



# Investigation of the use and satisfaction of content and language integrated learning approach and the 5W1H question techniques to improve tenth grade students' English reading comprehension and summary writing ability

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## Abstract

The purposes of the research were (1) to compare the ability of English reading comprehension before and after studying of tenth grade secondary students by using content and language integrated learning approach (CLIL) and the 5W1H question techniques, (2) to compare the ability of summary writing before and after studying of tenth grade secondary students by using CLIL and the 5W1H question techniques, and (3) to study the satisfaction of tenth grade secondary students toward the learning management by using CLIL and the 5W1H question techniques. The sample group of students ( $n = 42$ ) from tenth grade, class 12 in academic year 2022 was selected by cluster random sampling. The research instruments included lesson plans, an English reading comprehension test, a test to measure summary writing ability and a student's satisfaction questionnaire. The results showed that: (1) the students' ability of English reading comprehension after studying by using CLIL and the 5W1H question techniques, was higher than before with a statistical significance  $**p < .01$ ; (2) the students' ability to write a summary after studying by using CLIL and the 5W1H question techniques, was higher than before with a statistical significance  $**p < .01$ ; and (3) the students were most satisfied with CLIL and the 5W1H question techniques in instructional materials. The average score was 4.70, and overall, students were satisfied at the highest level.

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## Introduction

In today's society, we reside in a global society brimming with abundant prospects and avenues for achieving success. The English language serves as an essential instrument for individuals worldwide, enabling effective communication, education, and the pursuit of knowledge. The Ministry of Education sets learning goals and requires teachers to adapt their teaching approaches to align with 21st-century learning practices. It is essential for teachers to employ effective teaching techniques to motivate students to enhance their language skills (Office of the Education Council, 2018). Moreover, the ultimate aim of learning a foreign language is to enable learners to effectively communicate in real-life situations (Ministry of Education, 2008).

Based on the findings of the Ordinary National Education Test (O-Net) conducted between 2019 and 2021 for twelfth grade students, in 2020, the average score dropped to 2.49 compared to 2019, and in 2021, it further decreased to 2.55 (National Institute of Educational Testing Service, 2022). To delve into the issue, the researcher analysed the O-Net test results and identified one of the problems stemming from the length of passages. When students lack proper reading techniques, they struggle to comprehend the main points of the texts they encounter. Furthermore, it is crucial for teachers to possess a deep understanding of reading strategies. If teachers lack appropriate teaching materials and fail to establish sufficient activities to engage and motivate students, it may lead to a negative attitude towards English subjects. Furthermore, the skill of writing is often the last aspect that learners focus on. Writing involves a complex thought process, requiring learners to gather ideas, generate knowledge, and choose appropriate words to effectively express their thoughts (Angwattanakul, 1997). However, learners studying English as a foreign language commonly face challenges when it comes to writing. This is primarily due to the limited opportunities they have to practice writing in English in their everyday lives. To address this issue, teachers should actively promote and modify their teaching methods to enhance learners' understanding and mastery of proper writing skills. Additionally, providing more opportunities for learners to practice writing is crucial. These efforts will not only assist

learners in improving their writing abilities but also instil confidence in their capacity to communicate effectively in English.

CLIL is a dual-focused education approach in which an additional language is used for the learning and teaching of both content and language. Therefore, CLIL is flexible and can be adapted for teaching in the different environment. Thus, teachers can design their teaching by following the 4Cs Framework, which includes (1) Content (subject matter) (2) Communication (language learning and using) (3) Cognition (learning and thinking processes), and (4) Culture (developing intercultural understanding and global citizenship) (Coyle et al, 2010).

Based on the statements above, this concept corresponds to English Standard in the core curriculum. While the students are studying, they can obtain knowledge and learn about the language from the content through doing activities. Moreover, they can learn about culture at the same time.

In addition, a great technique used to help students identify the information from the text they read is 5W1H question technique. 5W1H stands for the questions who, what, when, where, why, and how (Kipling, 1912). Thus, the researcher desired to develop teaching technique especially in English reading comprehension teaching. Students will gain reading techniques, be able to understand the main points of the passage, and have a positive attitude toward learning English through an interesting method.

Therefore, the researcher was interested in conducting this research to study the development of English reading comprehension of tenth grade secondary students by using content and language integrated learning approach (CLIL) and the 5W1H question techniques.

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## Literature Review

Content and Language Integrated Learning (CLIL) is an approach to teaching where a foreign or non-native language, such as English, is used as a medium of instruction for both language and content learning. CLIL also involves learning about the culture of the target language alongside content knowledge. CLIL is a flexible learning process, and teachers can use the 4Cs Framework to guide their teaching. This framework

emphasizes four key elements: content, communication, cognition, and culture (Coyle et al., 2010). Therefore, the researcher synthesized a framework for implementing CLIL to develop learners' English reading comprehension and summary writing. The teaching process consists of four steps, as follows: Step 1, Combination (C) involves introducing various instructional materials into the lesson to help learners connect their previous experiences and knowledge with new content. Step 2, Learning (L) is a teaching process that integrates both content and language learning, as well as cultural awareness, through collaborative work among students. By encouraging independent thinking and knowledge creation, learners can develop a deeper understanding of the story that they read. Step 3, Interaction (I) is a process that emphasizes exchanging information and expressing opinions through collaborative work among learners. It enables learners to communicate effectively and convey the essence of the story they read. Step 4, Locality (L) is a process that emphasizes the application of knowledge and culture learned from the content into activities or assignments designated by the teacher, which are relevant to the learners' local context.

The 5W1H question technique was developed by Kiplin 1912, an educational researcher. The origins of the technique come from the story "The Elephant's Child" in the book "Just So Stories." This technique involves using the questions: who, what, when, where, why, and how, which are part of the 6 types of questions according to Bloom's Taxonomy (Werathummo & Khatthiyamarn, 2006). This technique is particularly useful for identifying important information in reading comprehension and is often used by researchers to design learning activities.

CLIL integrates content learning with language development. By using the 5W1H questions technique, students are encouraged to engage with the content by asking and answering questions using the target language. This practice promotes language acquisition and proficiency in a meaningful and context-rich manner. Incorporating the 5W1H questions technique in CLIL lessons makes the learning experience more interactive and engaging. Students become active participants in the learning process as they ask and answer questions, share their perspectives, and contribute to class discussions. This active involvement enhances student engagement and promotes a student-centered learning environment.

Reading comprehension involves not only understanding individual words and phrases but also comprehending the overall meaning of the text. It requires the reader to activate their prior knowledge and experiences to make connections with the text and understand the author's intended message. It is an essential skill for academic success and lifelong learning. The levels of reading comprehension start from easy to difficult, and this research used the levels of reading comprehension for understanding according to the ideas of Day, 2013, a professor of second language education at the University of Hawaii, who designed and developed reading assessment tools as the basis for assessing and developing English reading comprehension abilities using the six levels of questioning as follows: (1) Literal Comprehension, (2) Reorganization, (3) Inference, (4) Prediction, (5) Evaluation, and (6) Personal Response.

Summary writing means the process of extracting the important points from a text or speech, and rephrasing them using one's own language to make them shorter, more concise, and easier to understand, while keeping the original meaning of the content intact. The researchers used the evaluation criteria for summary writing based on the ideas of Steven D. Rinehart, Steven A. Stahl, and Lawrence G. Erickson (Rinehart et al., 1986) to develop the ability to write summaries from reading. The criteria include main idea, supporting details, reducing redundancy, use of new vocabulary and sentence construction, correctness according to language rules, and the use of punctuation marks.

Satisfaction refers to the feeling of liking and being satisfied with the learning experience among tenth grade secondary students in relation to CLIL and the 5W1H question techniques. This study aims to assess the students' satisfaction in terms of learning outcomes learning management, instructional materials, and assessment and evaluation.

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## Methodology

### *Participants*

The population consists of tenth grade secondary students during the second semester of the 2022 academic year, which includes a total of 78 students. The sample

group of this research is a group of 42 students from tenth grade, class 12 in academic year 2022 selected by cluster random sampling. The classroom was also used as a random sampling unit.

Data Collection

Before data collection, the researcher obtained research ethical approval issued by Research and Development Institute, Thaksin University. The data collection for this research was conducted as follows: (1) pretest in English reading comprehension test was conducted with 24 items and a time limit of 30 minutes to assess comprehension before the lesson. The scores obtained from the pretest were compared with those obtained from the posttest; (2) pretest was conducted using a test measuring the ability to summarize from a reading passage, consisting of 2 questions with a total time limit of 20 minutes. The scores obtained from the pretest were compared with those obtained from the posttest; (3) Managing learning with the researcher-created lesson plans, a total of 8 plans, each lasting for 2 hours, for a total of 16 hours. The researcher also served as the teacher; (4) posttest with 24 items English reading comprehension test for understanding, lasting 30 minutes; (5) posttest was conducted using a test measuring the ability to summarize from a reading passage, consisting of 2 questions with a total time limit of 20 minutes; (6) the criteria for interpreting a reading comprehension test on a 20-item questionnaire; (7) the scoring rubric for writing a summary test; and (8) to measure satisfaction

using CLIL and the 5W1H question techniques, 20 questions to be asked within 20 minutes.

Data Analysis

The data analysis conducted for this research are as follows: (1) to compare the ability to read English comprehension before and after the experiment of the sample group, a dependent *t*-test can be used to test for significant differences in the mean scores before and after the experiment; (2) to compare the ability to summarize texts before and after the experiment, a dependent *t*-test can be conducted on the non-independent data. The alternative hypothesis is that there is a significant difference in the mean score; and (3) to compare students' satisfaction by using CLIL and the 5W1H question techniques to be compared against a criterion.

Results and Discussion

The three major themes found in this study were to compare the ability of English reading comprehension before and after studying of tenth grade secondary students by using CLIL and the 5W1H question techniques, to compare the ability of summary writing before and after studying of tenth grade secondary students by using CLIL and the 5W1H question techniques, and to study the satisfaction of tenth grade secondary students toward the learning management by using CLIL and the 5W1H question techniques. The results are presented in Table 1-Table 3.

**Table 1** Result of the ability of English reading comprehension before and after studying of tenth grade secondary students by using CLIL and the 5W1H question techniques

The level of ability in English reading comprehension	Full score	Pretest score		Posttest score		<i>t</i>
		$\bar{x}$	<i>SD</i>	$\bar{x}$	<i>SD</i>	
Literal comprehension	8	5.17	0.98	6.83	1.79	5.00**
Reorganization	8	3.67	0.90	4.83	1.69	4.99**
Inference	8	2.43	1.91	5.57	1.69	9.15**
Prediction	8	1.95	2.03	5.21	1.88	7.97**
Evaluation	8	1.79	1.84	5.40	2.00	9.73**
Personal response	8	1.86	2.05	5.12	1.99	7.81**
Total	48	2.81	0.53	5.49	0.14	10.44**

Note: \*\**p* < .01.

**Table 2** Result of the ability of summary writing before and after studying of tenth grade secondary students by using CLIL and the 5W1H question techniques

The components of a summary writing	Full score	Pretest score		Posttest score		<i>t</i>
		$\bar{x}$	<i>SD</i>	$\bar{x}$	<i>SD</i>	
Main idea	4	2.21	0.44	2.77	0.52	5.78**
Supporting details	4	2.17	0.40	2.58	0.58	3.97**
Reducing redundancy	4	2.67	0.28	3.44	0.25	18.23**
Using new vocabulary and sentence construction	4	1.07	0.26	2.30	0.46	16.42**
Correctness according to language rules and the use of punctuation marks	4	2.68	0.34	2.70	0.46	0.23**
Total	20	2.16	0.08	2.76	0.12	11.34**

Note: \*\* $p < .01$ .

**Table 3** Result of the satisfaction of tenth grade secondary students toward the learning management by using CLIL and the 5W1H question techniques

Assessment list	$\bar{x}$	<i>SD</i>	Interpreting the results
learning outcomes	4.50	0.18	the highest
Learning management	4.51	0.02	the highest
Instructional materials	4.70	0.09	the highest
Assessment and Evaluation	4.73	0.05	the highest
Total	4.61	0.07	the highest

## Conclusion and Recommendation

From the information mentioned above, it can be seen that the students have a good understanding of the basic level of literal reading comprehension because they can understand the meaning and facts of the content as stated, and can use this information to answer questions directly. Meanwhile, level of reorganization has the lowest average score; students have to consider information from various parts of the entire content and organize it into new data to use in answering questions. In this case, students have to use the process of thinking to sequence the events that occur. If students miss important points, it may lead to a lack of understanding of the content they read, and therefore, they cannot answer questions accurately.

In addition, the students use of vocabulary and sentence structure was limited because of their restricted range of words. Consequently, they faced difficulties selecting appropriate synonyms to create new sentences. In some cases, they resorted to copying or truncating words from the text, which may negatively impact the clarity and coherence of their writing. As a result, it may

become more challenging for them to convey their ideas effectively.

Therefore, CLIL integrates language learning with content knowledge. By using the 5W1H questions technique, learners not only develop reading comprehension skills but also strengthen their language proficiency. They practice reading, understanding, and summarizing content-specific texts, which helps them acquire subject-specific vocabulary, language structures, and writing conventions.

The satisfaction of tenth grade secondary students towards learning organized under CLIL and the 5W1H question techniques reveals that students are most satisfied with the Instructional materials, as the teachers have designed them to be interesting, up-to-date, and diverse. They have chosen images that are relevant to the topic being discussed, which helps students to clearly link vocabulary and their meanings from the pictures. Furthermore, satisfaction in terms of learning outcomes, learning management, and assessment and evaluation is also the highest.

However, the researcher has some suggestions that are seen as beneficial for learning and education management as follows: teachers should study the

concept of CLIL and the 5W1H question techniques thoroughly before implementing them in the classroom. This will ensure the highest level of effectiveness in learning management. Moreover, teachers should explore and implement such by using a variety of teaching formats and methods; thus, teachers can help students improve their ability for efficient reading and writing.

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### Conflict of Interest

The authors declare that there are no conflicts of interest.

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