



A CLIL-BASED INSTRUCTIONAL MODEL USING BUDDHIST NARRATIVE TEXTS TO
ENHANCE ACADEMIC AND CRITICAL ENGLISH READING LITERACY
AMONG BACHELOR OF EDUCATION STUDENTS

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ABSTRACT

This research study aimed to: (1) examine the level and fundamental issues of academic and critical English reading literacy among Bachelor of Education students (International Program); (2) develop a Content and Language Integrated Learning (CLIL)-Based Model for Bachelor of Education students (International Program); (3) compare the effectiveness of academic and critical English reading literacy before and after using a Content and Language Integrated Learning (CLIL)-Based Model among Bachelor of Education students (International Program); and (4) evaluate the satisfaction of Bachelor of Education students (International Program) at Mahachulalongkornrajavidyalaya University toward a Content and Language Integrated Learning (CLIL)-Based Model. The sample group was 35 second year Bachelor of Education students (International Program), selected by Random Sampling Method. This study employed a Research and Development (R&D) methodology combining by mix methods which consist of four phases.

The research findings revealed that:

The CLIL-based model was associated with significant improvement in students' academic and critical English reading literacy, with post-test scores showing a mean score of 45.86 and a standard deviation of 4.73, surpassing pre-test scores with a mean score of 32.40 and a standard deviation of 5.21. This yielded an average increase of 13.46 points, with $t(34) = 11.87$ and $p < .05$. Furthermore, students expressed a high level of overall satisfaction, with a mean score of 4.05 and a standard deviation of 0.58. Among the evaluated aspects, the Culture dimension received the highest rating, with a mean score of 4.31 and a standard deviation of 0.49, whereas the Cognition dimension recorded the lowest score, with a mean score of 3.81 and a standard deviation of 0.68, though it remained at a high level. This study proposes a new conceptual framework, which extends the CLIL 4Cs by incorporating schema bridging between students' first-language knowledge and target-language reading, a staged progression from rote memorization to critical reading, and explicit accommodation of student diversity between monastic and lay students.

Keywords: Content and Language Integrated Learning (CLIL); academic English reading literacy; critical English reading literacy; Buddhist narrative texts.

INTRODUCTION

The widespread use of English is particularly significant for students who aspire to pursue higher education, as it is often the primary language of instruction, research publications, and academic discourse. The dominance of English in academic settings allows students to access a wealth of scholarly resources, including international journals, conferences, and online databases, which are predominantly available in English. Proficiency in English enables students to participate effectively in global academic communities, fostering academic collaborations and networking opportunities essential for scholarly and professional growth (Kirkpatrick, 2011). Furthermore, Dearden (2014) stated that many universities offer programs exclusively in English to attract international students, facilitating a multicultural and diverse academic environment. As a result, universities in non-English-speaking countries have integrated English-medium instruction (EMI) into their curricula to enhance students' competitiveness in the global job market. The increasing prevalence of EMI reflects the growing demand for graduates who are proficient in English, capable of engaging in international business, diplomacy, and academia.

The ability to read, understand, integrate, and restate ideas from academic texts is essential for university students' academic achievement. In higher education, peer-reviewed materials such as journal articles are highly valued because they reflect the development of knowledge and scholarly thinking. However, these texts can be difficult for newcomers to understand because they often use abstract and specialized language to convey institutional knowledge rather than everyday experience (Dardjito et al., 2023). This difficulty is even greater for students who do not speak English as their first language. Particularly when considering that the enormous requirements of academic reading encountered by students in higher education significantly differ from those confronted by students in lower education. Lee & Spratley (2010) demonstrated that higher education students are often expected to engage with and make sense of large quantities of intricate and information dense texts within constrained timeframes. Additionally, academic writing tends to be highly compressed and precise, requiring even capable readers to draw on advanced interpretive and analytical literacy to derive meaning.

The most immediately visible challenges that Thai university students face in academic English reading are linguistic in nature. Empirical studies conducted in Thai higher education contexts have consistently documented limited academic vocabulary knowledge

as a primary barrier to reading comprehension. While general English vocabulary instruction is provided throughout primary and secondary schooling, the specialized academic vocabulary that populates EMI course materials including the high frequency academic lexis catalogued in Coxhead's (2000) Academic Word List and the low frequency technical terminology of individual disciplines is largely absent from Thai EFL curricula. The research suggests that readers need to know approximately 95-98% of the words in a text to achieve adequate comprehension, a threshold that many Thai university students struggle to meet when confronted with authentic academic texts.

Beyond linguistic difficulties, EMI students face significant cognitive and metacognitive challenges in academic and critical English reading. Research in both L1 and L2 reading has established the central importance of strategic reading the deliberate, goal directed use of cognitive and metacognitive processes to monitor, regulate, and enhance (Pressley & Afflerbach, 1995). Skilled academic readers engage in a repertoire of strategies including previewing text structure, activating prior knowledge, self-questioning, making inferences, monitoring comprehension breakdowns, and adjusting reading rate and focus according to purpose. Studies conducted with Thai university students in EMI contexts suggest that strategic reading behavior is underdeveloped relative to the demands of academic text processing. Content and Language Integrated Learning (CLIL) offers a theoretically principled and pedagogically actionable response to the academic and critical reading challenges documented in the preceding sections. Empirical evidence from Asian higher education settings including Lo's (2020) study of Hong Kong EMI students findings from Indonesian university contexts confirms that CLIL-informed scaffolding approaches can produce measurable improvements in academic reading comprehension, critical thinking engagement, and students' confidence, suggesting that the systematic integration of CLIL principles into Thai EMI reading instruction represents a well-evidenced and contextually appropriate pathway toward closing the academic literacy gap.

RESEARCH OBJECTIVES

1. To examine the level and fundamental issues of academic and critical English reading literacy among Bachelor of Education students (International Program) at Mahachulalongkornrajavidyalaya University.

2. To develop a CLIL-Based Model among Bachelor of Education students (International Program) at Mahachulalongkornrajavidyalaya University

3. To compare the effectiveness of academic and critical English reading literacy before and after the implementation of a CLIL-Based Model among Bachelor of Education students (International Program) at Mahachulalongkornrajavidyalaya University.

4. To evaluate the satisfaction of undergraduate students in the International Programs at Mahachulalongkornrajavidyalaya University toward a CLIL-Based Model.

RESEARCH METHODOLOGY

1. Research Design

This study employed a mixed-methods Research and Development (R&D) design, consisting of four phases: (1) qualitative needs analysis, (2) instructional model development, (3) one-group pretest–posttest implementation, and (4) evaluation.

The population of this study comprised 145 second year students enrolled in the International Program at Faculty of Education, Mahachulalongkornrajavidyalaya University during the first semester of Academic year 2025. A sample of 35 students was selected using simple random sampling. The same 35 students participated across all phases of the study, including the needs-analysis interviews, the pretest–posttest implementation, and the evaluation phase.

2. Research Procedure

This study employed a mixed-methods Research and Development (R&D) design consisting of four phases: needs analysis, design and development, implementation, and evaluation.

Phase 1 Needs Analysis (R1)

This phase aimed to identify students' English reading literacy levels, challenges, and needs. Data were collected through unstructured interviews with experts and second-year undergraduate students. The interview guide was validated for content congruence prior to use. Data were analyzed using content analysis to inform the design of the instructional model.

Phase 2 Design and Development (D1)

Based on the findings from Phase 1, a CLIL-based instructional model grounded in the 4Cs Framework (Content, Communication, Cognition, and Culture) was developed. Three supporting instruments were designed and validated: CLIL-based English lesson plans, a reading literacy test, and a satisfaction questionnaire.

Phase 3 Implementation (R2)

The CLIL-based model was implemented with 35 second-year Bachelor of Education students in the International Program over a period of 8 weeks, using a one-group pretest–posttest design. The procedure consisted of three stages: (1) pretest administration; (2) six weeks of CLIL-based reading instruction; and (3) posttest administration and completion of the satisfaction questionnaire.

Phase 4 Evaluation

Students' learning outcomes and satisfaction were evaluated to assess the effectiveness of the instructional model and to inform recommendations for future instructional improvement.

3. Research Instruments

3.1 The interview form was reviewed by the dissertation advisor and validated by a panel of five experts using the Index of Item–Objective Congruence (IOC). All items obtained an IOC value of 1.00, exceeding the acceptable criterion of 0.50.

3.2 The CLIL-based English lesson plans were designed according to the 4Cs Framework (Content, Communication, Cognition, and Culture). The lesson plans were reviewed by the dissertation advisor and evaluated by a panel of five experts, obtaining an IOC value of 1.00, which exceeded the acceptable criterion of 0.50.

3.3 The reading literacy test was a 60-item multiple-choice test. It was reviewed by a panel of five experts and subsequently piloted with 35 students outside the target sample. Item difficulty indices ranged from 0.20 to 0.80, and item discrimination indices were at least 0.20. The overall reliability, estimated using the Kuder–Richardson Formula 20 (KR-20), was 0.70.

3.4 The satisfaction questionnaire used a 5-point Likert scale and was validated by a panel of five experts, obtaining an IOC value of 1.00, which exceeded the acceptable criterion of 0.50. Internal consistency was not examined using Cronbach's alpha, as the instrument was employed only for descriptive purposes.

4. Data Analysis and Statistics

Extensive reading records and the application of reading strategies throughout the 8 weeks intervention period were analyzed using content analysis, following qualitative research methodology. Pre-test and post-test scores on English reading comprehension were analyzed using quantitative statistics, including mean(M), standard deviation (s.d.), and

dependent samples t-test. Data regarding students' satisfaction toward the extensive reading approach integrated with reading strategy instruction were analyzed using mean(M), standard deviation (s.d.), and content analysis.

5. Research Ethics

This research was conducted in accordance with ethical principles for human subject research. The interview instrument was validated by a panel of experts prior to data collection. Informed consent was obtained from all participants before the study began, and they were informed of their right to withdraw at any time without penalty. All interviews were conducted confidentially, with audio recording and written documentation carried out only with participants' permission. Data were stored securely and used solely for academic purposes. Participant identities were protected throughout the research process, and no identifying information will be disclosed in any reports or publications without explicit consent.

RESULTS

Objective 1: To examine the level and fundamental issues of academic and critical English reading literacy among Bachelor of Education students (International Program) at Mahachulalongkornrajavidyalaya University.

The findings suggested that students experienced several interconnected difficulties in English reading, including limited vocabulary, weak reading strategies, low confidence, limited exposure to authentic academic texts, and insufficient context-specific materials. A notable gap was found between students' understanding of Buddhist concepts in their languages and ability to comprehend the same concepts in English. As Expert 2 stated, "Students can understand Buddhist concepts, but they struggle when the same concepts appear in English academic texts." Student 4 similarly reported, "When I read it in English, I cannot identify the main idea and supporting details." Another student noted, "I do not read English outside class because it is difficult and makes me feel that I am not good at English." Overall, the findings suggest that students' reading difficulties resulted from the interaction of linguistic, strategic, motivational, and instructional factors, highlighting the need for scaffolded, strategy-based, and context-specific reading instruction.

Objective 2: To develop a CLIL-Based Model among Bachelor of Education students (International Program) at Mahachulalongkornrajavidyalaya University.

An Instructional Model and an accompanying Teacher's Manual were developed employing the Content and Language Integrated Learning (CLIL) technique. The model comprised six lesson units, each constructed around a distinct Buddhist narrative theme and organized according to the CLIL 4Cs framework; Content, Communication, Cognition, and Culture. This framework was selected because it enables the simultaneous development of subject-matter knowledge and English language proficiency, rather than treating language and content as separate instructional strands.

Objective 3: To compare the effectiveness of academic and critical English reading literacy and after using a CLIL-Based Model among Bachelor of Education students (International Program) at Mahachulalongkornrajavidyalaya University.

The comparison of pre-test and post-test scores revealed that the mean post-test score was significantly higher than the mean pre-test score at the .05 level of significance, indicating that a Content and Language Integrated Learning (CLIL)-Based Model effectively enhanced students' academic and critical English reading literacy.

Table 1: Comparison of Pre-test and Post-test Scores on academic and critical English Reading Literacy

Test	n	Mean	S.D.	df	t	Sig. (2-tailed)	Cohen's d
Pre-test	35	32.40	5.21	34	11.87	.000*	2.01
Post-test	35	45.86	4.73				

Table 1 presents the comparison of Bachelor of Education students' English academic and critical reading literacy scores before and after receiving instruction through the Content and Language Integrated Learning (CLIL)-Based Model. The results indicated that the mean score of the post-test ($M = 45.86$, $S.D. = 4.73$) was significantly higher than the mean score of the pre-test ($M = 32.40$, $S.D. = 5.21$), with a mean difference of 13.46 points. A paired-samples t-test revealed that this difference was statistically significant, $t(34) = 11.87$, $p < .001$, with a very large effect size (Cohen's $d = 2.01$). These findings suggest that the CLIL-Based Model had a substantial positive impact on students' academic and critical reading literacy.

Objective 4: To evaluate the satisfaction of Bachelor of Education students (International Program) at Mahachulalongkornrajavidyalaya University toward a CLIL-Based Model.

The evaluation of Bachelor of Education students' satisfaction with the Content and Language Integrated Learning (CLIL)-Based Model indicated an overall high level of satisfaction. The highest level of satisfaction was recorded in the Culture dimension, as the content successfully connected with the students' Buddhist knowledge and beliefs. Conversely, the Cognition dimension received the lowest rating (though still at a high level), suggesting that critical thinking activities may require further refinement, as shown in Table 2.

Table 2: Students' Satisfaction with the CLIL-Based Instructional Model

Aspect	No. of items	<i>M</i>	<i>S.D.</i>	Level of Satisfaction
1. Content	5	4.13	0.58	High
2. Communication	5	3.95	0.60	High
3. Cognition	5	3.81	0.68	High
4. Culture	5	4.31	0.49	High
5. Overall Satisfaction	20	4.06	0.56	High

Table 2 presents the overall summary of undergraduate students' satisfaction toward the CLIL-Based Instructional Model. Students reported a high level of satisfaction with the CLIL-Based Instructional Model, with an overall mean score of 4.06 ($SD = 0.56$). Among the four dimensions, Culture received the highest mean score ($M = 4.31$, $SD = 0.49$), whereas Cognition received the lowest mean score ($M = 3.81$, $SD = 0.68$). Nevertheless, all dimensions were rated at a high level of satisfaction.

DISCUSSION

The findings demonstrate that the CLIL model effectively bridged students' existing conceptual knowledge in Buddhist studies with their developing English reading literacy. Consistent with Schema Theory (Carrell & Eisterhold, 1983), students possessed strong content schemata in Buddhist studies but initially lacked the linguistic schemata to activate that knowledge in English a gap the CLIL approach was designed to address. By using Buddhist narrative texts as the medium of instruction, the model enabled students to access familiar concepts through English, thereby reducing the cognitive distance between their Thai-based conceptual understanding and their English language proficiency. This aligns with the view that

language is best learned as a medium for constructing knowledge rather than as an isolated object of study (Dalton-Puffer, 2011; Agustín-Llach & Canga Alonso, 2016). The significant gains in academic and critical reading literacy suggest that locally meaningful content should be prioritized as a core design feature in CLIL models for similar higher education contexts, rather than treated as incidental.

The improvement in students' reading performance can be understood through the lens of cognitive load theory and bottom-up/top-down processing. These findings are consistent with Grabe and Stoller's (2019) theory of reading processing: students who rely excessively on word-level decoding consume cognitive resources needed for higher-order comprehension. According to Sweller (1988), unfamiliar vocabulary and complex syntax increase cognitive load beyond working memory capacity when readers lack strategies such as chunking or contextual inference. The integrated scaffolding provided in this model combining content, language, cognition, and culture likely mitigated this overload by supporting both bottom-up decoding and top-down meaning construction. These findings are also consistent with the concept of deeper learning proposed by the National Research Council (2012), which posits that meaningful gains occur through active engagement in interpretation, analysis, and application rather than through language exposure alone. However, the demanding nature of critical reading tasks, combined with many students' prior grounding in rote-memorization learning traditions, suggests that future iterations should incorporate more gradual, recursive cognitive scaffolding including explicit modeling of critical reading strategies to support this conceptual shift over a longer instructional period (Grabe, 2009).

Students reported high satisfaction with the instructional model, with the Culture dimension receiving the highest rating. This underscores the importance of integrating culturally relevant content: materials connected to students' prior knowledge, beliefs, and cultural backgrounds enhanced engagement, motivation, and comprehension. Theoretically, the study supports the view that language learning is enhanced when linguistic, cognitive, and sociocultural dimensions are integrated within a coherent framework. By contrast, the Cognition dimension received the lowest, though still high, satisfaction rating. This suggests that the demanding nature of critical reading tasks, combined with students' prior grounding in rote-memorization, may have contributed to this lower rating consistent with Grabe's (2009) distinction between critical literacy and reproductive recall. Therefore, instructional design

should address both cognitive and affective dimensions of reading difficulty, not vocabulary alone.

NEW KNOWLEDGE

This study offers both theoretical and practical contributions to the fields of CLIL, literacy education, and English language teaching, while providing a foundation for future research and innovation in content-based language instruction. On a practical level, the findings suggest that instructional design should account for learner diversity through differentiated support, in order to help monastic students whose religious education has traditionally emphasized rote memorization move gradually toward critical reading. For instance, monastic students may benefit from additional academic vocabulary and language scaffolding, while lay students may benefit from supplementary background knowledge on Buddhist content prior to engaging in analytical reading tasks.

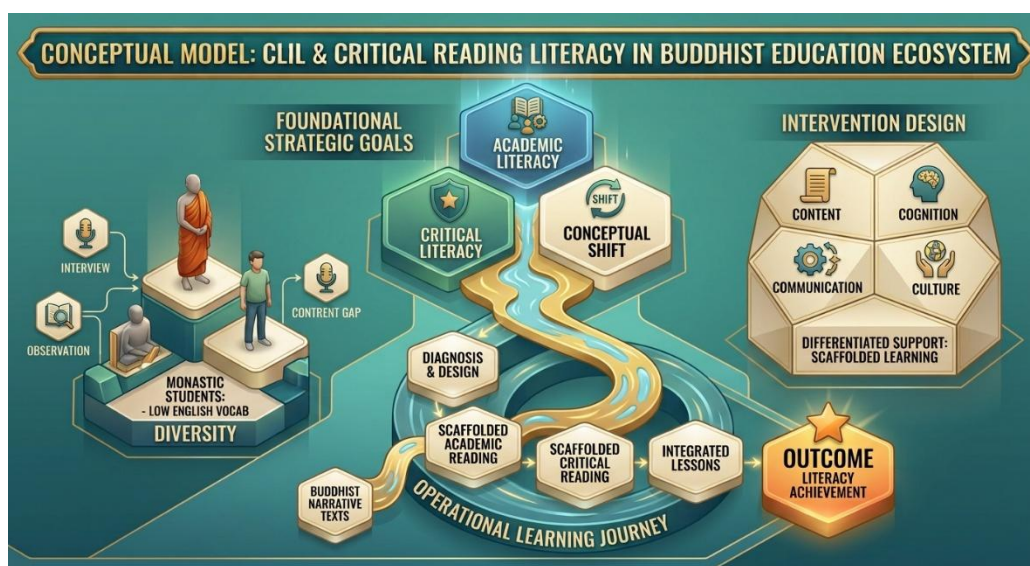


Figure 1: New Knowledge Gained from The Study

Source: Researcher's synthesis; visual design by NotebookLM, 2026.

CONCLUSIONS AND RECOMMENDATIONS

The study developed a CLIL-Based Instructional Model for enhancing English academic and critical reading literacy through Buddhist narrative texts by integrating the four dimensions of Content, Communication, Cognition, and Culture (4Cs). The findings indicated

that the model and the accompanying teacher's manual were appropriate for implementation. Students demonstrated improvement in English academic and critical reading literacy after participating in the instructional activities, while culturally relevant Buddhist narrative texts supported engagement, interpretation, reflection, and critical thinking. The model therefore provides a practical framework for integrating language learning, academic literacy, higher-order thinking, and cultural understanding in higher education. However, the findings should be interpreted with caution because the study involved only 35 students from a single institution and employed a one-group pretest-posttest design without a control group.

1. Policy Recommendations

1) Higher education institutions should promote CLIL-based instruction as an approach for integrating English language learning, academic literacy, critical thinking, and content knowledge.

2) Curriculum developers should encourage the use of culturally relevant materials, including Buddhist narrative texts where appropriate, to support meaningful and context-based language learning.

3) Institutions should provide professional development for instructors in CLIL pedagogy, critical reading instruction, culturally responsive teaching, and integrated assessment.

2. Suggestions for Utilization

1) The developed instructional model and teacher's manual may be applied in English reading, academic literacy, and critical reading courses in higher education.

2) Instructors should adapt the content, texts, activities, and language difficulty to students' proficiency levels, academic backgrounds, and learning needs.

3) Teaching activities should maintain a balance among the four CLIL dimensions—Content, Communication, Cognition, and Culture—to promote both language development and higher-order thinking.

3. Suggestions for the Next Research

1) Future studies should employ quasi-experimental or experimental designs with control or comparison groups to provide stronger evidence of the model's effectiveness.

2) Further research should include larger and more diverse samples from different universities, disciplines, and levels of English proficiency.

3) Longitudinal and mixed-methods studies should be conducted to investigate the retention of learning outcomes and to explore how each CLIL dimension contributes to academic and critical reading development.

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