GEN TEFL Journal Volume 10, 30 Dec. 2025
E- ISSN 2520 209X and P-ISSN 2520 6648

Implementing Competency-Based Learning in High School: Administrators and Teachers Reflections on a Design Thinking Framework

Persephone Rose Arboleda

Secondary School, Thewphaingarm School, Thailand

Copyright©2025 by author, all rights reserved. Authors agree that this article remains permanently open access under the terms of the Creative Commons Attribution License 4.0 International License

Abstract

This paper presents a reflective case study on the implementation of a Competency-Based Learning (CBL) program at the high school level of a bilingual school in Thailand, using Design Thinking as the guiding framework. Initially, the secondary level trialed project-based learning integrated with Design Thinking in individual subjects. In 2025, this evolved into a structured, interdisciplinary CBL program spanning English, Math, Science, and Social Studies, delivered in two dedicated periods per week. The program aligns with real-world themes and competencies such as collaboration, critical thinking, creativity, and communication, with the Design Thinking process—Empathize, Define, Ideate, Prototype, Test—embedded in the lesson planning cycle.

The study examines the program from the perspectives of the academic head (author), the foreign coordinator with prior experience in both Project-Based Learning (PBL) and CBL, and the school director who has been leading curriculum development at the institutional level. Data were gathered through interviews and reflective discussions to capture qualitative insights on program goals, student engagement, and implementation experiences. Findings highlight that CBL provides greater structure, consistency, and competency alignment than PBL, while maintaining opportunities for creativity and real-world application. The reflections also emphasize the importance of collaborative planning, adequate preparation time, and ongoing teacher professional development. The case contributes to the growing body of knowledge on integrating CBL with Design Thinking in bilingual secondary education.

Keywords**:** Competency-Based Learning; Design Thinking; bilingual education; high school; interdisciplinary learning; reflective case study

I. Introduction

Competency-Based Learning (CBL) has emerged as an educational approach that emphasizes mastery of clearly defined skills and competencies, with a focus on real-world application and long-term learner growth. Unlike traditional models that measure progress by time or seat hours, CBL prioritizes what students can do with the knowledge they have acquired. Increasingly, this model is being implemented worldwide as part of efforts to align education with 21st-century demands such as critical thinking, creativity, collaboration, and communication (Voogt & Roblin, 2012).

At Thewphaingarm School, the primary level introduced Project-Based Learning (PBL) in 2021, which allowed for flexible, interest-driven projects, often through STEM activities. According to the foreign coordinator, PBL created high levels of engagement and curiosity, giving students opportunities to connect learning with real-life contexts.

In 2022, the author of this paper developed and introduced a Design Thinking (DT) approach for high school, specifically to align with the PBL model used in the primary level. This adaptation ensured that while primary students engaged in weekly PBL sessions, high school students could experience a comparable, project-based process integrated into their regular subject lessons. Using the five stages of Design Thinking—Empathize, Define, Ideate, Prototype, and Test—teachers guided students through problem-solving projects relevant to their subjects. This fostered creativity, critical thinking, and practical application of knowledge, although the projects at that time largely remained subject-specific rather than interdisciplinary.

In 2025, the school unified its learning approach across all levels with a formal CBL program. In high school, the

program is delivered through two dedicated weekly CBL periods in English, Math, Science, and Social Studies. These projects follow the DT stages over a two-week cycle, enabling students to explore interdisciplinary themes connected to real-world challenges such as sustainability, community development, and digital literacy. Importantly, the program is situated within Thailand's educational innovation "sandbox," giving the school flexibility to design its own competency-based curriculum, with the primary curriculum already submitted to the Ministry of Education for review and the secondary curriculum in progress.

This paper presents a reflective case study focusing on administrative and teacher perspectives on the initial implementation of high school CBL. It highlights program goals, the rationale for the transition from PBL to CBL, and reflections on student engagement, competency development, and implementation support. It discusses the program's structure, perceived benefits, and future opportunities for strengthening the model, aiming to contribute to best practices in bilingual secondary education.

II. Methodology

This study employs a reflective case study design to examine the first semester implementation of the Competency-Based Learning (CBL) program in the high school level of a bilingual school in Thailand. The case study approach allows for an in-depth exploration on how institutional goals, curriculum design, and classroom practices intersect during the program's first semester.

Scope and Setting:

The study focuses on the high school CBL program implemented in 2025, which integrates English, Math, Science, and Social Studies into interdisciplinary projects delivered in two dedicated CBL periods per week. Each project follows the DT stages—Empathize, Define, Ideate, Prototype, and Test—over a two-week cycle, with themes aligned to real-world issues such as sustainability, community development, and digital literacy.

Participants:

The reflections analyzed in this study represent three perspectives:

1. The academic head (author), who designed the DT framework for high school and oversaw the shift to CBL.
2. The foreign coordinator, who has experience implementing both PBL and CBL and provided insights from teaching and coordination roles.
3. The school director, who articulated the institutional goals and vision behind CBL, including its alignment with national educational reforms and competency frameworks.

Data Collection:

Data were collected through:

1. Semi-structured interviews were conducted with the foreign coordinator and school director to gather reflections on PBL, the shift to CBL, and program implementation.
2. Researcher reflections from the academic head on the design, implementation, and observed outcomes of the program.

Operational Definitions:

Competency-Based Learning (CBL): An instructional approach focused on mastery of defined skills and competencies through real-world and interdisciplinary learning experiences.

Design Thinking (DT): A five-stage process (Empathize, Define, Ideate, Prototype, Test) used to guide the planning and execution of CBL projects.

Reflective case study: A descriptive and analytical examination of a specific educational implementation based on the lived experiences and perspectives of key stakeholders.

Data Analysis:

Interview transcripts and researcher reflections were analyzed thematically to identify recurring patterns and insights related to student engagement, perceived benefits, and opportunities for program refinement. The analysis prioritized themes that highlighted the strengths of the CBL approach and the ways in which the DT framework supports its implementation.

III. Results and Discussion

A. Competency Goals and Institutional Context

According to the school director, Thewphaingarm School's CBL framework emphasizes the development of six key competencies: self-management, high-level thinking, communication, teamwork, citizenship, and sustainable coexistence with nature and science. The school began piloting the model under the name Daily Life Skills, positioning itself as a pioneer within Thailand's educational innovation "sandbox." As a result, the school has been able to design and implement its own competency-based curriculum, independent of the national core curriculum. This initiative has already led to a full competency-based curriculum for the primary level submitted to the Ministry of Education, with secondary-level design currently in progress. This institutional commitment underscores the school's role as a model for nationwide adoption of competency-based education.

B. Teacher Reflections on Transition from PBL to CBL

The foreign coordinator, who previously taught under the PBL framework, reflected on both its strengths and its evolution into CBL. PBL fostered student engagement, curiosity, and creativity by allowing flexible, interest-driven projects. However, with CBL, teachers observed an added clarity of learning goals and stronger alignment with 21st-century competencies. Unlike PBL, where outcomes varied across classrooms, CBL integrates pre-planned themes connected to real-world contexts such as sustainability, digital literacy, and community health. Teachers found this

structure valuable for ensuring consistency while still maintaining opportunities for student creativity.

C. Strengthening Competency Development

From both administrative and teaching perspectives, the CBL model supports deeper development of competencies compared to PBL. The structured two-week project cycle, guided by the Design Thinking process, helps students connect knowledge across English, Math, Science, and Social Studies. Teachers observed that this not only strengthened collaboration and communication but also encouraged students to transfer skills to authentic, real-life situations. Furthermore, the school's emphasis on mastery, where progress is measured by competency rather than time, has allowed students to demonstrate skills at their own pace.

D. Student Response and Engagement

Teacher feedback indicates that students have responded positively to CBL, showing greater confidence in teamwork, critical thinking, and reflective practices. Themes rooted in real-world issues have helped students connect classroom learning to their own lives, increasing motivation and engagement. The foreign coordinator noted that CBL encouraged students to approach learning as problem-solving rather than task completion, leading to a noticeable shift in classroom dynamics.

E. Support for Implementation

Teachers emphasized the need for dedicated planning time, sufficient resources, and ongoing professional development to ensure the success of CBL. Administrative leaders echoed this need, highlighting the importance of collaborative lesson design and reflective practices. These supports were seen as essential for sustaining the quality and integrity of the program as it expands across grade levels.

F. Connection to Literature

The findings resonate with existing studies highlighting the strengths of competency-based frameworks supported by structured models like Design Thinking (Koh et al., 2015; Thammaprateep, 2023; Sukhum & Vanichwatanavorachai, 2023). They also align with research suggesting that embedding real-world contexts in learning enhances student engagement and long-term skill transfer (Voogt & Roblin, 2012; Saengsawang & Kornpoung, 2024).

IV. Conclusions

This reflective case study highlights the successful implementation of a Competency-Based Learning program at Thewphaingarm School, framed through Design Thinking. From the institutional perspective, CBL provides a clear pathway for building core competencies that align with national and global educational goals. From the teacher perspective, the structured approach ensures consistency, deeper skill development, and authentic student engagement, while retaining opportunities for creativity. The study also emphasizes the importance of sustained teacher support, professional development, and collaborative planning. As the school positions itself as a model for competency-based education in Thailand, these early reflections contribute to the ongoing refinement of practice and provide insights for other institutions adopting similar frameworks.

Acknowledgment

The author would like to express gratitude to the school director, Mr. Dulyarit Chindaphun, and the foreign coordinator, Mrs. Megha Chand, for generously sharing their insights and reflections that greatly contributed to this study. Sincere thanks are also extended to the administration, teachers, and colleagues at Thewphaingarm School for their continuous support in the implementation of the Competency-Based Learning program.

References

Brown, T. (2008). Design thinking. Harvard Business Review, 86(6), 84–92.

Chatmaneerungcharoen, S. (2024). Whole school professional development for competency-based instruction through professional learning community in Phuket Province. Journal of Education and Innovation, 26(1), 87–101.

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

Saengsawang, P., & Kornpoung, A. (2024). Developing a competency-based integrated learning unit using problem-based learning to promote the competence of learners in self-development schools of Phitsanulok Province. Journal of Education and Innovation, 26(2), 248–262.

Sukhum, C., & Vanichwatanavorachai, S. (2023). Competency-based learning design: Concepts, instructional design and learning evaluation. Research and Development Journal Suan Sunandha Rajabhat University, 15(1), 65–78.

Thammaprateep, J. (2023). Development of learning design for competency-based learning of science teachers by using self-directed learning strategies. STOU Education Journal, 16(2), 123–140.

Voogt, J., & Roblin, N. P. (2012). A comparative analysis of international frameworks for 21st century competences: Implications for national curriculum policies. Journal of Curriculum Studies, 44(3), 299–321.

GEN TEFL Journal Volume 10, 30 Dec. 2025
E- ISSN 2520 209X and P-ISSN 2520 6648