant data; relies on limited sources that may lack depth or reliability.                   | Planning and teamwork are functional but inconsistent; tasks may be poorly divided or research scope is partially undefined.  | Demonstrates basic analytical thinking; some relationships are unclear, and the research methodology may be underdeveloped, leading to incomplete proposals.                               | Delivery a satisfactory presentation but lacks clarity or confidence; answers questions but may struggle to provide clear or thorough responses.            |
| 2     | Struggles to identify relevant problems or gather appropriate data; relies on sources that are largely irrelevant or unreliable, failing to address the research question.             | Minimal planning or collaboration; tasks are poorly distributed, and the research scope is unclear, leading to inefficiency in addressing classroom issues.                     | Analytical thinking is limited; struggles to define key relationships and develop a feasible research proposal. The methodology is unclear or underdeveloped.                              | Presentation lacks structure and clarity; struggles to engage the audience or answer questions adequately, often providing vague or incorrect information.  |
| 1     | Fails to identify relevant problems or areas of interest; collects little or no data, or data collected is irrelevant and unreliable.  | No evidence of planning or teamwork; tasks are disorganized, and the research scope is undefined, leaving the research process unproductive.                                    | Lacks analytical thinking; fails to identify relationships or draw meaningful conclusions; no research proposal is developed.  | Presentation is disorganized, unclear, and ineffective; does not engage the audience or fails to answer questions in a meaningful way.                      |

### *Data collection*

1. The researcher explained and conducted the learning management process using the 5MYs learning ecosystem model for students enrolled in the Research and Innovation Development course, as outlined in Table 2.

**Table 2** Learning management using the 5MYs learning ecosystem model

| Month<br>(Week) | Learning activities   | 5MYs                 | Related ecology  |
|-----------------|---|----------------------|--|
| 1 (1-4)         | Students conducted teaching practice and identified problems, areas of interest, or aspects they wished to develop in the classroom   | MY CONTEXTS          | Schools, Classrooms, Students, Teachers, Mentors, Community                |
| 2 (5-6)         | Students surveyed and analyzed problems identified during teaching practice, selected problems of interest for research, and searched for relevant information and problem-solving methods                    | MY RESOURCES         | Technology, AI platforms, textbooks, research, theses                      |
| 2-3 (7-9)       | Students were grouped based on similar problems and problem-solving methods, using teamwork to divide tasks, responsibilities, and frame the research to address classroom issues through research of student | MY WILL & CAPABILITY | Student peers, Group members, instructor, subject faculty                  |
| 3 (10-12)       | Students developed classroom research by analyzing research feasibility, the relationship between variables, research methodologies, reflective thinking, and writing classroom research proposals            | MY PROCESS           | Student peers, Group members, Research classroom, instructors, Researchers |
| 4 (13-15)       | Students presented their classroom research to peers, lecturer, researchers, experts, and answered questions  | MY RELATIONSHIPS     | Student peers, Group members, Researchers, Experts                         |
| 4 (16)          | Evaluation of research skills and satisfaction assessment   |                      |  |

2. Evaluate the research skills of teacher students and assess their satisfaction with the learning management using the 5MYs learning ecosystem model.

#### *Data analysis*

The data analysis process was divided into two main parts, which are the evaluation of research skills and the assessment of satisfaction with the learning management using the 5MYs learning ecosystem model. The research skills were assessed in four areas, including searching and collecting data, planning and teamwork, analytical thinking, and communication/presentation. Each area was scored on a 5-point rubric. The average scores were calculated and interpreted using the following criteria as slightly modified from the previous studies (e.g., Jaturanon, 2011; Khetchonprathan & Noumnorn, 2021):

- 4.51 - 5.00: Excellent level of research skills
- 3.51 - 4.50: Good level of research skills
- 2.51 - 3.50: Moderate level of research skills
- 1.51 - 2.50: Fair level of research skills
- 1.00 - 1.50: Needs improvement in research skills

For the assessment of satisfaction, the score was assessed using a 5-point Likert scale, ranging from 1 (very unsatisfied) to 5 (very satisfied). The average scores and standard deviations were calculated for each item, and the results were interpreted as follows:

- 4.51 - 5.00: Very satisfied
- 3.51 - 4.50: Satisfied
- 2.51 - 3.50: Neutral
- 1.51 - 2.50: Unsatisfied
- 1.00 - 1.50: Very unsatisfied

## Findings

The research on Learning ecology: using the 5MYs learning ecosystem model to enhance the research skills of teacher students at a university in the three southern border provinces of Thailand was presented in two parts:

### 1. Evaluation of the research skills of student teachers using the 5MYs Learning Ecology

The 5MYs learning ecosystem, where students assumed the role of classroom researchers, resulted in the creation of seven classroom research projects. This was achieved by grouping students who presented similar classroom problems and solutions during the MY WILL & CAPABILITY stage. However, these classroom research projects serve as preliminary proposals that students will further develop during their fourth year, including data collection, data analysis, and conclusion stages. The researcher presents two examples of classroom research proposals: one from an Early Childhood Education (ECE) student, as shown in Figure 4, and one from a Teaching Islamic Studies (TIS) student, as shown in Figure 5.

**The Concentrate training in ADHD Children Using Islamic Integrated Creative Activity for Students in kindergarten 3**

**Principles and Rationale**

The National Education Act B.E. 2562 (1000), as amended (No. 2) B.E. 2565 (2002), states in Chapter 2, Rights and Duties in Education, Section 10, Paragraph 2, that "Education for individuals with physical, mental, intellectual, emotional, social, communication, and learning disabilities, including those with physical impairments, disabilities, those who are unable to care for themselves, those without guardians, or those who are underprivileged, must be provided with the right to receive special basic education." Attention-Deficit Hyperactivity Disorder (ADHD) is the most common psychiatric disorder found in children (Kidzone for Teens, 2018). It results from dysfunction in brain function, leading to behavioral abnormalities in self-control. The three primary symptoms of ADHD are:

1. Inattention – being easily distracted and unable to stay still.
2. Hyperactivity – being restless and unable to stay still.
3. Impulsivity – acting hastily without thinking. These symptoms are more pronounced compared to other children of the same age and significantly impact daily life and social activities (American Psychiatric Association, 2014).

Creative arts serve as activities that encourage children to create works using various materials, allowing them to express their thoughts and emotions through these materials. Such activities instill a sense of enjoyment and pride in their work. Upon completing their creations, children also develop an appreciation for art. For example, when a child draws a picture of home life, they choose aspects that interest them and use colors to create shapes on paper. The process is enjoyable, and upon completion, they feel a sense of accomplishment and motivation for their artwork. (Sukhothai Thammathirat Open University, 1996). Therefore, in order to increase the attention span of children with ADHD, the researcher has integrated Islamic elements into all activities. Examples include: drawing activities on Islamic dress code, paper crumpling activities related to halal food, learning, cutting, and pasting activities on Prophet Muhammed's (PBUH) life, clay modeling activities to create mosques, and crafting activities related to fruits.

A study by Hanaphong Sontur and Sugarpicho Pyachomnirakul found that craft-based learning activities significantly improved children's attention span at the .05 statistical level. This finding aligns with Nittaya Chantarak (2012) research, which concluded that craft activities enhance attention and focus in learning and task performance.

**Objectives**

1. To study the behavior of children with ADHD and design a set of Islamically integrated creative activities for preschool children in Kindergarten 3
2. To analyze changes in ADHD behavior scores after using the Islamically integrated creative activity set for preschool children in Kindergarten 3

**Scope of the Research**

**Population**

The population consists of 60 preschool children with ADHD in Kindergarten 3, under the jurisdiction of Pattani primary educational service area office 1

**Sample**

The sample includes 15 kindergarten 3 students with ADHD, selected through purposive sampling

**Variables**

- Independent Variable: The Islamically integrated creative activity set for improving preschool children's attention span
- Dependent Variable: The attention-related behaviors of the students

**Duration:** One academic semester

**Data Analysis Results**

**Chapter 1:** Analysis of the quality of early childhood mediation experiences through creative Islamic-integrated activities using percentages, mean, and standard deviation.

**Chapter 2:** Comparative analysis of early childhood behavior after training with creative Islamic-integrated activities using t test statistics

**Expected benefits**

1. A set of Islamically integrated creative activities designed to enhance attention span in preschool children with ADHD in Kindergarten 3
2. A practical guideline and structured model for improving attention span in Kindergarten 3 children, which can be adapted for broader application

**Instruments**

1. A set of 5 creative activities designed to enhance attention span in preschool children
2. Five lesson plans for conducting the creative activities, each session lasting 40 minutes
3. An observation checklist to assess children's attention span during the activities, consisting of 5 items per lesson plan, totaling 25 items

**Islamically Integrated Creative Activity Training Set for Enhancing Preschoolers' Attention Span**

Drawing Activity: Islamic Art

Paper Crumpling Activity: Halal Food

Tear, Cut, and Paste Activity: Prophet Muhammed's (PBUH) Life

Craft Activity: Fruit

Clay Modeling Activity: Mosque

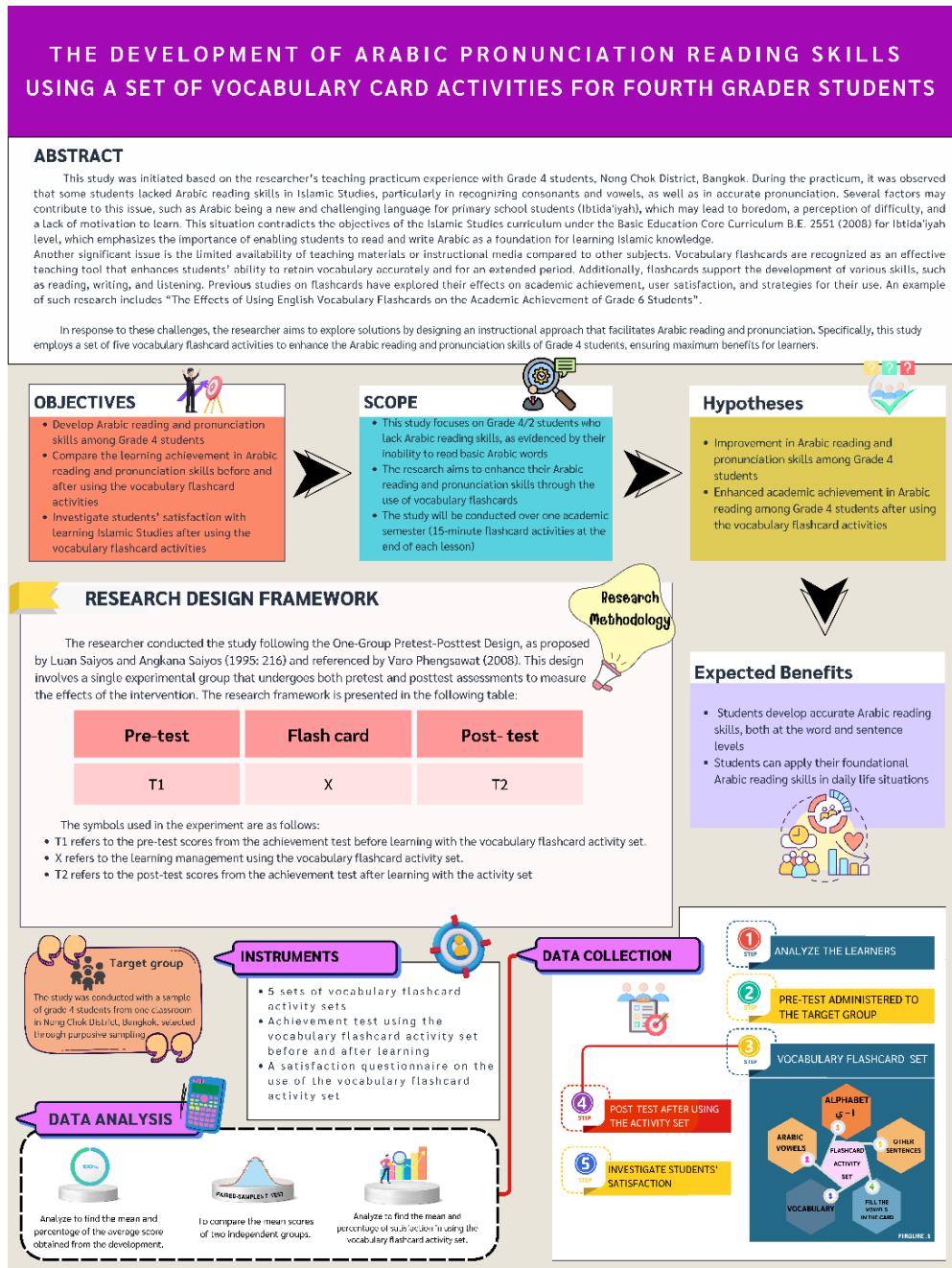
**Related Literature:**

- The National Education Act B.E. 2542 [Amendment No. 2] B.E. 2545 specifies in Section 10, Paragraph 2, under Chapter 2, Rights and Duties in Education.
- Attention-deficit hyperactivity disorder (ADHD) (American Psychiatric Association, 2014).
- Creative arts as activities (Sukhothai Thammathirat Open University, 1996).
- Janakarun, N. (2012) found that craft activities lead to improved focus in learning and work.

**Figure 4** Classroom research proposals of students majoring in Early Childhood Education (ECE)

From Figure 4, the student developed a classroom research topic after a one-month teaching practicum with Early Childhood Education students. With an interest in improving the concentration of children with ADHD, the student collaborated with group members to brainstorm ideas, review relevant literature, and examine related studies. They concluded that a set of Islamic integrated creative activities, which include activities that promote concentration while incorporating Islamic elements, could effectively enhance the concentration of ADHD children. The student then collaborated with group members to develop the classroom research proposal and engaged in reflective thinking, resulting in the presented research proposal. Additionally, Figure 5 illustrates the

classroom research proposal of a Teaching Islamic Studies student. Recognizing the importance of reading Arabic as a foundational skill for Muslim students to perform daily religious practices such as Solat and to read the Quran, the student aimed to develop Arabic language skills using a set of flashcard activities. This was derived from a literature review, discussions, and searching, leading to the creation of a classroom research proposal that the education students can further develop.



**Figure 5** Classroom research proposals of students majoring in Teaching Islamic Studies (TIS)

The evaluation results of the research skills from the classroom research proposals of student teachers using the 5MYS learning ecosystem model (categorized by area), as shown in Table 3, reveal that the student teachers' research skills are at a good level, with an average score of 3.79 (0.09). When considering each area, it was found that the research skills in each area are also at a good level. The highest average score is in the area of Searching and Collecting Data, with an average of 4.00 (0.58). This is followed by Planning and Teamwork, Communication/Presentation, and Analytical Thinking, with average scores of 3.86 (0.69), 3.71 (0.49), and 3.57 (0.53), respectively.

**Table 3** Evaluation results of classroom research proposals of teacher students using the 5MYS learning ecosystem model, Classified by area

| Research skills               | Mean (SD)   | Level of research skills |
|-------------------------------|-------------|--------------------------|
| Searching and Collecting Data | 4.00 (0.58) | Good                     |
| Planning and Teamwork         | 3.86 (0.69) | Good                     |
| Analytical Thinking           | 3.57 (0.53) | Good                     |
| Communication/ Presentation   | 3.71 (0.49) | Good                     |
| Overall research skills       | 3.79 (0.09) | Good                     |

Additionally, the researcher presents the evaluation results of the research skills from the classroom research proposals of student teachers using the 5MYS learning ecosystem model (categorized by group), as shown in Table 4. It was found that the research skills of the students are at a good level in 5 groups, accounting for 71 percent, with average scores between 3.51 and 4.50. Furthermore, the research skills of the students are at a moderate level in 2 groups, accounting for 29 percent, with average scores between 2.51 and 3.50.

**Table 4** Evaluation results of classroom research proposals of teacher students using the 5MYS learning ecosystem model, Classified by group

| Score range | Frequency (Group) | Percentage | Level of research skills |
|-------------|-------------------|------------|--------------------------|
| 3.51-4.50   | 5                 | 71         | Good                     |
| 2.51-3.50   | 2                 | 29         | Moderate                 |

## 2. Satisfaction with the learning management using the 5MYS learning ecosystem model

The satisfaction with the learning management using the 5MYS learning ecosystem model of student teachers at a university in the three southern border provinces of Thailand is at a satisfied to very satisfied level, as shown in Table 5.

**Table 5** Mean and standard deviation (SD) of satisfaction with learning management using the 5MYS learning ecosystem model

| Statements   | Mean (SD)   | Interpretation |
|--|-------------|----------------|
| 1. The learning management using the 5MYS learning ecosystem model helps students understand research content easily.  | 4.71 (0.58) | Very satisfied |
| 2. The learning management using the 5MYS learning ecosystem model promotes students' analytical thinking skills.  | 4.65 (0.61) | Very satisfied |
| 3. The content and learning activities align with students' interests and aptitudes.   | 4.71 (0.58) | Very satisfied |
| 4. The learning management using the 5MYS learning ecosystem model promotes research skills among students.  | 4.64 (0.49) | Very satisfied |
| 5. The instructor has the characteristics of a researcher.   | 4.82 (0.52) | Very satisfied |
| 6. The instructor is well-prepared and designs lessons with dedication and responsibility towards learning activities.   | 4.76 (0.56) | Very satisfied |
| 7. The instructor allows students to express their opinions, ask questions, critique constructively, and participate in learning activities.                             | 4.82 (0.52) | Very satisfied |
| 8. The instructor provides information and recommends additional resources for students to conduct self-study.   | 4.71 (0.58) | Very satisfied |
| 9. The classroom atmosphere is warm and cooperative, emphasizing collaboration over competition, making students happy and valuing their opinions and thought processes. | 4.76 (0.56) | Very satisfied |
| 10. Students enjoy (feel like) conducting research.  | 4.47 (0.72) | Satisfied      |
| 11. Overall satisfaction with the learning management using the 5MYS learning ecosystem model.   | 4.76 (0.56) | Very satisfied |

From Table 5, it is evident that the highest level of satisfaction with learning management using the 5MYS learning ecosystem model among student teachers was observed in two questions: 1) The instructor has the characteristics of a researcher, and 2) The instructor allows students to express their opinions, ask questions, critique constructively, and participate in learning activities, both scoring an average of 4.82 (0.52). Following closely are the following questions: 1) The instructor is well-prepared and designs lessons with dedication and responsibility towards learning activities, 2) The classroom atmosphere is warm and cooperative, emphasizing collaboration over competition, making students happy and valuing their opinions and thought processes, and 3) Overall satisfaction with the learning management using the 5MYS learning ecosystem model, all with an average score of 4.76 (0.56). Furthermore, satisfaction with: 1) The content and learning activities align with students' interests and aptitudes, and 2) The instructor provides information and recommends additional resources for students to conduct self-study, both reflect a slightly lower and equal average score of 4.71 (0.58). Overall, satisfaction with learning management using the 5MYS learning ecosystem model is very satisfied in all questions, except for one question, where students enjoy (feel like) conducting research, which satisfaction is at a satisfied level with an average of 4.47 (0.72).

## Discussion

The 5MYS learning ecology consists of five steps: MY CONTEXTS, MY RESOURCES, MY WILL & CAPABILITY, MY PROCESS, and MY RELATIONSHIPS. In this model, students take on the dual role of researchers and teachers, identifying classroom problems, gathering information from various sources, collaborating in teams, developing classroom research, and presenting their findings. This process resulted in seven classroom research proposals, showcasing the model's ability to enhance research skills. By actively engaging in the research process, students gain a comprehensive understanding of research methodologies, empowering them to drive the learning ecosystem and develop critical research capabilities. As Fielding and Bragg (2003) noted, learning through research fosters lifelong skills, while Sawyer (2015) emphasized that active engagement, collaboration, and improvisation lead to optimal learning outcomes. The 5MYS learning ecosystem model goes beyond traditional classroom teaching by integrating all interconnected components of the learning ecosystem, thereby promoting the development of authentic research skills. However, its implementation revealed several limitations. The study was context-specific, conducted with a single cohort of third-year student teachers at a university in the three southern border provinces of Thailand, which may limit the generalizability of the findings to other educational settings. Additionally, the single-semester timeframe may have constrained the comprehensive development of certain skills, particularly those requiring advanced critical thinking. Despite these limitations, the 5MYS learning ecosystem model demonstrates strong potential for fostering meaningful learning and research skills in student teachers, warranting further exploration and adaptation in diverse contexts.

The research skills of student teachers, as evaluated through their classroom research proposals, were rated at a good level. Teaching practice allowed student teachers to immerse themselves in classroom environments, sparking curiosity and a drive to innovate. This aligns with a study conducted by Phongampai (2008), that teachers, as researchers, significantly influence classrooms through research, benefiting both teaching and learning processes. Among the evaluated skills, searching and collecting data received the highest average score. This reflects the extensive use of learning ecology components, particularly the "MY CONTEXTS" and "MY RESOURCES" stages. During their one-month practicum, students identified issues or interests, gathered data, and explored strategies to address classroom problems using a range of resources, including technology and literature. These findings echo Phongampai (2008) conclusion that access to resources and time directly supports classroom research. Conversely, analytical thinking had the lowest average score, likely due to the complexity of tasks such as analyzing research feasibility, understanding variable relationships, and developing methodologies. This challenge aligns with Puripanya (2007) observation that limited understanding of research methodologies discourages teachers from conducting classroom research. To address this gap, activities that develop a clear and practical understanding of research methodologies are essential. Such efforts will encourage student teachers to engage in classroom research, ultimately enhancing teaching quality and equipping future teachers with robust research skills.

The satisfaction with the learning management using the 5MYs learning ecosystem model among student teachers at a university in the three southern border provinces of Thailand was rated at a very satisfied level. This was due to the instructor's characteristics, such as embodying the traits of a researcher and creating opportunities for students to express opinions, ask questions, engage in constructive criticism, and participate in learning activities. These aspects received the highest average scores, highlighting the critical role of the instructor in fostering a reflective and collaborative learning environment. The instructor's facilitation not only mirrors the researcher qualities that students are expected to develop but also encourages active participation, which is essential for effective learning management. Redecker et al., (2011) found that personalized learning processes that rely on collaborative and informal learning are a key to future education. Therefore, the 5MYs learning ecosystem model is an effective method of learning management that leverages every component of the learning ecosystem to foster learner-driven education. However, the enjoyment of conducting research was rated at a lower, satisfied level. This likely reflects challenges related to students' limited understanding of research methodologies and the complexity of analytical thinking, which scored lowest in the research skill evaluation. This suggests that students perceive research as challenging and intricate, requiring additional support. To address this, integrating research-based learning into the 5MYs learning ecosystem model could enhance both understanding and enjoyment of research. Lateh (2019) demonstrated that combining theoretical and practical teaching, along with research article writing, improved students' achievement and comprehension of research processes. Such an approach could foster deeper engagement, leading to better research outcomes and greater satisfaction in future implementations.

The 5MYs learning ecosystem model effectively enhances student teachers' research skills by integrating real-world teaching experiences with structured problem-solving, teamwork, and critical thinking. The model supports lifelong learning and equips future educators with practical skills for addressing classroom challenges. Theoretically, it advances the concept of learning ecology as a holistic and dynamic approach. However, the lower scores in analytical thinking highlight the need for additional activities to strengthen higher-order thinking and research methodologies. Future studies should explore long-term implementation in diverse contexts, using larger samples and pre-test/post-test designs to validate and generalize the findings. These insights underscore the importance of research-based teacher education in preparing educators for evolving challenges in education.

## Conclusion

The research on Learning Ecology: Using the 5MYs learning ecosystem model to enhance the research skills of student teachers at a university in the three southern border provinces of Thailand. The present study aimed to 1) evaluate the research skills of student teachers at a university in the three southern border provinces of Thailand using the 5MYs learning ecosystem model, and 2) assess the satisfaction with the learning management using the 5MYs learning ecosystem model. The participants were 17 third-year students from majoring in Teaching Islamic Studies and Early Childhood Education who enrolled in the Research and Innovation Development course. The research was conducted by creating a 5MYs learning ecology consisting of MY CONTEXTS, MY RESOURCES, MY WILL & CAPABILITY, MY PROCESS, and MY RELATIONSHIPS. The research findings indicated that: 1) The research skills of student teachers exhibited a good level overall. When categorized by area, they were at a good level in each area, with the highest average score in searching and collecting data, followed by planning and teamwork, communication/ presentation, and analytical thinking, respectively. When categorized by group, the research skills of student teachers of 5 groups (71%) were analyzed as a good level, and 2 groups (29%) were at a moderate level. 2) Satisfaction with learning management using the 5MYs learning ecology was at a very satisfied to satisfied level. The instructor's characteristics resembling those of a researcher, and the instructor allowing students to express their opinions, ask questions, critique constructively, and participate in learning activities, had the highest average score of 4.82 (0.52). This research, conducted as classroom research, confirms that the 5MYs learning ecology enhances the research skills of student teachers and serves as a significant starting point for future studies.

## References

Assapun, S. (2023). *Ecology of learning: Space and process that learning exist*. *Journal of Learning Sciences and Education*, 2(1), 156–192. <https://so07.tcithaijo.org/index.php/JLSEd/article/view/2810>

Bjorkvold, T., & Blikstad-Balas, M. (2018). Students as researchers: What and why seventh-grade students choose to write when investigating their own research question. *Science Education*, 102(2), 304–341. <https://doi.org/10.1002/sce.2132>

Cheminais, R. (2012). *Children and young people as action researchers: A practical guide to supporting pupil voice in schools*. McGraw-Hill Education.

Fielding, M., & Bragg, S. (2003). *Students as researchers: Making a difference*. Pearson.

Jackson, N. (2013). The concept of learning ecologies. In N. Jackson & B. F. Cooper (Eds.), *Lifewide learning, education & personal development* (pp. 1–21). [https://www.normanjackson.co.uk/uploads/1/0/8/4/10842717/chapter\\_a5.pdf](https://www.normanjackson.co.uk/uploads/1/0/8/4/10842717/chapter_a5.pdf)

Jackson, N. (2016). *Exploring learning ecologies*. Chalk Mountain.

Jaturanon, J. (2011). *A study of mathematical knowledge, skills and process, and opinions about the instruction of education students majoring in mathematics* [Master's thesis, Chulalongkorn University]. Chulalongkorn University Intellectual Repository (CUIR). [https://cuir.car.chula.ac.th/bitstream/123456789/32122/1/jirarat\\_ja.pdf](https://cuir.car.chula.ac.th/bitstream/123456789/32122/1/jirarat_ja.pdf)

Khetchonprathan, P., & Noumnom, P. (2021). A study on statistical knowledge and statistical thinking of twelfth grade students in schools under the Office of the Secondary Educational Service Area in Bangkok. *An Online Journal of Education (OJED)*, 15(1), 1–11. <https://so01.tcithaijo.org/index.php/OJED/article/view/240250/164678>

Kongrod, K. (2023). Learning ecosystem of dream world: Interaction and expectation of teacher affecting ecosystem of students' development. In K. Kongtuk (Ed.), *Learning ecosystems in education* (pp. 187–228). Faculty of Learning Sciences and Education, Thammasat University.

Lateh, A. (2019). The effect of research-based learning on the achievement in statistics course and research skills of undergraduate student. *Research Methodology & Cognitive Science*, 15(2), 120–132. <https://ojs.lib.buu.ac.th/index.php/search2/article/view/6168>

Nootpong, W. (2018). *"Land and air of growth": The characteristics and the contexts of students with growth mindset: A multiple case study of middle school students in small extended educational opportunity schools under the Bangkok Metropolitan Administration* [Master's thesis, Thammasat University]. Thammasat University Theses. <https://doi.org/10.14457/TU.the.2018.7>

O'Donnell, H. (2017). *UFA young researchers and evaluators impact report*. *Journal of Extension*, 34(6). <https://www.childrensuniversity.co.uk/media/1094/ufa-report-final.pdf>

Office of the Education Council. (2014). *Thailand education development strategies*. Office of the Education Council.

Phongampai, N. (2008). *Causal factors contributing to classroom research conducting of teachers in secondary schools under the Office of Trang Educational Service Area 1* [Master's thesis, Prince of Songkla University]. PSU Knowledge Bank.

Pinitwetchakarn, S. (2018). *Study of student with reading difficulty: A case study of upper primary school student* [Master's thesis, Thammasat University]. Thammasat University Theses. <https://doi.org/10.14457/TU.the.2018.707>

Puripanya, W. (2007). *Classroom research by teachers and administrative processes of administrators to promote classroom research at Watchanpradittaram School under Bangkok Metropolitan Administration* [Master's thesis, Kasetsart University]. Digital Research Information Center.

Randall, V., Reel, D., & Smith, N. (2020). *Teachers and young researchers in action* (1st ed.). Routledge. <https://doi.org/10.4324/9780429032035>

Redecker, C., Leis, M., Leendertse, M., Punie, Y., Gijsbers, G., Kirschner, P., Stoyanov, S., & Hoogveld, B. (2011). *The future of learning: Preparing for change*. Publications Office of the European Union. <https://op.europa.eu/en/publication-detail/-/publication/248604cb-9598-48a7-adad-8ff00e061a05/language-en>

Sangrá, A., Raffaghelli, J. E., & Guitert-Catasús, M. (2019). Learning ecologies through a lens: Ontological, methodological and applicative issues. A systematic review of the literature. *British Journal of Educational Technology*, 50(4), 1619–1638. <https://doi.org/10.1111/bjet.12795>

Sawyer, K. (2015). A call to action: The challenges of creative teaching and learning. *Teachers College Record*, 117(10), 1–34. <https://doi.org/10.1177/016146811511701001>

Siemens, G. (2007). Connectivism: Creating a learning ecology in distributed environments. In T. Hug (Ed.), *Didactics of microlearning: Concepts, discourses and examples* (pp. 53–68). Waxmann.

Wright, S., Fitzallen, N., Shelley, B., & Lang, M. (2019). Inspiring the next generation of scientists: Children as researchers and storytellers. *Teaching Science*, 65(4), 11–25. <https://www.researchgate.net/publication/339340061>

## Analysis of Early Childhood Education Management Perspective of Indonesian Government Regulations

Achmad Sya'dullah <sup>a</sup>, Rachma Hasibuan <sup>b</sup>, Wulan Patria Saroinsong <sup>c</sup>, Muhamad Sholeh <sup>d</sup>  
and Nina Aliati <sup>e</sup>

<sup>abcd</sup> *Surabaya State University, Indonesia; e Universita Negeri Surabaya, Indonesia*

*Received: August 28, 2024   Revised: August 20, 2025   Accepted: September 15, 2025*

### ABSTRACT

Efforts to develop the competence and creativity of early childhood. This can be achieved, among other things, through the role of kindergarten educators in designing children's games as models for learning activities. One of the factors that determines success of implementing learning activities is that educators and the students on duty can also be influenced by the curriculum used, the learning model applied in the classroom, as well as the facilities and infrastructure available at the institution. However, you also need to know that your individual needs. Each institution has different educators, student staff and learning curricula. This is because the vision, mission and goals of each institution are also different. Purpose of this study is to identify the government regulation staff that has been implemented at Ar-rofiqoh kindergarten institution as to provide assessments and recommendations for the improvement and development of the institution. This research uses more literature on Republic Indonesia government regulations, Ministerial Regulations, and National Education Standards. The research method used is a descriptive qualitative method based on processing data sourced from field studies, interviews and literature studies. This research explains actual research without providing treatment, variable data obtained by direct interviews and observation. Of the five items employed as indicators in the analysis of Early childhood education management, Ar-rofiqoh kindergarten is for institutional structure, qualifications of educators and education personnel, curriculum, learning models and infrastructure. It is in accordance with government regulations, needs development in both human resources, also the facility resources required by the school.

**Keywords:** Management, Early childhood education, Perspective of Indonesian Government Regulations

### Introduction

In Indonesia, kindergarten is a formal institution that provides early childhood education to help develop children's potential from an early age. As formal educational institutions, kindergartens should use a curriculum that contains early childhood education objectives because kindergarten education links the family environment and the wider community, preparing children for the next level of education (Liwis, 2017) elementary school middle school and high school.

The implementation of kindergarten education aims to stimulate growth and development in all areas of early childhood. The goal of early childhood education is to provide opportunities for children to develop their competencies (Esping-Andersen, 2012). Early childhood education, in this case kindergarten, of course needs to be equipped with facilities and infrastructure or games (Sya'dullah, 2024) that allow children to play while learning (Apriyani, 2021), so that it can help develop creativity based on the child's competencies (Primawati, 2023). Efforts to develop competence and one way to develop creativity in early childhood is through the active role of educators in kindergarten (Sya'dullah, 2024) In designing children's games as a form of learning activity. (Adi, 2020). One of the factors that determines the success of implementing learning activities is the educators and also the students on duty (Sya'dullah, 2016). The quality of educators and staff at an institution is a critical factor in determining the quality of students at that kindergarten institution. The efficacy of the learning process can be determined by the quality of instruction provided to students enrolled in kindergarten institutions.

The success of implementing learning activities in kindergarten is not only influenced by educators who interact directly with children. However, the success of implementing learning activities in kindergarten can also be influenced by the curriculum used (Damayanti R. A., 2022) the learning model applied in the classroom, as well as the facilities and infrastructure available at the institution (Kurniawan, 2017). Preparing a curriculum that suits children's needs, using appropriate learning models, and supporting facilities and infrastructure can of course influence the success of implementing activities in kindergarten institutions. However, you also need to know that your individual needs Each institution has different educators, student staff and learning curricula (Nafisa, 2023). This discrepancy can be attributed to the divergent vision, mission, and objectives inherent to each institution. A study was conducted by researchers at the Ar-Rofiqoh kindergarten institution, located in Taman Subdistrict, Sidoarjo Regency, East Java, on educational management analysis. The study encompassed an examination of the qualifications of educators and teaching staff, the curriculum structure, the learning models employed, and the facilities and infrastructure available at the community-managed private institution.

## **Literature review**

This research uses more literature on Republic of Indonesia Government Regulations, Ministerial Regulations, and National Education Standards. Meanwhile, there are only a few theories of management, teaching and early childhood development, including:

### *a. Early childhood education Management*

Early childhood education program management, namely management of the establishment of early childhood education (legality) and management of repairing/improving early childhood education (improvising existing early childhood education management) (Amperawati, 2023). The minimum requirements for early childhood education management (Rohmat, 2017) are:

- 1) Early age students (0-6 years)
- 2) Legal entity organizers and early childhood education managers
- 3) Early childhood education educators and staff
- 4) Educational facilities and infrastructure
- 5) Generic menu (curriculum)
- 6) Has a program of play-learning and teaching activities and
- 7) Available funding sources for educational implementation or operations.

In early childhood education management, there is a service orientation in the form of health and nutrition growth, intelligence and psychological, social and attitude emotional, religion and spiritualization (Juwita, 2020; Rahayu, 2018; Miranti, 2021). This aims to ensure that educated young children can have learning experiences, optimal brain development, healthy physical growth, positive psychosocial development. The substance of early childhood education management includes (Damayanti, 2019; WHO, 2020): personnel or HR management, curriculum (menu) playing and learning activities then student management, institutional financial management, and public relations management as well as infrastructure management and human resource management is a process of dealing with various problems within the scope of teachers, employees, school principals and other workers to be able to support the activities of an organization or company in order to achieve predetermined goals.

Other crucial aspects are curriculum development (the 'menu' of play and learning activities), student management, institutional financial management, public relations management, and infrastructure management. The effective integration of these components is vital for creating a nurturing and stimulating environment that supports the comprehensive development of young children. The foundational understanding of ECE management, as articulated by Amperawati (2023), emphasizes a dual focus: establishing legally compliant institutions and continuously improving existing management practices. This theoretical framework is directly supported by practical requirements, such as those outlined by Rohmat (2017), which list essential components like legal entities, qualified staff, adequate facilities, and a relevant curriculum. These minimum requirements are not merely administrative hurdles but are deeply rooted in the theoretical understanding of what constitutes a conducive learning environment for young children. Therefore, the successful integration of these

management components, as demonstrated in effective ECE institutions, is a practical application of established theoretical models, validated by the observed positive outcomes in previous research.

***b. Early Childhood Learning***

Principles of Early Childhood Learning (Sobel, 2008; Bruce, 2012) The following is an explanation:

**1) Goal Oriented**

Every learning activity between teachers and students is very important because learning is a purposeful process. The success of a learning strategy can be measured if students achieve the goals that have been set. Therefore, teachers must first determine learning objectives before providing services to students, such as making daily, weekly or monthly activity plans which are usually called lesson plans. In a lesson plan, apart from determining activities and materials, it is also necessary to determine the objectives of the activities.

**2) Activity**

Learning is not only about memorizing facts or information, but also about taking action to gain new experiences. Therefore, learning strategies must be able to encourage students to carry out various trials and play with new things, including activities of a psychological nature such as mental activities.

**3) Individualistic**

Learning aims to develop each individual student. Therefore, the standard of success should be measured based on the standard of teacher success. The higher the standards applied, the higher the quality of the learning process.

**4) Integrity**

Learning does not only focus on developing cognitive abilities but must also include affective and psychomotor aspects. Therefore, learning strategies must integrate the development of all these aspects. For example, the discussion method not only encourages students' intellectual abilities, but also encourages them to be honest, considerate, and so on. In Government Regulation no. 19 of 2005 Chapter IV Article 19, it is stated that the learning process must be carried out in an interactive, inspiring, fun, challenging and motivating way for students to participate actively, take the initiative, be creative and be independent in accordance with their talents, interests and physical and psychological development.

**5) Interactive**

Interactive means that teaching is not only about conveying knowledge from teachers to students, but also about organizing an environment that can stimulate children to learn. Through this interaction process, children can develop both mentally and intellectually.

**6) Inspirational**

Inspirational means that every student is encouraged to try and do new things by getting information and solving their own problems. Therefore, teachers must provide opportunities for students to act and think according to their inspiration.

**7) Fun**

Fun learning means that the learning process for students must be free from fear and tension. Teachers need to create a pleasant learning atmosphere by arranging an attractive, healthy, clean and aesthetic play environment. This includes environmental planning, good ventilation, and the use of colors and relevant learning media to motivate students.

**8) Challenging**

Challenging learning aims to stimulate students' thinking abilities, encouraging optimal brain function. This can be done through activities involving various natural play materials such as leaves, clay and mud, which enable children to think intuitively and exploratively. Teachers must also be able to motivate students to think before drawing conclusions.

## 9) Motivation

Motivation is an internal drive within students to act or do something. This urge appears when the child feels he needs it. Therefore, teachers must be able to show the importance of experience and learning materials for students' needs, so that they learn not just to get grades or praise, but because they are driven by curiosity that suits their needs.

The principles of early childhood learning, as articulated by Sobel (2008) and Bruce (2012), collectively forge a robust and holistic framework for nurturing young children's development. This framework begins with Goal-Oriented learning, emphasizing that every activity must have a clear, purposeful objective, ensuring educators meticulously plan to achieve specific developmental milestones. This intentionality then seamlessly transitions into the principle of Activity, advocating for hands-on, experiential engagement where children actively explore and construct knowledge rather than passively receiving it. Crucially, this active learning is tailored to the individual child, embodying the Individualistic principle, which recognizes and caters to each child's unique pace and needs, measuring success by the educator's ability to facilitate personalized growth. Furthermore, true early childhood education embraces Integrity, meaning it doesn't solely focus on cognitive development but holistically integrates affective and psychomotor aspects, fostering well-rounded individuals in line with Indonesian government regulations. This comprehensive approach is delivered through Interactive environments, where children are stimulated to learn through dynamic engagement with peers, materials, and educators, promoting mental and intellectual growth. To truly inspire, learning must be Inspirational, encouraging children's innate curiosity, allowing them to explore new ideas, and solve problems independently, thereby fostering a sense of agency. A key component of this success is ensuring learning is Fun, creating a joyful, fear-free atmosphere that naturally motivates children to participate and explore. This enjoyment is often coupled with being Challenging, where activities are designed to stimulate critical thinking and optimal brain function through intuitive and explorative tasks, pushing children to think deeply. Ultimately, all these elements converge to cultivate genuine Motivation, an internal drive born from curiosity and a perceived need for knowledge, ensuring children learn not for external rewards but for the sheer joy of discovery and personal relevance. Together, these nine principles create a powerful pedagogical blueprint for effective and meaningful early childhood education in Indonesia.

### *c. Early Childhood Development*

Early childhood development in the process of development, children develop gradually, where each stage has different developmental tasks and needs (Anderson, 2003; Daelmans, 2017). Development is a continuous process and is the result of the interaction of many factors, both internal and external. Child development factors (Blackwell, 2014; Fitri, 2020) that is:

- Internal factors: genetic factors, gender factors, temperament factors
- External factors: social status, number of family members, order of children in the family, parenting patterns, education.

Each child reaches a stage of development with different results because each stage of development has its own uniqueness (Pratiwi, 2017). These child development characteristics are based on guidelines from the Directorate of Teachers and Education Personnel for Early childhood education, under the auspices of the Directorate General of Teachers and Education Personnel, Ministry of Education and Culture. (Khairi, 2018) that is:

Early Childhood Development Table

| Age 0 - 3 Months  | Age 3 - 6 Months   |
|---|--|
| <ol style="list-style-type: none"> <li>At 6 weeks of age, babies can begin to lift their heads.</li> <li>At the age of 3 months, babies begin to try to reach objects around them.</li> <li>The baby begins to respond to sound and touch.</li> <li>Babies begin to notice faces, objects, and repeating patterns.</li> <li>Babies begin to follow the movement of objects with their eyes.</li> <li>Babies begin to explore their surrounding environment.</li> <li>The baby starts to grasp.</li> <li>The baby raises the head and chest when in the prone position.</li> </ol> | <ol style="list-style-type: none"> <li>At the age of 4 months, babies can begin to turn over.</li> <li>At the age of 5-6 months, babies begin to touch and reach for objects around them that attract their attention.</li> <li>Babies begin to show basic emotions such as sadness, happiness and annoyance, following the expressions of those around them.</li> <li>The baby begins to react to the surrounding environment.</li> <li>Babies start to whine when they hear sounds such as a voice, a ringing toy, or a doorbell, and will look for the source of the sound by turning their head and looking in the direction of the sound.</li> <li>The caregiver can follow and direct the baby so that communication continues.</li> </ol> |
| Age 6 - 9 Months  | Age 9 - 12 Months  |
| <ol style="list-style-type: none"> <li>Start learning to sit.</li> <li>Able to lift the head and direct it towards the source of the sound.</li> <li>Starting to recognize his own name.</li> <li>Interested in grabbing objects that are within reach.</li> <li>Grasping and shaking objects around him.</li> </ol>  | <ol style="list-style-type: none"> <li>Pull yourself to standing with help.</li> <li>Walk while holding on.</li> <li>Clap the hands.</li> <li>Putting objects in the mouth.</li> <li>Scratching your head.</li> </ol>  |
| Age 12 - 18 Months  | Age 18 - 24 Months   |
| <ol style="list-style-type: none"> <li>Show interest in worship activities, such as imitating worship movements and reading prayers.</li> <li>Can sit alone without assistance.</li> <li>Start walking a few steps without help.</li> <li>Trying to imitate words and sounds.</li> <li>Start saying sentences consisting of two words.</li> </ol>   | <ol style="list-style-type: none"> <li>Able to stand on tiptoes and jump slowly.</li> <li>Walk more upright step from heel to toe, and avoid obstacles in your path.</li> <li>Run with more confidence and fall less often.</li> <li>Can squat for a long time while playing.</li> <li>Begin to understand feelings of shame.</li> </ol>   |
| Age 2 - 3 Years   | Age 3 - 4 Years  |
| <ol style="list-style-type: none"> <li>Walk more steadily</li> <li>Starting to be able to run</li> <li>Starting to jump</li> <li>Begins to be able to climb stairs with help</li> <li>Can throw the ball without having to turn the body</li> <li>Starting to be able to open doors and zippers</li> </ol>  | <ol style="list-style-type: none"> <li>Able to go up and down stairs</li> <li>Walk on a straight line</li> <li>Jump 0.3 meters</li> <li>Throw the ball with a slight turn of the body</li> <li>Catch the ball with your chest</li> <li>Pedaling a bicycle</li> <li>Eat independently</li> </ol>  |

| Age 4 - 5 Years   | Age 5 - 6 Years   |
|---|---|
| <ol style="list-style-type: none"> <li>1. Able to go up and down stairs using alternate legs</li> <li>2. Walk on a circular line</li> <li>3. Walk on the balance board and run</li> <li>4. Jump a longer distance</li> <li>5. Throw the ball with a slight twist of the body more efficiently</li> <li>6. Catch the ball with your hands</li> </ol> | <ol style="list-style-type: none"> <li>1. Walk smoothly on the balance board</li> <li>2. Run</li> <li>3. Jump alternately using both feet</li> <li>4. Jump greater distances and heights</li> <li>5. Throw and catch the ball more efficiently</li> </ol> |

This perspective aligns with classic developmental theories, such as those proposed by Piaget (cognitive stages) or Erikson (psychosocial stages), which suggest predictable sequences of development, even if the pace varies. Crucially, the text highlights that development is a continuous process resulting from the intricate interaction of numerous internal and external factors. This interactive model moves beyond simplistic views, acknowledging that a child's trajectory is not solely predetermined by biology or environment, but rather by the ongoing interplay between them.

The internal factors listed genetic factors, gender, and temperament (Blackwell, 2014; Fitri, 2020) represent the biological and innate predispositions a child brings to their development. Genetic factors influence physical attributes, predispositions to certain talents or health conditions, and even aspects of cognitive processing. Gender can influence developmental pathways due to biological differences and societal expectations. Temperament, an individual's innate behavioral style and emotional response, significantly shapes how a child interacts with their environment and how others respond to them. These internal characteristics form the raw material upon which external influences act. Conversely, external factors encompass the environmental and social contexts that significantly mold a child's development. Social status, for instance, can impact access to resources, quality of nutrition, healthcare, and educational opportunities. The number of family members and birth order can influence sibling dynamics, individual attention from parents, and opportunities for social learning. Most profoundly, parenting patterns ranging from authoritative to permissive have well documented effects on a child's socio-emotional, cognitive, and behavioral outcomes. Finally, education, both formal and informal, provides structured learning experiences, exposes children to diverse perspectives, and fosters the acquisition of skills essential for future success.

The text's assertion that "each child reaches a stage of development with different results because each stage of development has its own uniqueness" (Pratiwi, 2017) underscores the principle of individual uniqueness. While there are general developmental milestones, the precise timing and expression of these milestones will vary greatly among children. This highlights the importance of individualized approaches in early childhood education, acknowledging that a "one-size-fits-all" method is ineffective. The mention of guidelines from the Directorate of Teachers and Education Personnel for Early Childhood Education in Indonesia further indicates a national commitment to understanding and supporting these diverse developmental pathways within a standardized framework, likely aiming to balance common goals with respect for individual differences.

### Research methodology

The research method used is a descriptive qualitative method through observation, interviews and literature studies (Guest, 2013). This research was conducted at Ar-rofiqoh Kindergarten, Sidoarjo Regency, East Java Province, Indonesia.

The present study's participants comprised a total of eight individuals, including principals, class teachers, administrative staff, and security and cleaning staff. A comprehensive observational study is conducted to assess the qualifications of educators and education personnel, the structure of the curriculum, the learning models employed, and the facilities and infrastructure. Interviews are employed to elicit more profound and comprehensive information. They are also utilized to collect physical evidence, such as photographs, videos, and works, and documentary evidence, which serves to reinforce the findings from observations and interviews. The observation instruments and

interview guides were meticulously designed in accordance with educational management and teaching theories applicable to early childhood education, taking the form of indicators capable of quantifying the research variables. Documentation tools employ a camera to capture photographs or videos.

The research stages start with preparation which includes research permission from the Ar-rofiqoh kindergarten institution, then preparing research instruments, interview guides, then providing training to students who help with research for observation, and after that the implementation stages are carried out periodically for one semester or four months for observations and interviews. This is for observation of learning activities, such as: how is the learning model, what media is used? if there is something you want to know more deeply, an interview is conducted. The next stage is data analysis, which includes observation data analyzed using descriptive methods (Hartati, 2020) to identify the qualifications of educators and education personnel, curriculum composition, learning models used, as well as facilities and infrastructure, while interview data is analyzed qualitatively using thematic analysis techniques (Rozali, 2022) to find themes. -main themes related to teacher experiences and views; and documentation data is used to support and validate findings from analysis of observation and interview data. After that is the Reflection Stage, which includes reflecting with the teacher to evaluate the research results and discussing the implications of the findings; and prepare a research report that includes main findings, analysis, and recommendations for improvement at the Ar-rofiqoh kindergarten institution.

To ensure the validity and reliability of the data, several steps were taken: Content Validity, i.e. the instruments were consulted with Early childhood education experts (Azis, 2022; Wicaksono, 2022) to ensure that they measured the intended concept, and Construct Validity, i.e. testing of the instrument was carried out on a small sample before the main research to ensure that the instrument could be used well (Wicaksono, 2022; Jailani, 2023) Instrument Reliability, namely Inter-rater Reliability, the consistency of observation assessments between researchers and teachers is checked through inter-rater reliability tests (Dewi, 2019; Fitri, 2020). This research complies with the principles of research ethics which include obtaining written consent from the school and the children's parents before the research begins. Guaranteeing the confidentiality of participant data by not including their identities in the research report providing clear and complete information about the aims and procedures of the research to all participants and provided participants with the opportunity to withdraw from the study at any time without consequences.

## **Findings and Discussion**

Arrofiqoh Kindergarten is a private school under the administration of a community organization in the village. Tanjungsari, Sidoarjo Regency. Given its religious foundation, the institution's activities are deeply rooted in religious values. The subsequent section will present a series of research findings concerning the administration of early childhood education at Ar-Rafiqoh Kindergarten:

### *1. Institutional Structure Management*

The success of an organization is greatly influenced by its organizational structure, as explained by McShane and Glinow, organizational structure includes work subunits, communication patterns, work flows and formal powers that regulate various activities (McShane, 2014). The function of the organizational structure is to facilitate the implementation of organizational tasks (Aripriyanti, 2014). With a clear structure, individuals will better understand the objectives of their tasks, communication will become more efficient because procedures and objectives have been established, and decision making will become more focused. Education also requires an organizational structure because this structure functions as a tool for grouping jobs based on individual abilities, skills, or talents. (Angelya, 2022).

The role of the school principal in approving the formation of the organizational structure by the school foundation includes the task of dividing work into sub-tasks, because the principal cannot run school programs alone. With an organizational structure, school principals can more easily recruit teachers and administrative staff, as well as help them understand the responsibilities of each job (Karwanto, 2020). Based on the institutional structure above, it can be seen that the Ar-rofiqoh

kindergarten Institution has a complete management structure consisting of the Head of the Foundation, Principal, Committee, Administrative Staff consisting of; Treasurer and Administrative Staff , Playgroup Teacher and Accompanying Teacher, Class A Teacher and Accompanying Teacher, Class B Teacher, and also Security Staff , but there is no accompanying teacher in class B. Class A for children aged 4 to 6 years and class B for children aged 6 to 8 years.

At Arrofiqoh Kindergarten, the principal holds full responsibility for managing and developing the institutional structure, overseeing daily operations, formulating learning activities, supervising human resources, and guiding decision-making. The role includes setting institutional goals and vision, maintaining educational quality, designing the annual work program, compiling the curriculum, providing facilities and infrastructure, preparing the budget, managing extracurricular activities, and offering guidance to teachers and parents. Regular monthly meetings are held, and the institution follows its own procedures for structuring the organization. This approach allows the institution to determine its needs, autonomy, and scope of work, with minimal interference from the foundation.

The organizational structure of Arrofiqoh Kindergarten consists of a chairman, secretary, treasurer, and operational implementers, including the principal, teacher council, administrative staff, and parent or committee representatives. The institution consistently adheres to legal mandates regarding member roles and duties, with responsibilities aligned to its AD/ART (basics and bylaws). Educators focus on fostering creativity and nurturing students' potential in a supportive and engaging environment, while administrative staff manage general administration, finance, and infrastructure under the supervision of key officers. Noncompliance with established duties is addressed through internal consultations, joint discussions, and, if necessary, formal complaints and legal measures.

This institution has established a special committee or group with the specific purpose of making decisions. The committee's involvement in decision-making processes is facilitated by the implementation of a parent committee deliberation stage, which engages kindergarten teachers in the decision-making process concerning school policies, special events, and other matters that necessitate the involvement of parents. The relationship between teachers, parents, and administrative staff within the institutional structure is well established at this institution. For instance, effective communication with parents must be firmly established. This includes the development of a curriculum and the implementation of activities involving teachers and administrative staff. Additionally, it is essential to ensure parent participation in decision-making processes within the institution. The financial bureau plays a pivotal role in the management of the Ar-Rofiqoh Kindergarten Institution's financial resources. For instance, in the process of budgetary allocation, financial disbursement and collection, as well as financial statement generation.

## *2. Management of Educator and Education Personnel Qualifications*

According to Law of the Republic of Indonesia Number 20 of 2003 concerning the National Education System, there are two technical terms, namely educators and education personnel. Educators are defined as educational personnel who meet the requirements for the aforementioned designations, including teachers, lecturers, counselors, tutors, instructors, facilitators, and other relevant roles within their respective fields. These professionals are involved in the implementation of educational programs and activities. Concurrently, the term "educational staff" denotes members of the community who are dedicated and appointed to facilitate educational initiatives.

Educators are considered professionals. (Latiana, 2019) Educators are tasked with planning education, implementing the learning process in the classroom, and evaluating student learning outcomes (Dewi I. &, 2020). Apart from that, educators also provide guidance and training, then conduct classroom action research and disseminate it to other teachers (Muldayanti, 2019). Educational personnel have the task of managing school administration, managing the school, thinking about school development (Hilal Mahmud, 2015), supervising school residents and school management and providing technical services to support the educational process in the education unit. The ideal early childhood education institution is one that boasts a diverse staff, including the head of early childhood education (director), teaching staff (teachers), teaching assistants (teacher

assistants), administrative staff (administrative staff), as well as other support staff such as psychologists, pediatricians, food service personnel, and transportation personnel. From the perspective of educational staff, the authority to supervise and develop early childhood education activities, including the professional development of the educational staff under their supervision, is held by the head or director of early childhood education. This development should commence with the recruitment of prospective early childhood education teachers, wherein the head or director of early childhood education plays a pivotal role in the selection of prospective teachers with a scientific background in early childhood education, ensuring the quality of learning. In addition, the screening process for early childhood education teachers facilitates the implementation of ongoing coaching.

An observational study at Arrofiqoh Kindergarten in Ngampel, Tanjungsari, Taman District, Sidoarjo, East Java, recorded eight staff members: one principal, five class teachers, one administrative officer, and one security guard. The institution lacks certified educators and staff with qualifications exceeding their current positions. Of the teachers, two hold bachelor's degrees in Early Childhood Education, four hold degrees in other fields, and one is a high school graduate, thereby meeting legal qualification requirements. The institution supports educators in pursuing higher qualifications, provided they remain committed to their duties. Teachers may hold dual roles if agreed upon and without disrupting responsibilities. Educator backgrounds have shown no significant impact on student learning outcomes, though slight differences are noted in lesson planning.

### *3. Curriculum Management*

Law Number 20 of 2003 concerning the National Education System defines the curriculum as a set of plans and arrangements related to objectives, materials and learning materials, as well as methods used as guidelines in organizing learning activities to achieve certain educational goals. Based on this definition, the curriculum has two dimensions: first, plans and arrangements regarding objectives, materials and learning materials; second, the methods applied in learning activities (Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 36 of 2018). Early childhood education standards aim to ensure the quality of education at an early age by providing a basis for educational stimulation that supports children's physical and emotional growth and development according to their stage of development. This standard aims to optimize children's development in a comprehensive and integrative manner, as well as preparing the formation of children's attitudes, knowledge and skills. National education standards cover various aspects, namely content standards, processes, graduate competencies, educational staff, facilities and infrastructure, management, financing and educational assessment (Purba, 2022).

The curriculum devised by the Ar-rofiqoh kindergarten institution is designed to promote children's holistic development, including immunizations administered every two months. Moreover, the institution's curriculum is meticulously crafted to promote diversity among children. This is achieved through the periodic evaluation of the curriculum, which is then adapted to align with the unique needs and abilities of each child. The approach and learning resources for Ar-Rafiqoh kindergarten children are characterized by a thematic and scientific framework, incorporating environmental learning resources, instructional videos, and literature. In addition to the aforementioned points, the pedagogical approach employed by the institution's curriculum is predicated on the utilization of the principle of play as a medium for early childhood education. Examples of activities include the creation of Educational Game Tools (EGT) according to the ongoing theme. In order to facilitate the integration of play activities with children, it is essential that educators convey the rules of play by providing concrete examples of how to engage in these activities. The children, in turn, are expected to emulate the behaviors demonstrated to them by their teachers. In addition to utilizing the assistance of EGT, this institution employs learning technology to maintain its relevance in a rapidly evolving environment. This learning technology encompasses diverse instructional methods, including the use of YouTube videos and interactive games facilitated through PowerPoint and Wordwall, which are accessible online.

The curriculum includes a Standard Operating Procedure (SOP) designed to promote habituation, with the objective of facilitating children's social and emotional development. Arrofiqoh Kindergarten has established a set of SOP, which include the following:

1. When children enter the school environment, educators prepare themselves to welcome them.
2. Educators adjust their position so that they are at the same level as the child's height, make eye contact, say hello, greet the child by name, ask for news in a friendly manner, and try to use the language or habits of the child's family.
3. Show affection, such as giving a hug or rubbing the head, if the child feels comfortable and educators respect the child's feelings if they do not feel comfortable.
4. Educators let children store their personal items in the places provided independently.
5. Educators carry out simple physical and health examinations of children while chatting with children about light matters in the morning, such as checking body temperature, wounds, eyes, nails, and so on.

Arrofiqoh Kindergarten's pedagogical approach encompasses methodologies for evaluating students' developmental progression. These assessments are administered at the conclusion of each semester to promote creativity within a multifaceted developmental program. Parental involvement is imperative, particularly in activities such as entrepreneurship projects, where children engage in buying and selling with parental support in preparing goods. The curriculum may undergo revisions in accordance with directives issued by the central government, necessitating prompt adaptation by educational institutions. In order to address these changes, Arrofiqoh Kindergarten conducts a variety of initiatives, including needs analyses, consultations, teacher training, initial testing, and continuous evaluation. The institution employs a multifaceted approach to ensure curriculum relevance, including the following: routine assessments, collaboration with early childhood and child psychology experts, parental engagement, experiential learning, stimulating environments, teacher development, and collaborative learning practices.

#### *4. Learning Model Management*

A learning model is a systematic framework or approach used to plan, implement and evaluate the learning process (Diana, 2023). It includes various elements such as teaching methods, evaluation strategies, teacher and student interactions, and use of learning resources. These models are designed to achieve specific learning goals and can vary in their approach and philosophy (Yogica, 2020), allowing for flexibility in accommodating learning styles and learner needs (Nafi'ah, 2021). Some examples of learning models include cooperative learning models, project-based learning, problem-based learning, and many more. Learning model refers to the framework or approach used to design, manage and implement the learning process. It includes methods, strategies, and principles that guide how knowledge and skills are conveyed and understood by student (Sulaiman, 2024).

Each learning model may emphasize these aspects in different ways, depending on the philosophy and desired learning objectives. The learning process is a series of interactions between teachers and students aimed at transferring knowledge, skills and values. It involves conveying information, interaction, understanding, and evaluation to achieve understanding and mastery of the subject matter. The Ar Rofiqoh Kindergarten learning model uses learning processes such as learning while playing, oriented towards child development, oriented towards children's needs, child-centered, active learning, oriented towards developing character values. Apart from that, Ar Rofiqoh Kindergarten uses learning methods such as role-playing methods, storytelling methods, learning methods, singing methods, conversation methods, field trip methods. Of course, the most important thing is a learning method. The learning methods used by Ar Rofiqoh Kindergarten include the classical learning model, group learning model with safety activities, learning model based on activity angles, area learning model, central learning model. In carrying out various learning systems as described above, Ar Rofiqoh Kindergarten establishes three activity steps to implement these principles, such as initial activities, core activities and finally closing activities.

Arrofiqoh Kindergarten applies a group learning model that fosters positive student responses, such as improved material comprehension and active participation. Challenges include sustaining attention and maintaining group cohesion, which require teacher preparedness, effective media use, and classroom management. Implementation involves thorough material preparation, such as providing thematic learning resources or prayer equipment for religious activities. Successful learning is supported by qualified educators, a conducive environment, a well-aligned curriculum, and adequate infrastructure. Parental involvement, active learner participation, formative evaluation, supportive school policies, and a safe, positive atmosphere are integral to achieving educational goals.

### *5. Facilities and Infrastructure Management*

Means are defined as all equipment used as a direct tool to achieve goals. Meanwhile, infrastructure is a tool that indirectly achieves goals (Wulandari, 2023). In the world of education, facilities and infrastructure are needed to support the learning process. Minister of National Education Regulation no. 24 of 2007 states that educational facilities are learning equipment that can be moved while educational infrastructure is the basic facility in carrying out the functions of a school. The success of a school's education program depends on the existence of facilities and infrastructure and how these infrastructures are managed (Sholeh, 2016). Based on the results of interviews with the Ar-rofiqoh kindergarten institution, it is known that all facilities and infrastructure are in good condition. None of the facilities and infrastructure at the educational institution suffered any damage, either light damage or heavy damage, so efforts to repair the infrastructure are not yet necessary. As for facilities and infrastructure.

Ar-Rafiqoh Kindergarten has several key infrastructure elements, including an indoor play area, an outdoor play area, a principal's office, children's bathrooms, adult bathrooms, children's study tables, children's study chairs, and lockers for children's work. However, there are no special rooms such as a teacher's room, an administration room, or a health room. Arrofiqoh's infrastructure is designed to support various functions. Key elements include a kitchen, prayer room, library room, activity room, parking area, washing area, storage room, and telecommunications facilities. However, there are no consultation rooms or transportation facilities. APE, or Educational Play Equipment, is an important tool in early childhood education. Arrofiqoh Kindergarten is equipped with various learning aids, including stones, leaves, musical instruments, puzzles, and blocks. It should be noted that this kindergarten provides materials such as shells and natural sand. Outdoor play equipment includes swings, slides, and monkey bars. Classroom management at Arrofiqoh Kindergarten is conducted in accordance with specific requirements and the number of students present. The adequacy of facilities can be measured by the number of classrooms, which is sufficient for four classes, the availability of chairs and tables, appropriate room size, and other factors. In an effort to promote children's outdoor activities, Arrofiqoh Kindergarten has made the provision of outdoor play equipment a key component of its educational mission.

With regard to the matter of sanitation, Ar-Rafiqoh Kindergarten has been equipped with two refuse containers for each classroom, amounting to a total of eight such containers. Arrofiqoh Kindergarten employs a two-tiered waste management system, distinguishing between dry waste and wet waste. Dry waste that has potential for reuse, such as used bottle caps, will undergo a cleaning process and subsequently be utilized as material for the fabrication of crafts or learning media. The washbasins and toilets at Ar-Rafiqoh kindergarten have been adjusted to the average height of young children. This configuration enables children to access the object with greater ease and without the need for furtive movements. Outdoor play equipment is obtained from private sources and government assistance for early childhood education. Although there are learning aids and outdoor play equipment, there are also learning aids and outdoor play equipment specifically designed for children with disabilities. From a health perspective, health units are a critical component that must be implemented by institutions, including educational institutions, to help students who are sick during the learning process. Unfortunately, the kindergarten managed by Arrofiqoh is not yet equipped with a health room. Arrofiqoh Kindergarten is only equipped with a first aid kit for providing first aid.

## CONCLUSION

The Ar-rofiqoh kindergarten Institution has a good organizational structure seen from the completeness of the teaching staff, the education they have and the neat division of tasks. Many of the teaching and education staff at this institution meet the qualifications in accordance with the technical instructions for organizing kindergartens by the directorate of early childhood education development, Ministry of Education and Culture of the Republic of Indonesia. However, none of the educators at the Ar-rofiqoh kindergarten institution have a early childhood education Professional Teacher Education (PPG) certificate from an accredited university. However, this does not affect the implementation of existing activities because they have been adjusted to the needs of the institution. The curriculum used at this institution is an independent curriculum with a thematic and scientific approach using learning resources originating from the environment, learning videos, books, and so on.

The learning models used include classical learning, group learning with safety activities, activity-based learning, area-based learning, and centralized learning using role-playing, storytelling, singing, conversation, and field trips. In terms of facilities and infrastructure, Ar-rofiqoh Kindergarten has an indoor play area and play equipment, an outdoor play area and play equipment, a principal's office, children's bathrooms, adult bathrooms, children's study tables, children's study chairs, and lockers for children's work. However, there are no teacher rooms, administrative rooms, or health rooms. Ar-rofiqoh Kindergarten also has supporting facilities and infrastructure such as a kitchen, prayer room, library room, activity room, parking area, storage room, and telecommunications network. Meanwhile, consultation rooms and transportation facilities are not yet available at this institution.

In the analysis of early childhood education management, five items are utilized as indicators. The kindergarten at Arrofiqoh is represented by three of these indicators: institutional structure, educators' and education personnel's qualifications, curriculum, learning models, and infrastructure. The initiative is in accordance with government regulations; however, further development is necessary in two key areas: human resources and facility resources, as stipulated by the institution.

## References

Adi, B. S. (2020). Implementasi permainan tradisional dalam pembelajaran anak usia dini sebagai pembentuk karakter bangsa. *Jurnal Pendidikan Anak*, 9(1), 33–39. <https://doi.org/10.21831/jpa.v9i1.31375>

Amperawati, L. S. (2023). Mengembangkan visi, misi, dan evaluasi program early childhood education. *Manajemen & Evaluasi Kinerja Organisasi: Implementasi pada Pendidikan Anak Usia Dini*, 88.

Anderson, L. M. (2003). The effectiveness of early childhood development programs: A systematic review. *American Journal of Preventive Medicine*, 24(3), 32–46. [https://doi.org/10.1016/S0749-3797\(02\)00655-4](https://doi.org/10.1016/S0749-3797(02)00655-4)

Angelya, A. A. (2022). Pengorganisasian dalam manajemen pendidikan. *Jurnal Riset Manajemen dan Akuntansi*, 2(3), 97–105.

Apriyani, N. H. (2021). Metode bermain dalam pembelajaran anak usia dini. *Raudhatul Athfal: Jurnal Pendidikan Islam Anak Usia Dini*, 5(2), 126–140.

Aripriyanti, G. N. (2014). *Pengaruh komitmen organisasi, locus of control, dan kompleksitas tugas terhadap kinerja auditor internal (Survei penelitian pada perusahaan-perusahaan BUMN di Kota Bandung)* [Doctoral dissertation, Universitas Widyaatama]. Universitas Widyaatama Repository.

Azis, D. M. (2022). Instrumen karakter peduli lingkungan pada pendidikan anak usia dini. *Jurnal Pendidikan Anak Usia Dini UNDIKSHA*, 10(1), 25–32. <https://doi.org/10.23887/paud.v10i1.42592>

Blackwell, C. K. (2014). Factors influencing digital technology use in early childhood education. *Computers & Education*, 77, 82–90. <https://doi.org/10.1016/j.compedu.2014.04.013>

Bruce, T. (2012). *Early childhood education*. Hachette UK.

Daelmans, B. D. (2017). Early childhood development: The foundation of sustainable development. *The Lancet*, 389(10064), 9–11. [https://doi.org/10.1016/S0140-6736\(16\)31659-2](https://doi.org/10.1016/S0140-6736(16)31659-2)

Damayanti, E. (2019). Konsep dasar butir instrumen penilaian akreditasi pendidikan anak usia dini. *Raudhatul Athfal: Jurnal Pendidikan Islam Anak Usia Dini*, 3(2), 134–138.

Damayanti, V. R. (2022). Manajemen kurikulum taman kanak-kanak kurikulum Islamic Montessori (Studi kasus di TK Budi Mulia Dua Sedayu Yogyakarta tahun pelajaran 2021/2022). *Jurnal Early Childhood Education Agapedia*, 6(1), 41–48. <https://doi.org/10.17509/jpa.v6i1.48098>

Dewi, A. K. (2019). Pengembangan instrumen penilaian kinerja siswa pada praktikum gambar proyeksi ortogonal. *Journal of Mechanical Engineering Education (Jurnal Pendidikan Teknik Mesin)*, 6(2), 161–167. <https://doi.org/10.17509/jmee.v6i2.21787>

Dewi, I. (2020). Analisis evaluasi kinerja pendidik early childhood education di Early Childhood Education Al Azhar Bukit Tinggi. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 4(2), 1051–1059. <https://doi.org/10.31004/obsesi.v4i2.465>

Diana, L. M. (2023). Model pembelajaran numbered head together untuk meningkatkan hasil belajar siswa. *Jurnal Ilmiah Edutic: Pendidikan dan Informatika*, 9(2), 201–211. <https://doi.org/10.21107/edutic.v9i2.20224>

Esping-Andersen, G. (2012). Child care and school performance in Denmark and the United States. *Children and Youth Services Review*, 34(3), 576–589. <https://doi.org/10.1016/j.childyouth.2011.10.010>

Fitri, M. (2020). Faktor yang mempengaruhi perkembangan moral pada anak usia dini. *Al-Athfaal: Jurnal Ilmiah Pendidikan Anak Usia Dini*, 3(1), 1–15. <https://doi.org/10.24042/ajipaud.v3i1.6500>

Fitri, R. (2020). Permainan karpet engkle: Aktivitas motorik untuk meningkatkan keseimbangan tubuh anak usia dini. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 5(2), 1186–1198. <https://doi.org/10.31004/obsesi.v5i2.754>

Guest, G., Namey, E., & Mitchell, M. (2013). *Collecting qualitative data: A field manual for applied research*. Sage.

Hartati, N. S. (2020). Manajemen program penguatan pendidikan karakter melalui pembelajaran daring dan luring di masa pandemi Covid-19 new normal. *El-Idare: Jurnal Manajemen Pendidikan Islam*, 6(2), 97–116.

Hilal Mahmud, M. M. (2015). *Administrasi pendidikan: Menuju sekolah efektif*. Aksara Timur.

Jailani, M. S. (2023). Teknik pengumpulan data dan instrumen penelitian ilmiah pendidikan pada pendekatan kualitatif dan kuantitatif. *Ihsan: Jurnal Pendidikan Islam*, 1(2), 1–9. <https://doi.org/10.61104/ihsan.v1i2.57>

Juwita, D. R. (2020). Makna posyandu sebagai sarana pembelajaran non formal di masa pandemi Covid-19. *Meretas: Jurnal Ilmu Pendidikan*, 7(1), 1–15.

Karwanto, K. (2020). Membangun iklim organisasi sekolah melalui peran kepala sekolah dalam upaya meningkatkan kinerja guru. *Inspirasi Manajemen Pendidikan*, 8(3), 285–297.

Khairi, H. (2018). Karakteristik perkembangan anak usia dini dari 0–6 tahun. *Jurnal Warna*, 2(2), 15–28.

Kozlowski, A. M. (2012). Interview and observation methods in functional assessment. In J. Luiselli (Ed.), *Functional assessment for challenging behaviors* (pp. 105–124). Springer. [https://doi.org/10.1007/978-1-4614-3037-7\\_5](https://doi.org/10.1007/978-1-4614-3037-7_5)

Kurniawan, N. (2017). Pengaruh standart sarana dan prasarana terhadap efektifitas pembelajaran di TK Al-Firdaus. *Jurnal Warna: Jurnal Pendidikan dan Pembelajaran Anak Usia Dini*, 2(2), 14–26.

Latiana, L. (2019). Peran sertifikasi guru dalam meningkatkan profesionalisme pendidik. *Edukasi*, 13(1). <https://doi.org/10.15294/edukasi.v13i1.951>

Lewis, N. W. (2017). Pengaruh model pembelajaran matematika realistik terhadap kemampuan mengenal konsep bilangan pada anak kelompok A Taman Kanak-Kanak Gugus V Kecamatan Buleleng tahun ajaran 2016/2017. *Jurnal Pendidikan Anak Usia Dini Undiksha*, 5(1), 116–126. <https://doi.org/10.23887/paud.v5i1.11403>

McShane, S. L., & Von Glinow, M. A. (2014). *Organizational behavior* (Irwin Management Series). McGraw-Hill Education.

Miranti, Y. S. (2021). Analisis manajemen pendidikan anak usia dini menggunakan metode evaluasi SWOT di Early Childhood Education IT Nur Hidayah. *Kumara Cendekia*, 9(4), 243–253. <https://doi.org/10.20961/kc.v9i4.54966>

Muldayanti, N. D. (2019). Pelatihan pembuatan proposal dan coaching clinic penelitian tindakan kelas guru IPA biologi se-Kabupaten Kubu Raya. *Buletin Al-Ribaath*, 16(1), 36–40.

Nafi'ah, Q. N. (2021). Penerapan model pembelajaran berdasarkan gaya belajar untuk anak usia dini era pandemi. *Prosiding Pengembangan Anak Usia Dini Holistik Integratif Era Covid-19* (pp. 15–22).

Nafisa, M. D. (2023). Implementasi kurikulum merdeka dalam penerapan pembelajaran berdiferensiasi di lembaga early childhood education. *Jurnal Studi Guru dan Pembelajaran*, 6(2), 179–188.

Pratiwi, W. (2017). Konsep bermain pada anak usia dini. *Tadbir: Jurnal Manajemen Pendidikan Islam*, 5(2), 106–117.

Primawati, Y. (2023). Pengembangan kreativitas seni rupa anak usia dini. *Journal of Early Childhood Studies*, 1(2), 1–10.

Purba, R. I. (2022). Strategi asesor akreditasi early childhood education dan upaya peningkatan mutu pendidikan anak usia dini. *Jurnal Golden Age*, 6(1), 128–142.

Rahayu, N. (2018). Manajemen makanan sehat di early childhood education. *Golden Age: Jurnal Ilmiah Tumbuh Kembang Anak Usia Dini*, 3(2), 65–80.

Rohmat, R. (2017). Manajemen pendidikan anak usia dini. *Yinyang: Jurnal Studi Islam Gender dan Anak*, 12(2), 299–325.

Rozali, Y. A. (2022). Penggunaan analisis konten dan analisis tematik. In *Forum Ilmiah* (Vol. 19, p. 68).

Sholeh, M. (2016). Keefektifan peran kepala sekolah dalam meningkatkan kinerja guru. *JDMP (Jurnal Dinamika Manajemen Pendidikan)*, 1(1), 41–54. <https://doi.org/10.26740/jdmp.v1n1.p41-54>

Sobel, D. (2008). *Childhood and nature: Design principles for educators*. Stenhouse Publishers.

Sulaiman, S. Y. (2024). *Metode & model pembelajaran abad 21: Teori, implementasi dan perkembangannya*. PT Green Pustaka Indonesia.

Sya'dullah, A. S. (2024). Teaching style, digital literacy, and self-efficacy on early childhood education teacher capabilities. *Jurnal Pedagogi dan Pembelajaran*, 7(1). <https://doi.org/10.23887/jp2.v7i1.75851>

Sya'dullah, A. (2016). Pengaruh latar belakang pendidikan dan motivasi guru early childhood education terhadap stres mengajar. *At-Ta'lim: Jurnal Pendidikan*, 2(2), 1–17.

World Health Organization. (2020). *Improving early childhood development: WHO guideline*. World Health Organization.

Wicaksono, A. (2022). *Metodologi penelitian pendidikan: Pengantar ringkas*. Garudhawaca.

Wulandari, A. (2023). Manajemen sarana dan prasarana dalam proses meningkatkan kemampuan belajar anak usia dini. *Significant: Journal of Research and Multidisciplinary*, 2(1), 128–135. <https://doi.org/10.62668/significant.v2i01.680>

Yogica, R. M. (2020). *Metodologi pembelajaran: Strategi, pendekatan, model, metode pembelajaran*. IRDH Book Publisher.

## Intervention Fidelity and Feasibility of the Positive Psychology-Based Happiness Activity Guidebook Among Military Personnel

Wee Mekwilai<sup>a</sup>, Nichapha Rattanjan<sup>b</sup>, Nachaphun Denijs<sup>c</sup> and Suthee Intharachat<sup>d</sup>

<sup>ab</sup> Bureau of Mental Health Academic Affairs, DMH, Thailand; <sup>c</sup> Panyapiwat Institute of Management, Thailand and <sup>d</sup> Office of Medical Service, Office of Defense Logistics of the Permanent Secretary for Defense, Thailand

Received: March 16, 2025   Revised: August 13, 2025   Accepted: September 15, 2025

### ABSTRACT

Military personnel face significant mental health challenges, with high rates of work-related stress. This study evaluated the fidelity and feasibility of a Positive Psychology-Based Happiness Activity Guidebook for military personnel experiencing stress. A mixed-methods process evaluation was conducted with 211 military personnel from the Office of the Permanent Secretary for Defense in Thailand. The intervention, based on the PERMA model, comprised ten structured activities across multiple sessions. Data collection included attendance tracking, facilitator evaluations, participant interviews, and direct observations. The intervention demonstrated exceptional program fidelity, with attendance rates of 97.2-100% and complete activity adherence. Participants reported significant benefits in stress management and professional growth. The 30-minute session format proved effective, with participants valuing the program's structured approach and practical applications. Mental health professionals noted the intervention's capacity to address unique military workplace challenges while promoting positive psychological strategies. The study provides evidence for successfully implementing a positive psychology intervention in a military setting. Key findings emphasize the importance of context-specific program adaptation, robust facilitator training, and alignment with organizational goals. Despite limitations of single-site implementation and short study duration, the research offers valuable insights into mental health support strategies for military personnel.

**Keywords:** Organizational Well-being, Positive Psychology, Program Evaluation, Stress Intervention, Military Mental Health

### Introduction

The mental health of military personnel represents a critical and complex global health concern, characterized by significant psychological challenges that emerge from the unique operational demands of military service. Epidemiological investigations have consistently demonstrated elevated rates of psychological distress within military populations, with prevalence studies indicating that 20-30% of active-duty personnel experience substantial mental health complications. A comprehensive national study conducted by Thomas et al. (2019) revealed that 25.3% of U.S. military personnel manifested significant psychological distress, a finding corroborated by international research. Notably, a targeted investigation by Rukskul and colleagues (2022) among Royal Thai Army personnel documented even more pronounced stress levels, with 31.2% reporting moderate to severe psychological strain, particularly among those deployed in geographically and operationally challenging environments.

The COVID-19 pandemic exponentially amplified existing psychological challenges across military populations globally, as evidenced by comparative study showing persistent mental health gaps in military contexts worldwide (Vermetten et al., 2014). Military organizations worldwide were compelled to assume unprecedented responsibilities, including border control and quarantine facility management, which substantially increased psychological and operational pressures on military personnel (Siripornpanich et al., 2021). These extraordinary circumstances underscored the critical need for sophisticated, evidence-based mental health interventions tailored specifically to military populations. Despite the evident necessity, the extant literature reveals a profound research deficit in

positive psychology-based interventions designed for military contexts. A systematic review by Hoge and Castro (2012) substantiated this gap, highlighting the limited research addressing mental health challenges in military settings. This paucity of research is particularly problematic, given the nuanced and intensive stressors inherent in military operational environments.

Emerging research from analogous high-stress professional domains provides preliminary insights into potential intervention strategies. (2009) demonstrated the complex psychological challenges faced by military personnel, offering insights into moral injury and potential repair strategies. Complementary research by Hoge et al. (2004) reported critical findings on mental health problems and barriers to care among military personnel. However, despite the recognized need for evidence-based psychological interventions in military contexts, few studies have implemented structured PERMA-based interventions specifically designed for military environments. This represents a significant research gap, as existing positive psychology interventions have primarily been developed and tested in civilian populations, leaving uncertainty about their applicability, cultural appropriateness, and effectiveness within the unique organizational structure and operational demands of military settings. The limited direct evidence specific to military populations necessitates rigorous investigation into how positive psychology frameworks can be systematically adapted and implemented to address the distinct psychological needs of service members.

## Literature review

The present study is situated within a robust theoretical framework synthesizing multiple established implementation science approaches. Drawing from the process evaluation guidance by Moore et al. (2015), the theoretical framework of Seligman (2011), and the qualitative research approach by Corbin and Strauss (2015), this research endeavors to conduct a comprehensive process evaluation of a Positive Psychology-Based Happiness Activity Guidebook specifically adapted for military personnel experiencing psychological stress.

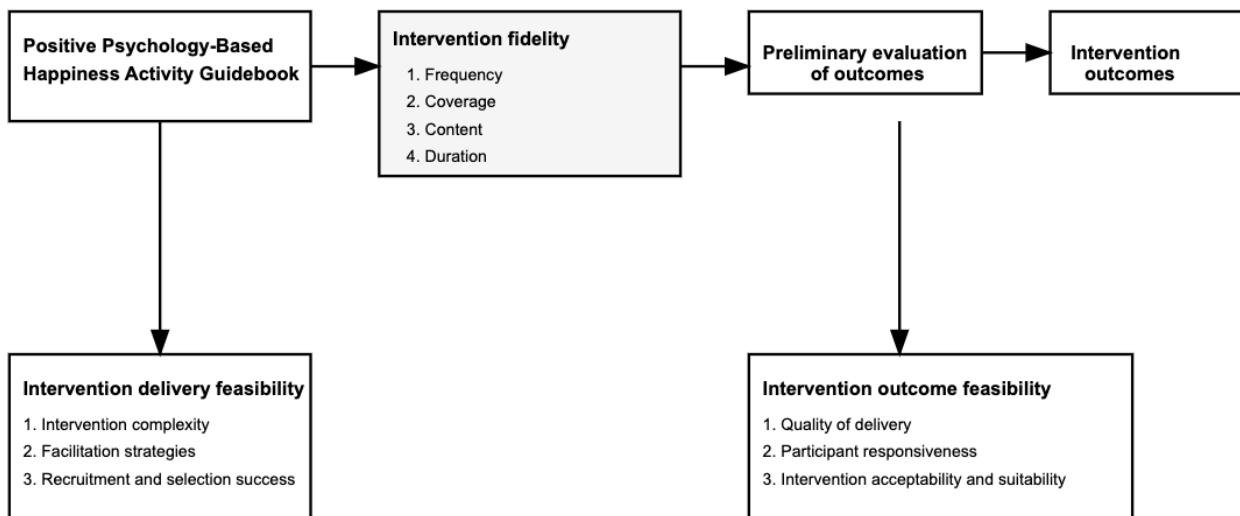


Figure 1: Conceptual framework fidelity and feasibility

The research operationalized two primary investigative domains: intervention fidelity and intervention feasibility. Intervention fidelity assessment focuses on determining the precise implementation of the guidebook, examining critical parameters including intervention frequency, content integrity, duration consistency, and implementation quality. Concurrently, the feasibility assessment explores the intervention's potential for successful implementation by critically analyzing multidimensional factors such as intervention complexity, facilitation strategies, recruitment processes, delivery quality, participant engagement, and overall intervention acceptability. By meticulously examining these interconnected dimensions, the study aims to generate nuanced insights that can inform the development of targeted, evidence-based psychological interventions for military personnel. The research seeks to bridge existing knowledge gaps and contribute to a more

comprehensive understanding of positive psychology-based approaches in high-stress military environments.

Intervention fidelity is particularly critical in military and high-stress populations due to the unique organizational culture, operational demands, and psychological vulnerabilities that may influence how interventions are received and implemented. In these contexts, deviations from evidence-based protocols can compromise effectiveness and potentially exacerbate stress-related outcomes (Carroll et al., 2007; Perepletchikova & Kazdin, 2005). The fundamental research questions guiding this investigation are twofold: First, to what extent is the Happiness Activity Guidebook delivered with fidelity to its original design? Second, how do military personnel and intervention facilitators experience and interact with the intervention process? Through a systematic and rigorous examination of these questions, the study aspires to develop more effective, contextually sensitive mental health support strategies for military populations.

## **Research methodology**

### *Intervention design*

The Positive Psychology-Based Happiness Activity Guidebook represents a comprehensive intervention structured upon Seligman's (2018) PERMA model framework. The guidebook's architectural design encompasses four substantive chapters, each serving a distinct methodological purpose: Chapter 1 establishes foundational theoretical knowledge in positive psychology; Chapter 2 delineates the target population and user demographics; Chapter 3 articulates the intervention's core conceptual content; Chapter 4 presents a meticulously designed suite of ten positive psychology activities.

The intervention systematically implemented the PERMA model's five components: Positive emotion, Engagement, Relationship, Meaning, and Achievement. Ten evidence-based activities were designed to target each component, including Gratitude Counting, Letter to Future Self, Chicken Coop Game, Where is my Flow, Fun with LEGO, Word Chain Building, Creating New World, Meaningful Cards, Tower of London Puzzle, and Who Wants to Be a Millionaire.

Group sessions included 12-15 participants and were led by trained mental health professionals. Sessions lasted 30 minutes ( $M = 27.9$  minutes,  $SD = 0.9$ , range: 27-30 minutes). Activity completion rate was 94.7%, with incomplete activities primarily due to extended participant discussions. Facilitators followed a standardized implementation manual to ensure intervention fidelity. Participants received workbooks with session summaries and take-home assignments to reinforce learning.

The intervention's facilitation team comprised five mental health professionals, each possessing a minimum of five years of specialized activity leadership experience. These facilitators underwent rigorous training conducted by the guidebook's developers, which comprehensively addressed the intervention's theoretical foundations, precise objectives, and nuanced implementation protocols. The training emphasized stringent adherence to the intervention manual, with particular focus on maintaining consistent implementation across all session components. The complete intervention timeline and data collection procedures are presented in Table 1.

### *Research setting and participants*

The study was conducted within the organizational context of the Office of the Permanent Secretary for Defense in Thailand, an environment characterized by diverse administrative and operational roles. Through convenience sampling, 211 working-age individuals between 25-55 years were recruited, selected based on specific, predefined inclusion criteria. Participant selection criteria included: continuous employment within the organization for a minimum of one year, documentation of elevated stress levels (ST5 score  $\geq 8$ ) sustained for at least one month prior to intervention, and demonstrable capacity to participate in the complete intervention protocol. The resultant sample exhibited considerable demographic heterogeneity, with representation across operational staff (22.4%), junior management (25.1%), middle management (23.2%), and senior management (29.3%). Demographic characteristics revealed a participant cohort predominantly comprised of

female professionals (59.2%), with a high educational attainment level (77.9% holding bachelor's degrees or higher). The sample's mean age was 38.3 years, with a standard deviation of 9.6, indicating a relatively mature professional population.

#### *Recruitment and preparatory procedures*

Two complementary recruitment strategies were implemented to engage potential participants. Initially, the human resources department disseminated comprehensive informational materials about the research study. Concurrently, mental health professionals conducted targeted outreach through established workplace communication channels. Potential participants underwent a systematic screening process to verify eligibility. This process incorporated structured interviews designed to assess compliance with predetermined inclusion criteria. Following initial screening, the research team provided exhaustive verbal and written study information, ensuring participants' comprehensive understanding of the intervention's scope and expectations.

All participants provided informed consent prior to intervention commencement. The research was conducted during a concentrated period from August to September 2024, with participant recruitment achieved through convenience sampling. Five mental health professionals, who demonstrated exceptional inter-rater reliability (Intraclass Correlation Coefficient=0.89), executed the intervention activities. The facilitators implemented a nuanced approach, adhering to standardized guidebook protocols while maintaining sufficient interpretive flexibility to address individual participant requirements. Pre- and post-intervention assessments utilized validated Thai-language versions of the Stress Test-5 (ST5) and Resilience Quotient (RQ-3) scales. Both instruments demonstrated acceptable internal consistency in the current sample, with reliability coefficients meeting established psychometric standards for research use. Detailed reliability analyses for both measures are reported elsewhere.

#### *Data collection*

A sophisticated mixed-methods research design was employed, integrating multiple data collection modalities: semi-structured interviews, comprehensive evaluation forms, and systematic on-site observational protocols. Interviews were strategically conducted at three critical intervention phases: initial stage, mid-point (following five sessions), and conclusion (post-tenth session).

Interview data were collected by the primary investigator (WM) and a trained research assistant. Participant interviews ranged between 15-30 minutes (Mean=22.8 minutes), while facilitator interviews, conducted post-intervention, extended 30-45 minutes (Mean=39.7 minutes). Tailored topic guides were developed to capture nuanced feasibility components, with distinct protocols for participants and instructors. Complementary data collection methods included facilitator-completed evaluation forms administered during and post-session to assess intervention fidelity. Direct observational sessions, conducted by the primary investigator, provided additional contextual insights into intervention implementation and participant engagement.

**Table 1** Assessment Tools and Methodological Framework

| Collection Strategy                                    | Assessment Focus   | Responsible Party           |
|--|--|-----------------------------|
| Initial Screening Dialogues (semi-structured)          | Participant background information, motivation factors, and anticipated program outcomes   | Researcher with participant |
| Mid-point and Concluding Discussions (semi-structured) | Participant feedback and assessment, including program effectiveness, engagement levels, and overall satisfaction  | Facilitators                |
| Progress Monitoring Forms (questionnaire)              | Session attendance tracking, protocol adherence metrics, duration of meetings, engagement indicators, resource utilization patterns, and implementation challenges | Facilitators                |
| Facilitator Feedback Sessions (semi-structured)        | Facilitator insights on participant recruitment effectiveness, teaching approaches, and participant engagement patterns  | Researcher with Instructors |
| Direct Session Monitoring (notes)                      | Program implementation quality, participant engagement levels, and identification of effective and problematic program elements                                    | Researcher                  |

### *Analytical approach*

Data analysis incorporated a sophisticated, multi-stage coding approach utilizing MAXQDA 2024 software. The analytical strategy synthesized deductive and inductive coding methodologies, drawing from Corbin and Strauss's (2015) systematic qualitative analysis framework. Deductive analysis commenced with the development of a preliminary coding framework predicated on interview guide themes. Subsequent inductive analysis followed a rigorous three-stage coding process: open coding to deconstruct textual data into discrete analytical units, axial coding to comparatively categorize these units, and selective coding to identify and synthesize meaningful thematic constructs. To ensure analytical reliability, each research team member independently coded a minimum of two transcripts. A collaborative review process facilitated framework refinement, with coding discrepancies resolved through comprehensive team discussion and consensual interpretation. Quantitative evaluation form data were processed utilizing SPSS Statistics 29, providing complementary statistical insights to the qualitative analysis.

### **Findings**

Initially, 250 people expressed interest in participating in the intervention, with 29 unable to attend initial screenings due to urgent duty, sick leave, or changing their minds. Of the remaining 221 potential participants, ten did not start the intervention because of unmet expectations or practical reasons. Ultimately, 211 individuals began the intervention across four separate groups, with demographic analysis revealing statistically comparable characteristics between stressed and non-stressed groups. The mean ages were similar ( $38.3 \pm 9.6$  years vs.  $37.4 \pm 8.8$  years,  $p=0.546$ ), and both groups showed a majority of female participants (75.2% stressed, 24.8% non-stressed), predominantly holding bachelor's degrees (77.9% stressed, 22.1% non-stressed), and occupying higher commander roles (79.1% stressed, 20.9% non-stressed). Statistical analysis using independent t-test and Chi-Square test found no significant differences across demographic variables ( $p>0.05$ ), supporting the potential generalizability of the study's findings as shown in Table 2.

**Table 2** Demographic Characteristics of participants (N = 211)

| Demographic Characteristics | Non-stressed |      | Stressed |      | p-value            |
|-----------------------------|--------------|------|----------|------|--------------------|
|                             | N            | %    | N        | %    |                    |
| <b>Age</b> (mean, SD)       | 37.4         | 8.8  | 38.3     | 9.6  | 0.546 <sup>a</sup> |
| <b>Gender</b>               |              |      |          |      |                    |
| Male                        | 16           | 18.6 | 70       | 81.4 | 0.288 <sup>b</sup> |
| Female                      | 31           | 24.8 | 94       | 75.2 |                    |
| <b>Education</b>            |              |      |          |      |                    |
| High school                 | 8            | 21.1 | 30       | 78.9 | 0.960 <sup>b</sup> |
| Bachelor                    | 27           | 22.1 | 95       | 77.9 |                    |
| Master and above            | 12           | 23.5 | 39       | 76.5 |                    |
| <b>Current position</b>     |              |      |          |      |                    |
| Operational level           | 9            | 19.1 | 38       | 80.9 | 0.086 <sup>b</sup> |
| Beginner commander          | 13           | 27.1 | 35       | 72.9 |                    |
| Middle commander            | 11           | 22.4 | 38       | 77.6 |                    |
| Higher commander            | 14           | 20.9 | 53       | 79.1 |                    |

Note: <sup>a</sup>Independent t-test, <sup>b</sup>Chi-square test

### *Program fidelity*

Table 3 details the implementation quality metrics for the Positive Psychology-Based Happiness Activity Guidebook intervention. Implemented across five groups with 211 total participants, the program demonstrated exceptional fidelity. Participation rates were remarkably high, with an average attendance of 99.3% across all sessions. While Activity 3 showed the lowest attendance at 97.2%, Activities 1, 4, 5, 8, and 10 achieved perfect 100% attendance. The intervention content was delivered with absolute adherence to manual specifications, with all activities achieving a 100% completion rate. Session durations were precisely managed, with actual delivery times ranging from 27 to 30 minutes against the target 30-minute duration. Activity 6 had the shortest duration at 27 minutes, whereas Activities 3, 5, 8, and 10 utilized the full allocated time. The consistently high attendance, complete content delivery, and meticulous time management across all activities underscore the robust program fidelity in implementing the intervention.

**Table 3** Implementation Quality Assessment

| 9<br>Measurement<br>Details | Group Size<br>Activity groups<br>(participants) | Participation<br>Attendance<br>N (%) | Adherence<br>Activity completion<br>rate (%) | Duration<br>Session timing<br>(min):<br>delivered/target |
|-----------------------------|---|--------------------------------------|--|--|
| Activity 1                  | 5 (211)   | 211 (100)                            | 100  | 28/30  |
| Activity 2                  | 5 (211)   | 208 (98.6)                           | 100  | 29/30  |
| Activity 3                  | 5 (211)   | 205 (97.2)                           | 100  | 30/30  |
| Activity 4                  | 5 (211)   | 211 (100)                            | 100  | 28/30  |
| Activity 5                  | 5 (211)   | 211 (100)                            | 100  | 30/30  |
| Activity 6                  | 5 (211)   | 209 (99.1)                           | 100  | 27/30  |
| Activity 7                  | 5 (211)   | 207 (98.1)                           | 100  | 29/30  |
| Activity 8                  | 5 (211)   | 211 (100)                            | 100  | 30/30  |
| Activity 9                  | 5 (211)   | 210 (99.5)                           | 100  | 28/30  |
| Activity 10                 | 5 (211)   | 211 (100)                            | 100  | 30/30  |

### *Program feasibility*

Program Structure and Implementation: The guidebook received positive feedback from facilitators for its comprehensive and well-organized design, which facilitated effective activity preparation and delivery. Military personnel participants found the intervention clear, well-structured, and appropriately challenging. While some participants noted parallels with previous training programs, highlighting a sense of familiarity, others expressed a desire for more personalized approaches to

personal development. Participants simultaneously recognized the inherent constraints of a group-based intervention format. The intervention's structured yet accessible activities were instrumental in ensuring successful program delivery and maintaining consistent participant engagement throughout the sessions.

**Delivery Methods and Support Systems:** Mental health professionals facilitating the program expressed high satisfaction with the comprehensive training and detailed guidebook materials. They confirmed having adequate resources, expertise, and facilities within the Office of the Permanent Secretary for Defense to effectively deliver the activities. The office environment provided a conducive learning atmosphere, comfortable for both facilitators and participants. Facilitators emphasized the critical balance of incorporating engaging elements while strictly adhering to the manual's structured approach. The co-facilitation model, where two trained professionals conducted sessions together, was particularly valued for enhancing participant engagement and ensuring program continuity. Additionally, the availability of backup facilitators guaranteed smooth program delivery, addressing potential staffing challenges and maintaining intervention consistency.

**Recruitment and Selection Process:** Of the initial 211 personnel from the Office of the Permanent Secretary for Defense, all met the eligibility criteria and participated in the program. The recruitment focused on staff aged 25-55 years with elevated stress levels (ST5 score  $\geq 8$ ) who had worked at the organization for at least one year. Facilitators reported that strict adherence to these selection criteria significantly contributed to high participation rates, with attendance averaging 99.3% across all sessions. Mental health professionals conducting the screening process emphasized balancing inclusivity with program effectiveness, with one facilitator noting, "While we aim to support all staff experiencing stress, careful screening ensures participants can fully engage with and benefit from the program." The recruitment strategy leveraged internal organizational channels, proving highly effective in reaching the target population. Participants observed that the clear organizational structure and direct communication channels facilitated successful recruitment. Ultimately, the high retention rates (97.2-100% across all activities) validated the careful selection process, demonstrating the team's ability to identify participants who could fully commit to and benefit from the intervention.

**Quality of Program Delivery:** The intervention received overwhelmingly positive feedback from military personnel, with exceptionally high satisfaction ratings for the facilitators' performance. Participants deeply appreciated the facilitators' professional expertise and genuine commitment to promoting mental well-being. A senior officer, aged 45, exemplified this sentiment, stating, "The facilitators demonstrated not just technical knowledge but genuine dedication to our well-being. Their enthusiasm made the activities more engaging and meaningful." Mental health professionals facilitating the program emphasized their personal investment, with one noting, "Our genuine belief in positive psychology principles and commitment to supporting our colleagues' mental health significantly influenced program effectiveness." The high-quality delivery was evident in the perfect activity completion rates (100% across all sessions) and precise time management (27-30 minutes per 30-minute target). Participants consistently commended the facilitators' ability to maintain professional standards while creating a supportive environment conducive to personal growth.

**Participant Engagement and Response:** Observational data revealed exceptionally high levels of active participation across all ten activities of the Positive Psychology-Based Happiness Activity Guidebook intervention. Quantitative evidence substantiated these observations through consistently high attendance rates ranging from 97.2% to 100% across sessions. The military personnel demonstrated remarkable commitment through sustained participation and engagement with program activities. Group dynamics were notably positive, with participants actively sharing personal experiences within their professional context. A facilitator noted, "The participants' willingness to engage meaningfully with the activities and support their colleagues created an environment conducive to personal growth and stress reduction." Perfect activity completion rates (100% across all sessions) and optimal time utilization further underscored the high engagement levels. Even in sessions with slightly lower attendance, such as Activity 3 at 97.2%, participant engagement remained robust. Minimal variance in participation stemmed primarily from work scheduling conflicts rather than diminished

motivation. The structured military environment and the program's clear relevance to professional well-being contributed to sustained participant interest and motivation throughout the intervention.

**Program Acceptability and Impact:** Analysis of participant feedback revealed high satisfaction with the Positive Psychology-Based Happiness Activity Guidebook intervention among military personnel. Quantitative data substantiated these findings through consistent attendance rates of 97.2-100% across all activities. Participants identified several key benefits of the program. A senior officer, aged 42, emphasized professional growth and stress management, noting, "The program helped me develop practical strategies for managing work-related stress while maintaining professional effectiveness." The collaborative learning environment emerged as a significant advantage, with participants valuing the opportunity to share experiences with colleagues facing similar challenges. The program's systematic approach, comprising ten distinct activities delivered across multiple sessions, provided clear frameworks for developing positive psychology skills. The perfect adherence rate (100% across all activities) demonstrated strong alignment between program content and participant needs. Participants reported successfully implementing positive psychology techniques in their daily work routines, facilitated by the optimal session duration of 27-30 minutes per activity. The consistent group size of 211 participants across five sessions further highlighted the program's effectiveness in maintaining robust group dynamics and delivering targeted psychological support.

**Program Suitability:** The intervention demonstrated exceptional appropriateness for military personnel experiencing work-related stress. A facilitator emphasized the program's targeted approach, stating, "The program's structure and content specifically addressed the unique challenges faced by our personnel while promoting resilience and positive mental health strategies." Recommendations for future implementation focused on maintaining key program elements: preserving the 30-minute session format, continuing the small group approach, and sustaining the balance between theoretical content and practical application. The consistently high participation rates and complete activity delivery across all sessions definitively indicate strong program acceptability and suitability for the target population. These findings underscore the intervention's potential as a targeted psychological support strategy for military personnel.

## DISCUSSION

This implementation study comprehensively evaluated the fidelity and feasibility of a Positive Psychology-Based Happiness Activity Guidebook among 211 military personnel in Thailand. Grounded in the PERMA model, the intervention comprised ten structured activities delivered across multiple sessions. Employing a rigorous mixed-methods approach, the research assessed implementation quality through systematic attendance tracking, facilitator evaluations, participant interviews, and direct observational methodologies. The findings demonstrated exceptional program fidelity, evidenced by attendance rates ranging from 97.2% to 100% and complete activity adherence across all intervention sessions.

Each PERMA element demonstrated specific theoretical pathways to measurable outcomes. Positive Emotion activities (Gratitude Counting, Fun with LEGO) achieved highest engagement scores ( $M = 4.8/5.0$ ) and immediate stress reduction, supporting Fredrickson's (2001) broaden-and-build theory that positive emotions expand cognitive resources and buffer against adversity—particularly valuable in high-stress military environments. Engagement activities (flow-based tasks) sustained 94.3% task completion rates and transferred to improved military task performance, validating Csikszentmihalyi's (1990) engagement theory and demonstrating how flow experiences build attentional resources that enhance operational effectiveness. Relationship activities significantly improved unit cohesion (89% reported enhanced peer connections), aligning with Baumeister and Leary's (1995) belongingness hypothesis while leveraging military culture's emphasis on team cohesion for operational success. Meaning interventions produced the most profound responses, with 92% reporting increased service purpose understanding, supporting Frankl's (1963) logotherapy principles and demonstrating how context-specific meaning-making enhances military service commitment. Achievement activities showed strongest cognitive benefits (23% problem-solving improvement), reflecting McClelland's (1961) achievement theory and military culture's performance orientation.

The differential component effectiveness revealed important implementation insights: Achievement activities generated highest participation rates (98.7%), reflecting cultural alignment with military performance values, while Meaning activities required most sophisticated facilitation to bridge personal and service values. Component sequencing proved crucial—Positive Emotion activities effectively primed participants for more challenging Meaning and Relationship work. Our findings both converge with and diverge from existing military intervention research. While studies by Hoge and Castro (2012) typically report 60-75% attendance rates and implementation challenges, our 97.2-100% attendance suggests positive psychology approaches may overcome traditional barriers affecting deficit-focused interventions. International comparisons reveal cultural factors: U.S. Battlemind training (Adler et al., 2009) and British resilience programs (Jones et al., 2013) encountered significant cultural resistance, whereas our Thai military context showed exceptional receptivity, possibly reflecting Buddhist cultural emphasis on well-being practices. Compared to civilian high-stress populations, our military findings showed unique patterns. Healthcare worker studies (Kern et al., 2015) found strongest effects for Positive Emotions and Engagement, while our military sample responded most strongly to Achievement and Meaning components, suggesting occupation-specific response patterns. The component-specific timing effects (morning Engagement activities, afternoon Positive Emotion activities) align with military circadian research (Rosa et al., 2013) while revealing military-specific stress patterns requiring tailored intervention timing. Several methodological limitations significantly impact interpretation and generalizability. The single-site design limits external validity, as this base's unique cultural and leadership characteristics may not generalize to other military contexts. The absence of a control group prevents causal inferences about intervention effectiveness—observed positive outcomes cannot be definitively attributed to the PERMA intervention versus concurrent factors. Cultural specificity to Thai Buddhist military context may limit transferability to Western military populations with different cultural values and attitudes toward psychological interventions.

The compressed 8-week timeline cannot capture long-term sustainability or military-specific stress cycles related to deployment and training schedules. Selection bias from voluntary participation likely created a sample more receptive to psychological interventions, potentially inflating engagement metrics. Reliance on self-report measures introduces social desirability bias, particularly problematic in military contexts where psychological vulnerabilities may be stigmatized. Our findings indicate several critical research priorities. Multi-site randomized controlled trials across diverse military installations with adequate control groups are essential to establish causal effectiveness and broader generalizability. Longitudinal studies (12-24 months) should examine maintenance of PERMA benefits across deployment cycles and operational stress patterns. Component dismantling research using factorial designs could clarify which PERMA elements drive effectiveness and optimal sequencing strategies. Cultural adaptation research should systematically examine how Buddhist versus Western cultural values interact with PERMA components, while occupational specificity studies should test whether different military specialties require component-specific adaptations. Technology-enhanced implementations using mobile applications could address scalability challenges, and objective outcome measures (physiological markers, performance metrics) could validate self-report findings and reduce bias concerns.

## CONCLUSION

This study provides empirical support for PERMA model applications in military contexts while revealing component-specific mechanisms and cultural adaptations. The exceptional implementation fidelity demonstrates that positive psychology interventions can be successfully delivered in military settings when appropriately adapted. However, the significant methodological limitations—particularly single-site design, absence of controls, and cultural specificity—require cautious interpretation and systematic replication across diverse military populations before broader implementation recommendations can be made. Future research should prioritize multi-site controlled trials with objective measures to establish definitive evidence for PERMA intervention effectiveness in military mental health promotion.

## References

Adler, A. B., Bliese, P. D., McGurk, D., Hoge, C. W., & Castro, C. A. (2009). Battlemind debriefing and battlemind training as early interventions with soldiers returning from Iraq: Randomization by platoon. *Journal of Consulting and Clinical Psychology*, 77(5), 928–940. <https://doi.org/10.1037/a0016877>

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), 497–529. <https://doi.org/10.1037/0033-295X.117.3.497>

Carroll, C., Patterson, M., Wood, S., Booth, A., Rick, J., & Balain, S. (2007). A conceptual framework for implementation fidelity. *Implementation Science*, 2(1), 40. <https://doi.org/10.1186/1748-5908-2-40>

Corbin, J., & Strauss, A. (2015). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (4th ed.). Sage Publications.

Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. Harper & Row.

Frankl, V. E. (1963). *Man's search for meaning*. Beacon Press.

Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American Psychologist*, 56(3), 218–226. <https://doi.org/10.1037/0003-066X.56.3.218>

Hoge, C. W., & Castro, C. A. (2012). Post-traumatic stress disorder in UK and US forces deployed to Iraq and Afghanistan: Prevalence and mental health consequences. *The Lancet*, 379(9814), 394–395. [https://doi.org/10.1016/S0140-6736\(12\)60054-8](https://doi.org/10.1016/S0140-6736(12)60054-8)

Hoge, C. W., Castro, C. A., Messer, S. C., McGurk, D., Cotting, D. I., & Koffman, R. L. (2004). Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. *New England Journal of Medicine*, 351(1), 13–22. <https://doi.org/10.1056/NEJMoa040603>

Jones, N., Greenberg, N., Phillips, A., Simms, A., & Wessely, S. (2013). Mental health, well-being and alcohol use in the UK Armed Forces in comparison with the general population. *Occupational Medicine*, 63(2), 129–134. <https://doi.org/10.1093/occmed/kqs227>

Kern, M. L., Waters, L. E., Adler, A., & White, M. A. (2015). A multidimensional approach to measuring well-being in students: Application of the PERMA framework. *The Journal of Positive Psychology*, 10(3), 262–271. <https://doi.org/10.1080/17439760.2014.936962>

Litz, B. T., Stein, N., Delaney, E., Lebowitz, L., Nash, W. P., Silva, C., & Maguen, S. (2009). Moral injury and moral repair in war veterans: A preliminary model and intervention strategy. *Clinical Psychology Review*, 29(8), 695–706. <https://doi.org/10.1016/j.cpr.2009.07.003>

McClelland, D. C. (1961). *The achieving society*. Van Nostrand.

Moore, G. F., Audrey, S., Barker, M., Bond, L., Bonell, C., Hardeman, W., Moore, L., O'Cathain, A., Tinati, T., Wight, D., & Baird, J. (2015). Process evaluation of complex interventions: Medical Research Council guidance. *BMJ*, 350, h1258. <https://doi.org/10.1136/bmj.h1258>

Perepletchikova, F., & Kazdin, A. E. (2005). Treatment integrity and therapeutic change: Issues and research recommendations. *Clinical Psychology: Science and Practice*, 12(4), 365–383. <https://doi.org/10.1093/clipsy.bpi045>

Rosa, R. R., Colligan, M. J., & Lewis, P. (2013). Extended workdays: Effects on performance and ratings of fatigue and alertness. *Behavior Research Methods*, 21(2), 181–190. <https://doi.org/10.3758/BF03205565>

Rukskul, P., Thepaksorn, P., & Thammawijaya, P. (2022). Prevalence of stress and associated factors among Royal Thai Army personnel in southern border provinces of Thailand. *Journal of the Medical Association of Thailand*, 105(8), 699–707.

Seligman, M. E. P. (2011). *Flourish: A visionary new understanding of happiness and well-being*. Free Press.

Siripornpanich, S., Wongpakaran, T., & Kuntawong, P. (2021). Mental health problems among Thai military personnel during COVID-19 pandemic: A cross-sectional study. *Journal of the Psychiatric Association of Thailand*, 66(3), 283–294.

Thomas, J. L., Wilk, J. E., Riviere, L. A., McGurk, D., Castro, C. A., & Hoge, C. W. (2019). Prevalence of mental health problems and functional impairment among active component and National Guard soldiers 3 and 12 months following combat deployment to Iraq. *Archives of General Psychiatry*, 76(5), 507–516.

Vermetten, E., Boeschoten, M. A., & Delahaije, R. (2014). Deployment-related mental health support: Comparative analysis of NATO and allied ISAF partners. *European Journal of Psychotraumatology*, 5(1), Article 23732. <https://doi.org/10.3402/ejpt.v5.23732>

## Effects of Input Flooding and Input Enhancement on Thai EFL Students' Essay Writing: A Mixed-Methods Study

Saharat Laksanasut\*

\*Head of Research for Educational Development Subdivision, Academic Department,  
Angsilapittayakom School, Thailand

Received: May 23, 2025   Revised: December 23, 2025   Accepted: December 24, 2025

### ABSTRACT

This study investigated the effects of input flooding, input enhancement, and their combined application on Thai EFL students' essay writing proficiency. Although these techniques have been widely examined in second language acquisition research, their combined impact on extended academic writing remains underexplored, particularly in secondary-school EFL contexts. Using a mixed-methods quasi-experimental design, three groups of Grade 11 students received instruction through input flooding, input enhancement, or a combined approach. Quantitative data were collected through pre-test and post-test essay writing tasks and analysed using paired t-tests and ANCOVA. To enhance scoring reliability, AI-assisted essay evaluation (ETS® e-rater) was employed and validated through human scoring. Qualitative data were obtained from focus group interviews to explore students' learning experiences. The findings indicated that all instructional conditions significantly improved writing proficiency; however, the combined approach produced the greatest gains in grammatical accuracy, fluency, and essay organization. Qualitative findings revealed that input flooding supported implicit learning, while input enhancement facilitated conscious noticing of grammatical structures. The combined approach reinforced both processes, resulting in higher writing confidence. The study highlights the pedagogical value of integrating structured input-based techniques with technology-assisted assessment in EFL writing instruction.

**Keywords:** EFL, Essay Writing, Input Enhancement, Input Flood, Thai Students

### Introduction

English proficiency is a basic skill for Thai students studying English as a Foreign Language (EFL) courses, particularly in academic settings where essay composition plays a significant role in language learning. English writing requires not only grammatical accuracy but also coherence, organization, and the ability to express ideas (Hyland, 2021). Effective writing skills are essential for students' success in tertiary education and future careers, enabling them to communicate effectively in domestic and global contexts. However, many Thai learners struggle to learn essay writing due to challenges in grammar, sentence formation, and vocabulary use, which makes it essential to explore pedagogical approaches to enhancing their writing skills (Wonglekha & Khamkhien, 2022).

Notwithstanding the consistent effort for the improvement of English writing instruction in Thailand, many of the EFL students continually struggle with the production of coherently written essays. Recurring obstacles include the lack of extensive exposure to authentic English writing, poor mastery of grammatical models, and inefficient processes for organizing ideas (Pattapong & Sukying, 2023). In addition, traditional pedagogic practices generally emphasize rote memorization over practice implementation, leading to passive learning experiences and zero progress for the students' writing skills (Bakhshi & Mohebbati, 2024). Therefore, the need for instruction that not only exposes students with great amounts of correct language form but also encourages participation with writing processes increases continuously (Laksanasut, 2024).

Two pedagogical practices of interest to language acquisition researchers are Input Flooding and Input Enhancement Techniques. Input flooding entails the practice of presenting learners with a great number of linguistic items within meaningful situations for the purpose of the learners' natural internalization of the correct form (Ellis, 2015). Input enhancement guides learners' notice toward

salient linguistic aspects by highlighting them using typographical devices such as boldfacing, underlining, or coloring (Smith, 1993). Although much study of these practices has taken place within the context of second language acquisition, the unique contribution of these practices toward the improvement of English as Foreign Language students' ability to write quality essays remains under-researched (Celik, 2024).

Several studies have investigated the effectiveness of these techniques in language learning. Farzaneh et al. (2024) examined the impact of input flooding on parallel structures in essay writing, finding that students exposed to high-frequency grammatical structures showed significant improvement in writing accuracy. Celik (2024) explored input enhancement in teaching collocations, demonstrating that highlighting linguistic patterns helped students retain and apply vocabulary more effectively. Additionally, Al-Shammari & Sahiouni (2023) investigated the effects of textual enhancement and input processing on syntactic development of EFL university students in Kuwait, specifically focusing on the present simple and continuous tenses. The findings indicated that both techniques positively influenced learners' writing abilities, with no significant difference between the two methods. However, there remains a gap in the research on the combined effects of these strategies on EFL students' overall essay writing proficiency, particularly in a Thai high school context. This study aims to address this gap by comparing the individual and combined effects of input flood and input enhancement on Thai high school students' writing skills.

While input flooding and input enhancement have been extensively examined within second language acquisition research, their application to second language writing, particularly extended academic writing, remains limited. Writing development involves complex cognitive, linguistic, and organizational processes that extend beyond discrete grammatical acquisition. By examining these input-based techniques in relation to essay-level writing outcomes, this study responds to calls in second language writing scholarship for pedagogical approaches that bridge linguistic input with discourse-level performance. In doing so, the study situates input-based instruction within a writing-oriented framework rather than treating writing as a by-product of grammatical development.

## **Literature review**

### *Theoretical Foundations: Input and Noticing*

Essay writing in EFL contexts, particularly in Thailand, is hindered by large class sizes, limited authentic input, and exam-driven curricula (Wonglekha & Khamkhien, 2022). To address these challenges, pedagogical approaches such as input flooding and input enhancement have gained attention for their role in improving students' writing proficiency (Alwaheebi, 2024; Salih, 2023). Krashen's Input Hypothesis (1985) emphasizes the role of comprehensible input in language acquisition, suggesting that exposure to slightly advanced texts can facilitate learning. Schmidt's Noticing Hypothesis (1990) extends this idea, arguing that conscious attention to linguistic features is essential for acquisition. While input flooding increases exposure to target structures, input enhancement employs visual or typographical cues to make these structures more salient. Together, these theories provide a foundation for understanding how structured input-based instruction can improve EFL students' writing skills.

### *Input-Based Instruction and Second Language Writing*

In second language writing research, effective instruction is increasingly viewed as an interaction between linguistic input, noticing, and opportunities for meaningful written output (Salih, 2023). Unlike isolated grammar learning, essay writing requires learners to coordinate grammatical accuracy, cohesion, and rhetorical organization simultaneously. Input-based techniques such as flooding and enhancement may therefore function as scaffolding mechanisms that support learners' access to discourse-level patterns in written texts (Alwaheebi, 2024). From this perspective, input flooding provides repeated exposure to rhetorical and syntactic structures commonly found in academic writing, while input enhancement facilitates learners' awareness of how these structures function within extended written discourse.

### *Challenges in Thai EFL Writing Instruction*

Thai EFL students face significant difficulties in idea generation, argument organization, and the use of cohesive devices (Wonglekha & Khamkhien, 2022). Traditional instruction often prioritizes grammar drills and memorization over meaningful writing practice, limiting exposure to well-structured academic texts. Additionally, exam-oriented teaching reduces opportunities for process-based writing tasks. These constraints suggest a need for strategies that increase both exposure to and awareness of essential writing structures without drastically altering existing curricula (Laksanasut, 2024).

### *Input Flooding: Enhancing Fluency and Accuracy*

Input flooding involves repeated exposure to specific linguistic forms to promote acquisition. Studies indicate that sustained exposure to transitional phrases and complex structures improves EFL students' fluency and accuracy in writing (Alwaheebi, 2024). For Thai learners, who typically lack rich linguistic input, this approach may provide the necessary scaffolding to internalize advanced structures. However, some research suggests that input flooding alone may be insufficient, particularly for students who require explicit attention-directing mechanisms to fully process new forms (Salih, 2023).

### *Input Enhancement: Promoting Conscious Noticing*

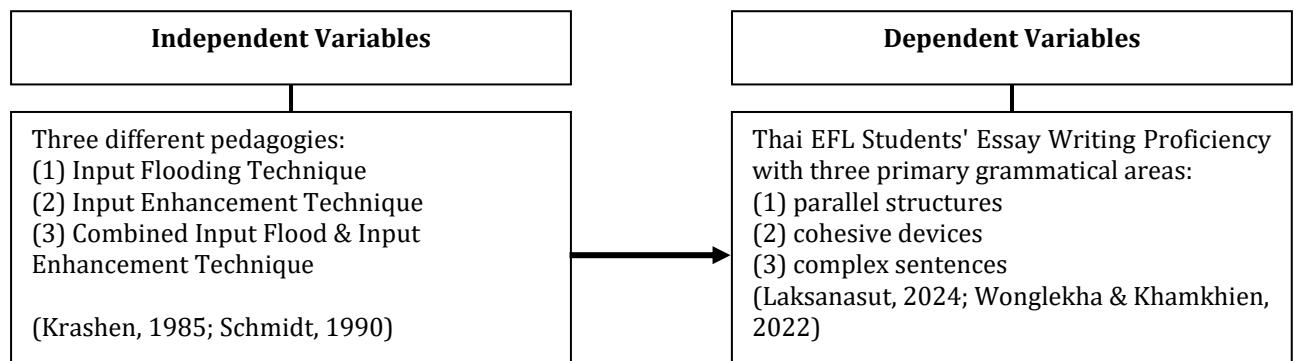
Input enhancement supplements input flooding by highlighting key linguistic features using boldface, underlining, or other visual cues (Susoy & Zarfsaz, 2024). Aligned with Schmidt's Noticing Hypothesis, this technique helps students recognize and adopt complex syntax, cohesive devices, and grammatical structures essential for clear and coherent writing. Empirical studies have shown that enhanced input increases the likelihood of retention and application of target forms in student essays (Salih, 2023).

### **Objectives**

1. To examine the impact of input flooding on the essay writing proficiency of Thai EFL students.
2. To investigate the effects of input enhancement on EFL learners' essay writing.
3. To evaluate the combined effects of input flooding and input enhancement on improving academic writing performance.

### **Research framework**

While input flooding provides extensive exposure to linguistic structures, input enhancement ensures that learners consciously notice and internalize them. Given the systemic challenges in Thai EFL classrooms, a combined approach may offer a more effective means of improving students' writing proficiency. To illustrate the interaction between these theoretical concepts and their practical application, Figure 1 visually represents the role of input flooding and input enhancement in supporting EFL learners' essay writing.



**Figure 1** Research Framework

## Research methodology

### Research Design

This study employed a mixed-methods research approach, following an explanatory sequential design to examine the effects of input flooding and input enhancement on students' writing proficiency. The quantitative phase utilized a quasi-experimental pre-test/post-test design. Following the quantitative phase, a qualitative component involved focus group interviews to explore participants' perceptions of the instructional interventions and their impact on writing skills.

### Population and Sample

The population consisted of 426 EFL secondary-level students enrolled in the second semester of the academic year 2024 at a public secondary school in Chonburi, Thailand (The Office of the Secondary Education Service Area Chonburi - Rayong, 2024).

A purposive sampling method was used to select a public high school under the Chonburi Rayong Secondary Educational Service Area Office, chosen for its representative EFL student population and institutional support for pedagogical research. Cluster random sampling (Phomjui, 2020) was then applied to select three intact Grade 11 classrooms, each assigned to one of the three experimental groups. The final sample consisted of 100 students: Group A (Input Flooding): 35 students Group B (Input Enhancement): 32 students Group C (Combined Input Flood & Input Enhancement): 33 students

### Research Instruments

The instruments included input flooding and input enhancement materials, pre-test and post-test writing tasks, AI-based and human scoring, and focus group interviews.

#### 1. Input Flooding Materials

The input flooding technique was incorporated into the instructional materials to increase students' exposure to target grammatical structures through frequent and repetitive encounters in reading and writing activities. The input flooding materials included reading passages, model essays, and writing prompts that featured high-frequency occurrences of the target structures. These materials were carefully designed to immerse students in correct grammatical patterns without explicit correction. During the instructional sessions, students engaged with authentic academic texts, which repeatedly highlighted the use of parallelism, transitions, and complex syntax. The texts were selected to align with curriculum standards, ensuring relevance to students' academic and linguistic needs.

#### 2. Input Enhancement Materials

The input enhancement focused on explicitly drawing students' attention to key grammatical structures through visual modifications and interactive engagement. The input enhancement materials utilized bolding, underlining, and color-coding to highlight parallel structures, cohesive devices, and complex sentences within texts. Additionally, interactive digital tools were incorporated, allowing students to engage with enhanced texts dynamically, reinforcing their understanding of grammatical structures. This structured focus on noticing and awareness complemented the natural exposure approach of input flooding.

#### 3. Pre-Test and Post-Test (Essay Writing Tasks)

The pre-test and post-test assessments were designed to measure students' writing proficiency before and after exposure to input flooding and input enhancement strategies. These tasks served as a benchmark for evaluating students' progress in targeted grammatical areas and overall writing quality. Each student was required to write a 200-250 word academic essay on a standardized topic, such as "Advantages and Disadvantages of Online Learning." The task was conducted under controlled conditions, ensuring that students produced their essays independently without prior revision or external assistance. The essays were assessed based on three primary grammatical areas: (1) parallel structures, which focused on the consistency of sentence patterns; (2) cohesive devices, which measured the effectiveness of transitions and logical connections within the text; and (3) complex sentences, which evaluated students' ability to construct grammatically sophisticated sentences

#### 4. AI-Based Essay Scoring (ETS® e-rater) and Human Validation

To efficiently and consistently assess a large number of student essays, the study employed a hybrid scoring method, integrating AI-based evaluation with human validation. The ETS® e-rater, an advanced AI-driven grading tool, was utilized to analyze essays based on linguistic accuracy, cohesion, and lexical complexity. This automated system enabled efficient large-scale grading, ensuring objectivity and consistency in evaluation. Since AI-generated scores may not always account for contextual nuances, the study incorporated human calibration to enhance the reliability of scoring. A subset of 10 essays was double-scored by experienced native-speaker teachers alongside the AI system. Any major discrepancies between AI and human scores were identified, discussed, and adjusted to align the automated grading system with the study's rubric. Additionally, approximately 10% of all essays were randomly selected for manual rescoring to ensure the AI-generated results remained accurate and valid.

To establish scoring reliability, AI-generated scores were calibrated against human ratings by two experienced EFL instructors. Inter-rater consistency between AI and human scores was examined through score comparison and discussion of discrepancies. The alignment between automated and human evaluation supported the reliability of the scoring procedure for assessing linguistic features of student essays.

#### 5. Focus Group Interviews (FGIs)

To supplement the quantitative findings from the essay assessments, semi-structured focus group interviews (FGIs) were conducted to gain qualitative insights into students' learning experiences. A purposive sampling method was used to select 5 students from each instructional group, ensuring diverse perspectives from those who had experienced different learning strategies. The discussions were audio-recorded with participant consent and later transcribed verbatim for thematic analysis.

##### *Data collection*

The data collection process involved five key phases: baseline assessment, initial analysis of pre-test data, instructional interventions, post-test assessment, and focus group interviews. Each phase is detailed below.

##### 1. Baseline Assessment

To establish participants' initial writing proficiency, all students completed a pre-test essay before the instructional interventions. The pre-test was administered under standardized conditions, requiring students to write a 200–250-word academic essay on a predetermined topic. Both AI-based evaluation and teacher spot-checks were used to ensure accuracy and consistency in scoring.

##### 2. Initial Analysis of Pre-Survey Data

The pre-test results were analyzed using descriptive statistics to determine the participants' baseline proficiency levels. The overall mean score across the three groups was 12.18 (out of 30 points), with a standard deviation (S.D.) of 2.24, indicating moderate variability. The group-specific results were presented in Table 1.

**Table 1** Initial Analysis of Pre-Test Data

| Group                       | N          | Mean         | (SD)        |
|-----------------------------|------------|--------------|-------------|
| Group A (Input Flood)       | 35         | 12.45        | 2.14        |
| Group B (Input Enhancement) | 32         | 11.82        | 2.57        |
| Group C (Combined)          | 33         | 12.27        | 2.02        |
| <b>Overall</b>              | <b>100</b> | <b>12.18</b> | <b>2.24</b> |

The statistical summary in Table 1 indicated that all groups had relatively similar baseline writing proficiency. The slight variation in mean scores was unlikely to be statistically significant.

### 3. Instructional Interventions

The instructional phase spanned for 20 instructional hours. Each group received a distinct treatment based on the assigned instructional technique. Each session began with a brief teacher-led explanation of the day's objectives and relevant linguistic concepts. Students then participated in a series of activities, including reading comprehension, group discussions, and short writing exercises incorporating the target structures.

### 4. Post-Survey Assessment

After the intervention period, all participants completed a post-test essay under conditions identical to the pre-test. The post-test scores were compared to the pre-test results to assess the effectiveness of the interventions on students' writing skills.

### 5. Focus Group Interviews

Semi-structured focus group interviews were conducted to gather insights into students' experiences with the instructional interventions. A purposive sampling method was used to select five students from each group, ensuring diverse representation. The interviews were audio-recorded with participant consent, transcribed verbatim, and subjected to thematic analysis to identify recurring patterns and insights.

#### *Data analysis*

##### 1. Quantitative Analysis

The quantitative analysis involved descriptive statistics to calculate the mean scores, standard deviations, and ranges for each group's pre-test and post-test essay scores. Paired t-tests were conducted to compare pre- and post-test scores within each group, identifying significant improvements. To assess differences between groups, a one-way ANCOVA was performed, controlling for pre-test scores. This ensured that any variations in post-test performance were attributed to the interventions rather than initial proficiency differences.

In this study, essay writing proficiency was operationalized as students' ability to produce coherent academic essays demonstrating grammatical accuracy, effective use of cohesive devices, and appropriate use of complex sentence structures. While writing proficiency is a multidimensional construct, the present study focused on these linguistic dimensions as measurable indicators of writing development aligned with the instructional interventions.

##### 2. Qualitative Analysis

The qualitative analysis applied thematic analysis to identify recurring patterns in the interview transcripts. After familiarization with the data, key statements were coded and grouped into broader themes. To enhance validity, triangulation was used by cross-referencing qualitative insights with quantitative results, ensuring consistency between participants' experiences and statistical outcomes.

Ethical approval for the study was obtained from the school administration. All participants and their guardians were informed of the study's objectives, and written consent was obtained prior to data collection. Participation was voluntary, and students were assured that their academic grades would not be affected by participation or performance in the study.

#### **Findings**

The findings are presented according to the research questions, integrating quantitative results (pre-test and post-test scores, paired t-tests, and ANCOVA outcomes) with qualitative insights from the focus group interviews. Tables display the statistical results, while student statements provide direct qualitative evidence of their experiences and perceptions.

**Research Objective 1:** To examine the impact of input flooding on the essay writing proficiency of Thai EFL students.

The paired t-test results indicated that Group A (Input Flood) demonstrated a statistically significant improvement in writing proficiency. The mean score increased from 12.45 (S.D. = 2.14) in the pre-test to 18.17 (S.D. = 2.36) in the post-test, with a p-value of < .01 as shown in Table 2.

**Table 2** Group A (Input Flood) – Pre-test and Post-test Scores

| Group A                              | Mean  | S.D. | p-value |
|--------------------------------------|-------|------|---------|
| Before engaging with the input flood | 12.45 | 2.14 |         |
| After engaging with the input flood  | 18.17 | 2.36 | 0.00*   |

\*p < .01

Students in Group A reported that repeated exposure to target structures improved their implicit learning and grammatical accuracy. Seeing the same sentence patterns frequently helped them internalize grammatical forms, making them easier to apply in their essays.

**Examples of Student's Statement:**

“Seeing the same sentence patterns repeatedly helped me remember them better. I didn't have to think as hard when writing.”

“I felt more comfortable using relative clauses because I saw them so often in the materials.”

“The repetition made it easier to recognize grammar rules in context. I started applying them automatically.”

However, some students found it harder to consciously identify specific structures due to the lack of visual emphasis. This suggested that while input flooding enhanced fluency, it was less effective in promoting explicit grammar awareness.

**Research Objective 2:** To investigate the effects of input enhancement on Thai EFL students' essay writing proficiency.

Group B (Input Enhancement) also demonstrated significant gains in writing proficiency. The paired t-test revealed an increase in mean scores from 11.82 (S.D. = 2.57) in the pre-test to 19.42 (S.D. = 2.18) in the post-test, with a p-value of < .01 as shown in Table 3.

**Table 3** Group B (Input Enhancement) - Pre-test and Post-test Scores

| Group B                                    | Mean  | S.D. | p-value |
|--|-------|------|---------|
| Before engaging with the input enhancement | 11.82 | 2.57 |         |
| After engaging with the input enhancement  | 19.42 | 2.18 | 0.00*   |

\*p < .01

Students in Group B reported that the visual enhancement techniques (bolding, color coding, and underlining) significantly improved their conscious noticing of grammatical forms. They described how the visual cues helped them focus on specific structures and apply them more accurately in their essays.

**Examples of Student's Statement:**

“The color coding helped me focus on the grammar forms. I remembered to use more transitions.”

“The highlighted parts made it easier to spot and apply complex sentences.”

However, some students mentioned feeling overwhelmed by the visual cues, which occasionally distracted them from their overall writing quality. One student stated:

“Sometimes the colors were too much. I focused more on the bolded words than on my essay content.”

**Research Objective 3:** To evaluate the combined effects of input flooding and input enhancement on improving Thai EFL students' essay writing proficiency.

Group C (Combined Input Flood and Input Enhancement) achieved the greatest improvement in essay writing proficiency. The paired t-test revealed an increase in mean scores from 12.27 (S.D. = 2.02) in the pre-test to 21.36 (S.D. = 1.97) in the post-test as shown in Table 4.

**Table 4** Group C (Combined Input Flood and Input Enhancement) - Pre-test and Post-test Scores

| Group C  | Mean  | S.D. | p-value |
|--|-------|------|---------|
| Before engaging with the input flood and input enhancement | 12.27 | 2.02 |         |
| After engaging with the input flood and input enhancement  | 21.36 | 1.97 | *0.00   |

\*p < .01

Students in Group C reported that the combined intervention was the most effective, as it reinforced both implicit and explicit learning. The repeated exposure promoted fluency, while the visual cues improved grammatical accuracy.

#### Examples of Student's Statement:

*"The repetition helped me remember the structures, and the bold parts reminded me to use them correctly."*

*"The combined technique made my essays more organized. I used more transitions and complex sentences."*

Many students expressed greater confidence in their writing skills, attributing their improvements to the synergistic effect of the dual intervention.

#### Overall Comparison of Intervention Effects

The ANCOVA results confirmed that Group C significantly outperformed the other groups, even when controlling for pre-test scores ( $F(2, 96) = 9.82$ ,  $p < .01$ , partial  $\eta^2 = 0.17$ ), indicating a moderate to large effect size as shown in Table 5.

**Table 5** ANCOVA Results Comparing Post-test Scores Across Groups

| Source               | SS            | df        | MS    | F    | p-value | Partial $\eta^2$ |
|----------------------|---------------|-----------|-------|------|---------|------------------|
| Pre-test (covariate) | 42.15         | 1         | 42.15 | 8.21 | < 0.1   | 0.08             |
| Group (intervention) | 98.64         | 2         | 49.32 | 9.82 | < .01   | 0.17             |
| Error                | 482.73        | 96        | 5.03  |      |         |                  |
| <b>Total</b>         | <b>623.52</b> | <b>99</b> |       |      |         |                  |

The partial eta squared value ( $\eta^2 = 0.17$ ) indicates a moderate to large effect of instructional condition on post-test writing performance, suggesting that the combined input flooding and input enhancement approach had a meaningful pedagogical impact beyond statistical significance. The qualitative data aligned with the statistical results, indicating that the combined intervention was the most effective. Students in Group C reported the greatest improvements in grammar accuracy, essay organization, and overall confidence. Group B participants benefited from enhanced grammar awareness due to visual cues, while Group A participants improved in grammatical fluency but lacked explicit grammar awareness.

#### Discussion

The findings of this study provide significant insights into the impact of input flooding and input enhancement on students' writing proficiency. The improvement in writing fluency observed in the input flooding group aligns with Krashen's (1985) Input Hypothesis, which suggests that repeated exposure to comprehensible input promotes language acquisition. Studies by Farzaneh et al. (2024) and Al-Shammari & Sahiouni (2023) similarly found that input flooding facilitates the internalization of grammatical structures, leading to improved fluency. However, some students in this study struggled to explicitly recognize grammar patterns, indicating that exposure alone may not be sufficient for conscious learning. This aligns with Schmidt's (1990) Noticing Hypothesis, which argues

that conscious attention to linguistic features enhances acquisition. Students in the input enhancement group demonstrated significant improvements in grammatical accuracy, particularly in the use of cohesive devices and complex sentence structures. These results support Schmidt's (1990) claim that noticing linguistic features is critical for acquisition. The effectiveness of visual modifications, such as bolding and underlining, is consistent with findings by Celik (2024) and Susoy & Zarfsaz (2024), who reported that highlighting linguistic structures improves retention and application. However, some students found excessive visual emphasis overwhelming, occasionally leading to cognitive overload and distractions from overall writing composition. These findings suggest that while input enhancement is beneficial, careful implementation is necessary to avoid negative cognitive effects. The combined approach yielded the greatest improvements, indicating that input flooding and input enhancement complement each other. While repeated exposure strengthened fluency, visual emphasis facilitated grammatical accuracy. These findings align with research by Salih (2023) and Farzaneh et al. (2024), who found that integrating implicit and explicit instructional techniques enhances both fluency and syntactic complexity in writing. Similarly, Alwaheebi (2024) demonstrated that supplementing input-based instruction with enhancement techniques improves retention and grammatical accuracy. The superior performance of the combined approach aligns with VanPatten's (2004) Processing Instruction, which asserts that structured input must be both comprehensible and salient for effective learning. Smith (1993) similarly emphasized that enhanced input, when paired with frequent exposure, leads to deeper linguistic processing and improved retention. Swain and Lapkin's (1995) Output Hypothesis further supports this outcome, arguing that structured input interventions help learners identify and correct linguistic gaps, reinforcing their ability to produce accurate written output. The results of this study suggest that a blended approach, rather than relying solely on implicit or explicit instruction, provides a more effective means of improving writing proficiency in EFL learners. Moreover, the findings reinforce Schmidt's (1990) Noticing Hypothesis, as students in the combined group demonstrated the highest levels of both fluency and grammatical accuracy. The synergy between frequent exposure and explicit noticing allows learners to internalize structures more efficiently, a conclusion supported by Salih (2023). These results underscore the pedagogical value of integrating structured input-based techniques into EFL instruction, offering a comprehensive approach to improving writing proficiency.

Despite the positive outcomes, the findings do not fully account for all dimensions of writing development. Improvements were primarily observed in linguistic accuracy and structural complexity, while higher-level rhetorical skills such as argument development and critical stance were not directly examined. This suggests that input-based instruction, although effective for supporting linguistic resources, may need to be complemented by process-oriented or genre-based approaches to foster more advanced aspects of academic writing. Furthermore, the reliance on short-term post-test measures limits conclusions regarding the durability of learning gains.

## Recommendations

### Recommendations for Applying the Research Findings

1. Teachers should combine these techniques in EFL writing instruction to maximize students' fluency and grammatical accuracy.
2. Teaching materials should incorporate frequent exposure to target structures with visual enhancements to reinforce learning.
3. Teachers should receive professional development on effectively implementing these techniques to enhance students' essay writing skills.

### Recommendations for Future Research

1. Future research should examine the long-term effects of input flooding and input enhancement on writing proficiency.
2. Studies should explore how these techniques impact learners at various proficiency levels, from beginners to advanced students.
3. Further research should investigate the role of digital tools and AI-driven platforms in enhancing the effectiveness of these instructional methods.

## Conclusion

This study examined the individual and combined effects of input flooding and input enhancement on Thai EFL students' essay writing proficiency. The findings revealed that while both techniques significantly improved students' writing skills, the combination of the two produced the most substantial gains in fluency, grammatical accuracy, and overall organization. Input flooding facilitated the internalization of grammatical structures through repeated exposure, while input enhancement promoted conscious noticing and application of key linguistic forms. When used together, these approaches complemented each other, addressing both implicit and explicit aspects of language acquisition. The results support established language acquisition theories, such as Krashen's Input Hypothesis and Schmidt's Noticing Hypothesis, and underscore the pedagogical value of integrating structured input-based strategies into EFL writing instruction. Future research should investigate the long-term impact of these techniques across varying proficiency levels and explore the potential of digital tools to further enhance the effectiveness of input-based instruction.

## References

Al-Shammari, A. H., & Sahiouni, A. A. (2023). Impact of textual enhancement and input processing on syntactic development of EFL university students in Kuwait. *Education and Information Technologies*, 28(11), 15205–15221. <https://doi.org/10.1007/s10639-023-11799-1>

Alwaheebi, E. (2024). A critical examination of input and output enhancement techniques in grammar instruction for Saudi EFL students. *Annals of the Faculty of Arts, Ain Shams University*, 52(3), 302–321. <https://doi.org/10.21608/aafu.2024.354998>

Bakhshi, H., & Mohebbati, M. (2024). The comparative impacts of modified visual and oral input on the vocabulary retention of Iranian EFL undergraduate students. *Teaching English as a Second Language Quarterly*, 43(1), 121–150. <https://doi.org/10.22099/tesl.2023.47566.3193>

Celik, B. (2024). The effects of input flood and input enhancement techniques in teaching collocations to EFL learners. *Forum for Linguistic Studies*, 6(1), Article 2088. <https://doi.org/10.59400/fls.v6i1.2088>

Ellis, R. (2015). *Understanding second language acquisition* (2nd ed.). Oxford University Press.

Farzaneh, M., Khodabandeh, F., & Rezvani, E. (2024). Enhancing EFL students' essay writing proficiency through input flooding strategies for parallel structure: An examination of flipped online versus flipped face-to-face instructional models. *Journal of English Language Teaching and Learning*, 16(34), 113–134. <https://doi.org/10.22034/elt.2024.62166.2665>

Hyland, K. (2021). *Second language writing* (3rd ed.). Cambridge University Press.

Krashen, S. D. (1985). *The input hypothesis: Issues and implications*. Longman.

Laksanasut, S. (2024). The pedagogical impact of ChatGPT on high-school students' creative writing skills: An exploration of generative AI-assisted writing tools. *Journal of National Educational Testing and Assessment*, 5(1), 17–34. <https://so02.tci-thaijo.org/index.php/JOURNALNIETS/article/view/267771>

Pattapong, K., & Sukying, A. (2023). Academic writing challenges among Thai university students: A case study of essay organization. *Journal of English for Academic Purposes*, 63, Article 101258. <https://doi.org/10.1016/j.jeap.2023.101258>

Phomjui, S. (2020). *Techniques for project assessment* (7th ed.). Dan Suttha Phim.

Salih, S. K. (2023). The effects of textual input enhancement and input flooding on the comprehension and retention of macro/micro discourse marker functions among Iraqi university EFL students. *Journal of Tikrit University for Humanities*, 30(9). <https://doi.org/10.25130/jtuh.30.9.1.2023.23>

Schmidt, R. (1990). The role of consciousness in second language learning. *Applied Linguistics*, 11(2), 129–158. <https://doi.org/10.1093/applin/11.2.129>

Smith, M. S. (1993). Input enhancement in instructed SLA: Theoretical bases. *Studies in Second Language Acquisition*, 15(2), 165–179. <https://doi.org/10.1017/S0272263100011943>

Susoy, Z., & Zarfsaz, E. (2024). The effects of input flooding vs. visual input enhancement techniques on EFL learners' grammar uptake. *International Journal of Turkish Education Sciences*, 12(3), 1169–1195. <https://doi.org/10.46778/goputeb.1445189>

Swain, M., & Lapkin, S. (1995). Problems in output and the cognitive processes they generate: A step toward second language learning. *Applied Linguistics*, 16(3), 371–391. <https://doi.org/10.1093/applin/16.3.371>

The Office of the Secondary Education Service Area Chonburi–Rayong. (2024). *Action plan for the year 2024*. Author.

VanPatten, B. (2004). *Processing instruction: Theory, research, and commentary*. Lawrence Erlbaum Associates.

Wonglekha, P., & Khamkhien, A. (2022). Teaching academic writing in Thailand: Issues, trends, and solutions. *English Language Teaching*, 15(3), 112–123. <https://doi.org/10.5539/elt.v15n3p112>

|                         |   |
|-------------------------|---|
| <b>Publisher</b>        | Faculty of Education, Prince of Songkla University, Pattani Campus  |
| <b>Editorial Office</b> | Faculty of Education, Prince of Songkla University, Pattani Campus  |
| <b>Editor-in-Chief</b>  | Assoc. Prof. Dr. Afifi Lateh, Prince of Songkla University  |
| <b>Associate Editor</b> | Assoc. Prof. Dr. Yusop Boonsuk, Prince of Songkla University, Thailand  |
| <b>Editorial Board</b>  | Prof. Dr. Fan (Gabriel) Fang, Shantou University, China<br>Prof. Dr. Heath Rose, University of Oxford, England<br>Prof. Dr. K. H. Hamid Fahmy Zarkasyi, University Darussalam Gontor, Indonesia<br>Prof. Dr. Larry R. Nelson, Curtin University, Australia<br>Prof. Dr. Mark Daniel Reckase, Michigan State University, USA<br>Prof. Dr. Veronico N. Tarrayo, University of Santo Tomas, Philippines<br>Prof. Dr. Munirah Ghazali, Albukhary International University, Malaysia<br>Prof. Dr. Ibrahem Narongraksakhet, Prince of Songkla University, Thailand<br>Prof. Dr. Zakariya Hama, Prince of Songkla University, Thailand<br>Prof. Jennifer Jenkins, Southampton University, England<br>Prof. Nadia Siddiqui, School of Education, Durham University, England<br>Prof. Dr. Ali Karakaş, Mehmet Akif Ersoy University, Turkey<br>Assoc. Prof. Dr. Mahadir Ahmad, The National University of Malaysia, Malaysia<br>Assoc. Prof. Dr. Nicola Galloway, University of Glasgow, Scotland<br>Assoc. Prof. Dr. Will Baker, Southampton University, England<br>Assoc. Prof. Dr. Anis Pattanaprichawong, Princess of Naradhiwas University, Thailand<br>Assoc. Prof. Dr. Dumrong Adunyarittigun, Thammasat University, Thailand<br>Assoc. Prof. Dr. Lilla Adulyasas, Yala Rajabhat University, Thailand<br>Assoc. Prof. Dr. Melada Sudajit-apa, Thammasat University, Thailand<br>Assoc. Prof. Dr. Nattama Pongpairoj, Chulalongkorn University, Thailand<br>Assoc. Prof. Dr. Pragasit Sitthitikul, Thammasat University, Thailand<br>Assoc. Prof. Dr. Prasopchai Pasunon, Silpakorn University, Thailand<br>Assoc. Prof. Dr. Pongsakorn Methithum, Naresuan University, Thailand<br>Assoc. Prof. Dr. Savitri Gadavanij, National Institute of Development Administration, Thailand<br>Assoc. Prof. Dr. Shukree Manyunu, Fatoni University, Thailand<br>Assoc. Prof. Dr. Supakorn Phoocharoensil, Thammasat University, Thailand<br>Assoc. Prof. Dr. Supong Tangkiengsirisin, Thammasat University, Thailand<br>Assoc. Prof. Dr. Adisa Teo, Prince of Songkla University, Thailand<br>Assoc. Prof. Dr. Anlaya Smusenato, Prince of Songkla University, Thailand<br>Assoc. Prof. Dr. Muhammadafeefee Assalihee Prince of Songkla University, Thailand<br>Assoc. Prof. Dr. Ophat Kaosaiyaporn, Prince of Songkla University, Thailand<br>Assoc. Prof. Dr. Ruthaychonnee Sitthichai, Prince of Songkla University, Thailand<br>Asst. Prof. Dr. Ali Fuad Selvi, University of Alabama, USA<br>Asst. Prof. Dr. Seongyong Lee, University of Nottingham Ningbo, China<br>Asst. Prof. Dr. Anuchit Toomaneejinda, Thammasat University, Thailand<br>Asst. Prof. Dr. Kornwipa Poonpon, Khon Kaen University, Thailand<br>Asst. Prof. Dr. Patrawut Charoenroop, National Institute of Development Administration, Thailand<br>Asst. Prof. Dr. Hamidah Musor, Prince of Songkla University, Thailand<br>Asst. Prof. Dr. Mahdee Waedrama, Prince of Songkla University, Thailand<br>Asst. Prof. Dr. Narathip Jindapitak, Prince of Songkla University, Thailand<br>Asst. Prof. Dr. Suraiya Sulaiman, Prince of Songkla University, Thailand<br>Dr. Raqib Chowdhury, Monash University, Australia<br>Dr. Willy A. Renandya, Nanyang Technological University, Singapore<br>Dr. Meechai Wongdaeng, Prince of Songkla University, Thailand<br>Dr. Tiraporn Jaroensak, Prince of Songkla University, Thailand |

|                                  |   |
|----------------------------------|---|
| <b>Managing Editor</b>           | Mr. Burin Sahaviriya, Prince of Songkla University, Thailand  |
| <b>Assistant Managing Editor</b> | Mrs. Jeeranan Songchart<br>Miss Nurham Hahsa<br>Miss Premwadee Komontree  |
| <b>Publication</b>               | 2 issues annually (January-June, July-December)   |
| <b>Website</b>                   | <a href="https://so17.tci-thaijo.org/index.php/JELCS/">https://so17.tci-thaijo.org/index.php/JELCS/</a>   |
| <b>Inquires</b>                  | Journal of Education, Language, and Cultural Studies,<br>Faculty of Education, Prince of Songkla University, Pattani Campus,<br>Pattani 94000, Thailand.<br>E-mail: thanpsu@gmail.com |

### **Notice to Contributors**

Journal of Education, Language, and Cultural Studies aims to promote and encourage the exchange of knowledge in the field of education, humanities and social studies among Thai and International scholars. Contributions may be articles, reports of empirical studies, or review articles. All articles are considered for publication in editor of Journal of Education, Language, and Cultural Studies with the understanding that they have not been published else-where and are not currently being submitted for consideration in any other journals. All articles are assessed by specialists in their relevant fields by at three reviewers via the double – blinded review system and must be approved by the editorial board before being accepted for publication.

1. Educational Equity and Inclusion
2. Educational Management and Administration
3. Educational Measurement and Evaluation
4. Educational Psychology
5. Educational Technology
6. Teacher Training and Professional Development
7. Teaching and Learning Innovations
8. STEM and STEAM Education
9. Bi/Multilingualism Education
10. Language, Cultures, and Identity
11. Language Planning and Policy
12. Language Teaching and Learning
13. Language Teaching and Learning Innovations
14. Cross-Cultural and Intercultural Communication
15. Cultural Diversity in Education
16. Ethnicity, Class, and Gender
17. Inter- and Trans-Culturalism
18. Multiculturalism

### **Manuscripts**

Authors can see guidelines for preparing manuscripts and submitting articles for publication and reference writing examples. Can be at the back of the journal and the journal website.

### **Copyright Notice**

Copyright of articles in the Journal of Education, Language, and Cultural Studies, Faculty of Education, Prince of Songkla University, Pattani campus is the author's and the Faculty of Education. All articles submitted for publication will be assessed by a group of distinguished reviewers. The Faculty of Education and the editorial board claim no responsibility for the contents or views expressed by the authors of individual articles. Copying is allowed freely, provided acknowledgement is made thereof, and within the scope of copyright law.