

Enhancing Early Childhood Pre-service Teachers' Competency in Designing Learning Experiences for Promoting Young Children's Emotional and Social Intelligence through the Phenomenon-Based Learning Approach

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Abstract

This research aimed (1) to develop a phenomenon-based learning (PhenoBL) approach for enhancing early childhood pre-service teachers' competency in designing learning experiences to promote emotional and social intelligence (ESI) in young children, and (2) to examine the effectiveness of the developed approach. The study employed a research and development (R&D) methodology. Data were collected using a competency assessment rubric, self-reflection, and observation forms, and were analyzed through descriptive statistics and content analysis. The results revealed that the developed PhenoBL approach comprising five learning stages: (1) phenomenon exploration, (2) questioning and planning, (3) investigation and collaboration, (4) synthesis and communication. After implementation, pre-service teachers demonstrated significant improvement in their competencies in designing learning experiences that foster emotional and social intelligence in early childhood. The findings suggest that the PhenoBL approach effectively enhances pre-service teachers' creativity, problem-solving ability, and understanding of holistic child development.

Keywords: phenomenon-based learning, early childhood education, emotional and social intelligence, learning experience design, teacher competency

1. Introduction

In the 21st century, early childhood education has emphasized the development of holistic competencies in both learners and educators. Emotional and social intelligence (ESI) are regarded as foundational skills that contribute to children's lifelong learning, interpersonal relationships, and self-regulation. Pre-service teachers, as future educators, must be competent in designing learning experiences that integrate emotional and social development with academic learning. However, teacher education programs in Thailand often prioritize theoretical knowledge over practical experience, resulting in a gap between pedagogical understanding and classroom application (Bhiromrat, 2023). The phenomenon-based learning (PhenoBL) approach, originating from Finland's curriculum reform, offers a pedagogical framework for connecting real-world phenomena with multidisciplinary learning. It emphasizes inquiry, collaboration, and reflection—processes that foster emotional engagement and social interaction among learners (Friman et al., 2021). Therefore, this research aimed to develop and implement a PhenoBL approach specifically tailored for early childhood pre-service teachers, focusing on designing learning experiences that promote emotional and social intelligence in young children.

2. Objective

To develop and evaluate the quality of a learning experience approach based on the phenomenon-based learning concept that can enhance emotional and social intelligence skills among early childhood pre-service teachers.

3. Literature review

Emotional and Social Intelligence (ESI) in Early Childhood Education

Emotional and social intelligence (ESI) is a foundational aspect of children's holistic development, encompassing self-awareness, empathy, emotional regulation, and prosocial behavior (Goleman, 1995; Denham et al., 2012). In early childhood education, ESI is closely linked with socio-emotional learning (SEL), which helps children develop emotional stability, interpersonal understanding, and conflict resolution skills—critical attributes for school readiness and lifelong well-being. Goleman's (1998) model defines ESI as a set of competencies involving emotional awareness, self-management, motivation, empathy, and social skills. Similarly, Mayer, Salovey, and Caruso (2004) conceptualize emotional intelligence as the capacity to perceive, understand, and regulate emotions effectively. In the early years, these skills are developed through guided play, storytelling, and peer interactions.

Research emphasizes that teachers play a decisive role in shaping children's ESI by modeling positive emotional responses and fostering emotionally supportive classroom environments (Denham et al., 2012). Therefore, pre-service teachers must acquire the competencies to design learning activities that intentionally nurture emotional expression and social connection.

Teacher Competency Framework and Professional Preparation

Teacher competency encompasses the integration of knowledge, skills, values, and attitudes necessary to deliver effective teaching and learning (Shulman, 1987; Darling-Hammond, 2017). According to Thailand's *Teachers' Council Professional Standards (2020)*, early childhood educators must demonstrate competencies in curriculum design, child development understanding, classroom management, and learning innovation. Pre-service teacher education programs aim to build these competencies through coursework and practicum experiences. However, several studies reveal that many pre-service teachers struggle to connect theory to practice, particularly in designing developmentally appropriate and emotionally responsive learning environments (Bhiromrat, 2023). The transition from knowledge acquisition to pedagogical application requires opportunities for **experiential learning** and **reflective practice**. Kolb's (1984) experiential learning cycle comprising experience, reflection, conceptualization, and experimentation—serves as a guiding framework for developing reflective teachers capable of adapting to real-world classroom challenges.

Phenomenon-Based Learning (PhenoBL)

Phenomenon-Based Learning (PhenoBL) originated from Finland's curriculum reform (Friman et al., 2021). It represents an interdisciplinary learning approach that engages learners in exploring real-world phenomena that cut across subject boundaries. PhenoBL encourages students to construct knowledge collaboratively, investigate authentic problems, and synthesize understanding through inquiry and reflection. Unlike traditional subject-based instruction, PhenoBL emphasizes *holistic learning experiences* that integrate multiple domains of knowledge. In teacher education, it offers a practical framework for developing 21st-century teaching competencies—such as critical thinking, creativity, and collaboration (Hakkarainen, 2020; Jongyung, 2025).

PhenoBL aligns with constructivist and sociocultural theories of learning (Vygotsky, 1978). Learners construct meaning through interaction and contextual engagement. For pre-service teachers, this approach promotes professional growth by allowing them to act as designers of meaningful, inquiry-based experiences for children (Lee & Hong, 2020). In the context of early childhood education, applying PhenoBL helps pre-service teachers understand children's learning through phenomena in their everyday world—such as weather, environment, community life, and emotions—thereby supporting cognitive, emotional, and social integration

Integrating PhenoBL and Emotional–Social Learning

PhenoBL provides a fertile ground for emotional and social development because it inherently involves collaboration, reflection, and real-world relevance. When pre-service teachers engage in phenomenon-based projects, they experience the same processes that foster ESI—such as empathy, communication, and cooperative problem-solving (Friman et al., 2021). Furthermore, PhenoBL's reflective component allows learners to examine their emotional responses, enhancing self-awareness and social understanding. These align closely with Goleman's (1995) dimensions of emotional intelligence and Schon's (1983) concept of the "reflective practitioner."

Integrating PhenoBL into teacher education thus supports not only pedagogical competency but also emotional literacy and interpersonal sensitivity critical attributes for early childhood educators who shape the emotional lives of young children (Denham, 2006; Darling-Hammond, 2017).

Research Gap and Conceptual Framework

Despite increasing global attention on emotional and social learning, limited studies have explored structured approaches for embedding these competencies within pre-service teacher education in Thailand. Previous research has focused on classroom management, technology integration, or lesson planning but rarely on emotional and social intelligence development through PhenoBL (Bhiromrat, 2023). Therefore, this study sought to develop a **PhenoBL-based instructional model** that equips early childhood pre-service teachers with the competency to design learning experiences fostering ESI in young children. The conceptual framework integrates:

1. Goleman's (1995) ESI dimensions,
2. Kolb's (1984) experiential learning cycle, and
3. Lonka's (2018) PhenoBL structure.

This integration provides a holistic foundation for preparing emotionally intelligent and pedagogically innovative early childhood educators.

4. Methodology

This research followed a **Research and Development (R&D)** design based on Borg and Gall's (1989) framework, which consisted of the **implementation and evaluation of its effectiveness**.

The validated approach was implemented with **first-year pre-service teachers** enrolled in the Learning Experience Design for Promoting Young Children's Emotional and Social Intelligence course at the Faculty of Education, Suan Sunandha Rajabhat University during the second semester of the 2024 academic year.

Research Instruments

1. **Self-Reflection** : collected participants' reflections on their emotional awareness, collaboration, and creativity throughout the PhenoBL process.
2. **Observation Form** : used to assess group dynamics, participation, and communication skills during implementation.

Data Analysis

Quantitative data (rubric scores) were analyzed using **mean ($\bar{X}$)**, **standard deviation (S.D.)**, and **paired-sample t-test** to determine improvement in competencies. Qualitative data (journals and observations) were analyzed using **content analysis**, identifying recurring themes in participants' reflections related to emotional growth, teamwork, and pedagogical design.

5. Results

Effects on Teacher Competency

After implementation, pre-service teachers showed a **significant improvement ($p < .05$)** in all competency dimensions:

- **Pedagogical Design Competency:** Ability to design integrated, child-centered learning experiences.
- **Emotional Intelligence Competency:** Awareness of emotions, empathy, and classroom application.
- **Social Intelligence Competency:** Communication, teamwork, and positive relationship-building.

The average competency score increased from **3.25 (pre-test)** to **4.52 (post-test)** on a 5-point scale, indicating substantial progress.

Qualitative Findings from Reflection

Content analysis revealed three major themes:

1. **Empathic Awareness:** Participants became more sensitive to children's emotions and peers' perspectives.
2. **Collaborative Learning:** Group projects enhanced teamwork, listening, and negotiation skills.
3. **Transformative Thinking:** Pre-service teachers recognized that emotional–social learning could be embedded naturally in play, storytelling, and inquiry-based activities.

Participants described the PhenoBL process as “*eye-opening*” and “*emotionally engaging*,” noting that it deepened their understanding of child development beyond theoretical coursework.

6. Discussion

The findings confirm that the phenomenon-based learning approach serves as an effective pedagogical framework for developing teacher competencies on a holistic level. Similar to the findings of Friman et al. (2021), PhenoBL empowered learners to connect cognitive inquiry with emotional engagement, resulting in a deeper and more authentic learning process.

The improvement in pre-service teachers' ESI-related competencies supports Goleman's (1995) theory that emotional intelligence can be cultivated through reflective practice and social interaction. The collaborative structure of PhenoBL allowed participants to engage in *shared problem-solving*, thereby reinforcing their social awareness and communication skills (Lee & Hong, 2020).

Furthermore, the reflective component of the model aligns with Schon's (1983) concept of the *reflective practitioner*, enabling pre-service teachers to analyze their teaching behavior, recognize emotional triggers, and adapt pedagogical strategies accordingly. The approach thus

bridges the gap between theoretical coursework and practical teaching skills, an issue widely recognized in Thai teacher education programs (Bhiromrat, 2023).

This study also emphasizes that teacher education programs should move beyond knowledge transmission toward transformative learning developing emotionally intelligent educators who can nurture empathy, resilience, and collaboration in young learners

7. Conclusion and recommendations

The study concluded that the developed **Phenomenon-Based Learning (PhenoBL) approach** effectively enhances pre-service teachers' competencies in designing learning experiences to promote emotional and social intelligence (ESI) in early childhood contexts. The key findings can be summarized as follows:

1. The PhenoBL approach demonstrated high validity and suitability, integrating theory and practice effectively.
2. Pre-service teachers significantly improved in competencies related to ESI, reflective thinking, and collaborative design.
3. The learning process cultivated essential 21st-century skills, including creativity, empathy, and problem-solving.

Recommendations

- **For Teacher Education Institutions:** Integrate PhenoBL as a core pedagogical approach in teacher preparation curricula, emphasizing reflection, teamwork, and real-world inquiry.
- **For Educators:** Use phenomena from children's everyday experiences (e.g., community life, nature, emotions) to design holistic learning activities that foster ESI.
- **For Future Research:** Replicate the study in diverse educational contexts or compare PhenoBL with other experiential approaches such as project-based or inquiry-based learning.

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