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Article

Enhancing Primary School Students' Argumentative Speaking Skills through Collective Reflection-Based Argumentation Mapping

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A B S T R A C T

This study examines the effectiveness of Collective Reflection-Based Argumentation Mapping (CR-AM) in enhancing argumentative speaking skills among primary school students. Conducted with 20 sixth-grade students at Anuban Ob-Om School in Southern Thailand, the research employed a Classroom Action Research (CAR) approach over two cycles, with data collected through pre-tests, post-tests, and observations. The assessments of students' speaking skills, conducted by pre-test and post-test evaluations, demonstrated a substantial enhancement in average speaking scores, rising from 52.75 to 70.25, with all students achieving the minimum mastery criterion. Observational data revealed elevated levels of student involvement and participation during collective reflection activities, underscoring the advantages of collaborative learning. The findings show that CR-AM effectively fosters essential language skills, preparing students for meaningful communication and critical thinking.

Keywords: *Argumentative Speaking, Argumentation Mapping, Collective Reflection, EFL, Primary Education*

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INTRODUCTION

English is the most commonly studied language and is utilized worldwide for communication. This follows its global nature, as it is learned and employed as a means of communication in many locations, serving as a first language, a second language, and a foreign language (Maghfiroh & Hikmat, 2023). English is a subject that must be learned since it remains relevant in today's global context and is an essential component in raising educational standards (Kharisma et al., 2024). English is taught as a foreign language in Thailand, similar to Indonesia, as a non-native rather than a second language. The majority of Thai people speak Basa Thai or Melayu daily. Consequently, most students are unfamiliar with English, particularly in primary school (Isty et al., 2024). Students often struggle with differences between Thai and English pronunciation, intonation, sentence structure, and alphabet (Hamilton et al., 2024). As a result, Thailand's overall proficiency in the English language is significantly lower than that of many other countries. According to the EF English Proficiency Index, Thailand is positioned 106th among 116 countries globally and 21st among 23 Asian nations (EF EPI, 2024).

Speaking is the most essential ability to develop. Speaking is one of the four language abilities (speaking, reading, writing, and listening) frequently used in daily activities. Humans utilize language for communication and comprehension. God created humans with diverse conditions and characteristics, necessitating their interaction with one another. Society uses communication as a means of conducting daily activities. One method of communication is speaking. Speaking is the most crucial aspect of English language acquisition, as it is the foundation of communication and, hence, a key skill. Communication is essential in English language acquisition (Firmansyah & Valatansa vegian, 2019). Speaking skills are vital for EFL

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primary school learners as they facilitate practical communication, boost confidence, and encourage the development of other language skills (Pittayanantakul & Phusawisot, 2024). Goh and Burns (2012) contend that practical speaking skills are crucial for young learners, since they foster active classroom participation, encourage social interaction, and improve overall language skills. Furthermore, Bygate (2009) underscores that speaking practice consolidates the grammar and vocabulary acquired through reading and writing, resulting in a more comprehensive language learning experience. These researchers contend that cultivating speaking skills in primary education improves immediate communication and establishes a foundation for future academic and social achievement. According to Vygotsky's collaborative learning theory, social interaction is crucial for cognitive development. This implies that learning is primarily a social activity in which people create knowledge and understanding through interactions. Collaborative learning activities, such as group discussions and peer tutoring, are efficient in promoting critical thinking, communication, and problem-solving skills (Vygotsky, 1978).

The majority of students who get an education in English as a foreign language, (EFL) especially Thai primary students, struggle with speaking the language. Several factors contribute to the challenges of that condition. There exist internal and external factors. The students themselves generate internal factors. These relate to personality factors. Students were hesitant to speak their thoughts. They feared that everyone would judge them. More ideas followed from the students. This relates to their surroundings, the impact of their parents, and the teaching strategies used in their school. Effective pedagogical methods are essential for the successful learning of languages in education (Arung & Jumardin, 2016). Speaking is an integral part of thinking, learning, and communicating. Students must master speaking components to enable effective communication. Enhancing pupils' speaking skills is consistently a priority in the classroom. Effective speaking is essential, allowing individuals to dialogue, articulate ideas, and share information. Speaking involves utilizing language with a recognizable voice, articulating words, comprehending and employing language, conveying thoughts verbally, and delivering speeches (Afri et al., 2021).

Numerous techniques are available to improve students' speaking abilities. One aspect is the pedagogical method. Indeed, speech ought to be communicative and natural. The objective of employing the mind mapping technique in teaching speaking is to establish the relevant concept. Prior to speaking, students must prepare their concepts. By employing the mind mapping technique, students can effortlessly develop and apply concepts during their speech (Kurniawan, 2017). Mind mapping is a diagram or diagram that depicts the relationship between concepts or ideas, beginning with the title concept and branching into sub-concepts and sub-concepts spread out around them, similar to the appearance of brain cells. It illustrated the intricate relationship of information regarding any subject in comprehensive detail (Khamying et al., 2022). Shahab (2019) delineates several benefits of mind mapping techniques, such as improving concentration, offering clarity and engagement via visual representation, clarifying core concepts, identifying relationships between ideas, enhancing memory retention, and fostering enjoyable and creative learning experiences.

Generally speaking, argumentation seeks to increase or decrease the acceptability of a controversial viewpoint (van Eemeren et al., 1996). Structured speaking is an integral part of thinking, learning, and communicating. Students must master speaking components to enable effective communication. Arguments are necessary for persuasive conversations, general decision-making, and drawing acknowledged conclusions (Duschl & Osborne, 2002). Argumentation is a ubiquitous staple of everyday communication and thinking (Kuhn, 1992). Argumentation is crucial for everyday communication and cognition, and it considerably enhances various skills, including communication, teamwork, and problem-solving. Argumentation is a dialogic process involving two or more individuals. Scientific argumentation involves coordinating facts and theory to advance explanations, models, predictions, or evaluations. Therefore, a crucial factor for engaging learners in classroom argumentation processes is the establishment of practical settings and conditions for such discourse. Evidence indicates that argumentation is promoted in contexts that allow and

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encourage student-student interaction. Toulmin for Argumentation provides a formal framework for analysing and structuring arguments in everyday contexts. The approach assists in dissecting an argument by emphasising the critical relationship between claims, evidence, and underlying reasoning to assess its strength and validity (Toulmin, 2003).

Argumentative speaking skills are crucial for effective communication and critical thinking, especially in educational environments. These skills empower students to express their ideas, formulate logical arguments, and participate in productive discussions with colleagues. Research demonstrates that cultivating argumentative speaking skills improves students' capacity to articulate their viewpoints and promotes higher-order cognitive skills, including analysis and evaluation. Critical thinking serves as the foundation for citizenship in a democratic society (Iordanou & Rapanta, 2021). The ability to argue effectively allows one to go beyond simple argumentative performance. Understanding how to argue is crucial in our daily lives and vital for fostering teamwork and enhancing problem-solving abilities (Wambsganss et al., 2020). The capacity to argue is crucial to critical thinking and effective communication to persuade the reader (Iswati & Purwati, 2022).

Designing learning strategies for English as a Foreign Language (EFL) learners is crucial for developing and enhancing argumentative speaking skills (Darmawansah et al., 2022). (Raffaghelli, 2023) Argumentation mapping visually depicts collaborative arguments to illustrate students' involvement in developing argumentative discourse. Argumentation mapping is essential for supporting students' virtual social activities. Argument maps may serve as an effective instrument for visualizing arguments. They establish logical connections between statements to facilitate comprehension of the reasoning process. Furthermore, collective reflection promotes students' reflective and analytical skills through collaborative assignments and group oversight. This approach enables students to contemplate their cooperative efforts regarding argumentative knowledge, enhancing their overall understanding (Darmawansah et al., 2022).

This research will illustrate that enhancing speaking skills is essential for English language learning, since it underpins effective communication and interaction in everyday life. Despite the challenges faced by students learning English as a second language, effective teaching strategies, such as mind mapping and argumentation mapping, can enhance their speaking abilities by promoting clarity, organization, and critical thinking. Enhancing argumentative speaking skills allows students to articulate their ideas and engage in meaningful debates, so improving higher-order cognitive abilities crucial for academic and social success. By creating conducive learning environments that foster contact and collaboration, educators may improve the cultivation of these vital skills, thus preparing EFL learners for active participation in a democratic society.

Argumentation Speaking Skills

Argumentative speaking is a communicative technique designed to persuade others to embrace our viewpoints grounded in facts and robust evidence (Maghfiroh & Hikmat, 2023). Argumentation speaking skills involve the ability to clearly and effectively present a viewpoint, support it with logical reasoning and proof, and persuade others to agree with it. These skills are crucial for effective communication and critical thinking, especially in discussions and debates. Argumentation skills are acknowledged as essential academic competencies linked to discussions and debates in language development instruction (Deane & Song, 2015). Argumentation involves five stages: understanding the issue, exploring the subject, contemplating perspectives, constructing and assessing arguments, and arranging and presenting arguments. The dialogic method promotes students' development of strategies for articulating multiple complex arguments and supplying pertinent evidence to substantiate them. Students are encouraged to present counterarguments and challenge the arguments of their peers (Chen et al., 2019).

Argumentation speaking skills are required for students to express their ideas clearly and convincingly. These skills can be improved by systematic activities that utilize argumentation mapping, which visually delineates arguments and their interconnections, so promoting clearer comprehension and communication. Studies demonstrate that

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argumentation mapping can markedly enhance students' capacity to formulate and analyze arguments, consequently improving their general speaking proficiency (Davies, 2011).

Collective Reflection

Collective reflection is essential in this framework since it pushes students to interact with their peers in a dialogic process that enhances their comprehension of argumentative discourse. Research indicates that collective reflection promotes a collaborative learning atmosphere, enabling students to exchange varied viewpoints and evaluate one another's arguments, enhancing the learning experience (Quiñones et al., 2018). This collaborative method improves individual comprehension and fosters a community of learners who assist one another in developing persuasive abilities. Using collaborative reflection in argumentation procedures has enhanced the depth of insights and increased students' ability to think critically (Rosen et al., 2024).

Argumentation Mapping

Argumentation mapping is intended to illustrate all elements of arguments generated by students inside its graphical frameworks. The mapping presents boxes of various colours, each symbolizing a distinct component of the argumentation (Darmawansah et al., 2022). Argumentation mapping has become a crucial educational instrument in higher education, enhancing students' critical thinking and argumentation abilities. Rapanta and Walton examine the efficacy of argument maps as an evaluative instrument, proposing that their incorporation into educational systems can improve collaborative learning experiences, especially when paired with dialogical approaches (Rapanta & Walton, 2016).

However, the research does not explicitly show how these methodologies may be implemented in dialogical contexts, when a partner may offer critical questions in order to shift the burden of evidence. The potential for collaborative learning via argument mapping is recognized. This corresponds with the research by Yıldızlı and Şimşek, which examined software-assisted argument mapping and its beneficial impact on academic performance in a postgraduate course. The authors utilized a mixed-methods approach, demonstrating that students enhanced their argumentation skills and articulated positive views toward the mapping applications, suggesting a wider acceptance of this technology in educational contexts. Moreover, argumentation mapping has been associated with other fields, such as law and computer science, as highlighted by Deplano, who underscores its significance in promoting substantive learning (Adekoya, 2018). Rinner examines the utilization of argumentation mapping in collaborative decision-making environments, emphasizing its significance in spatial decision support systems (Rinner, 2006). The systematic framework of argument mapping facilitates the explicit recognition of premises and assertions, which is crucial for proficient reasoning and dialogue (Göttlinger & Schröder, 2018). Davies delineates the differences between argument mapping and alternative mapping methodologies, emphasizing its concentration on logical linkages, which can substantially enhance students' argument analysis abilities (Davies, 2011). This comprehensive method of argumentation mapping improves personal learning results and fosters a more involved and informed academic community (Robillos & Art-in, 2023).

The Interplay between Reflection and Argumentation Mapping

The interplay between reflection and argumentation mapping is notably important. Argumentation mapping offers a systematic method for students to depict their ideas, facilitating group reflection. This engagement enables students to recognize deficiencies in their reasoning and to express their ideas more coherently (Yıldızlı & ŞİMŞEK, 2022). Furthermore, the act of mapping arguments can function as a reflective instrument that encourages students to evaluate the validity and robustness of their arguments, thereby improving their critical thinking abilities (Davies, 2011). The interplay between these two processes fosters a dynamic learning environment that enables students to perpetually enhance their persuasive skills.

Implications for Primary Education

Primary education is traditionally the first level of formal education, in which children between the ages of 6 and 12 attend school. (Firmansyah, 2018). One of the basic and crucial

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skills that primary school students should acquire is decision-making (Mettas, 2011), as they are expected to go through a decision-making process in everyday life continuously (Visscher, 2021), especially about real-life controversial issues (Reznitskaya et al., 2009). Primary education establishes an essential basis for progression to other educational levels. Accomplishments significantly influence success in secondary and higher education in primary schooling (Nasution et al., 2024).

The implications for primary schooling are significant. Integrating argumentation mapping and collaborative reflection into the curriculum enables educators to foster a more interesting and successful learning environment. Studies indicate that these approaches enhance students' argumentation speaking abilities while fostering vital life skills, including critical thinking, teamwork, and effective communication (Fathinnaufal & Hidayati, 2020). Moreover, these competencies are progressively vital in a society that prioritizes informed dialogue and civic participation. Educators are therefore urged to implement these techniques to equip pupils for forthcoming difficulties in academic and social spheres (Eslit, 2023).

METHOD

This research methodology will employ a Classroom Action Research (CAR) approach, a form of reflective research that involves implementing specific actions to enhance the quality of learning practices in the classroom. It is a critical component of scientific research, as it influences the quality of the results (Marsevani & Habeebanisya, 2022). This research will focus on identifying and addressing the research problem, formulating the action plan, conducting the research, monitoring, evaluating, and interpreting the results.

The research design will comprise four processes for implementing actions, as the cycle of the Action Research Model, based on Kemmis and McTaggart (1988), cited in (Burns, 2010), indicates that Classroom Action Research (CAR) was conducted in four stages: planning, acting, observation, and reflection. The research will be conducted in two action cycles, each comprising these four stages, to systematically improve students' argumentative speaking skills through Collective Reflection-Based Argumentation Mapping.

The success of this Classroom Action Research was determined by the student's performance on the speaking assessment. The criterion for success was defined as at least 70% of the students achieving a minimum mastery score of 65 on the assessment rubric. This benchmark evaluated whether the implemented Collective Reflection-Based Argumentation Mapping (CR-AM) strategy effectively improved students' argumentative speaking skills. Meeting or exceeding this success criterion indicated that the research action was successful and that further cycles might not be necessary.

Table 1. Research Stages

Stage	Activities Included	
	Cycle 1	Cycle 2
Planning	Giving a pre-test to assess students' initial speaking abilities and preparing lesson plans introducing the argumentation mapping strategy.	Developing a collective reflection-based argumentation mapping strategy and preparing a post-test
Acting	Administering pre-test and teaching argumentation mapping	Teaching advanced argumentation mapping, facilitating collective reflection sessions, and administering post-test
Observation	Monitoring students' engagement, difficulties, and performance on the pre-test	Monitoring students' participation, engagement, and performance on the post-test
Reflection	Analyzing pre-test results and observation notes to identify areas for improvement	Analyzing post-test results and evaluating the effectiveness of collective reflection-based argumentation mapping

Participants

This research involves sixth-grade students at Anuban Ob-Om School in Satun, Southern Thailand. Twenty students will participate in activities designed to improve their argumentative speaking skills. Purposive sampling was implemented to identify students who satisfied the research criteria according to the school's Master of English, who

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recommended the participants. Evaluations and analyses of the students' speaking competencies will be conducted before and after implementing these activities.

Instruments

The research instruments that will be used in this study will include simple tools to assess students' argumentative speaking skills and their participation in collective reflection-based argumentation mapping activities, such as a rubric of argumentative speaking assessment tool:

Table 2. The Rubric of Students' Argumentative Speaking Skills

Components of Argumentative Speaking	Score	Level	Indicators
Pronunciation	4	Excellent	Clear and easy to understand with very few errors
	3	Good	Mostly clear, some words mispronounced
	2	Fair	Sometimes unclear, requires repetition
	1	Poor	Often unclear and difficult to understand
Fluency	4	Excellent	Speaks smoothly with few pauses
	3	Good	Speaks fairly smoothly with occasional pauses
	2	Fair	Speaks with frequent pauses and hesitations
	1	Poor	Speaks with many pauses and difficulty continuing
Vocabulary Usage	4	Excellent	Uses appropriate and varied vocabulary
	3	Good	Vocabulary is moderately appropriate, still simple
	2	Fair	Vocabulary is limited, repetition of words
	1	Poor	Vocabulary is very limited, difficult to convey intent
Grammatical Accuracy	4	Excellent	Simple sentences are grammatically correct
	3	Good	A few grammatical errors do not hinder comprehension
	2	Fair	Grammatical errors are fairly frequent, sometimes confusing
	1	Poor	Many grammatical errors, difficult to comprehend
Clarity of Argument	4	Excellent	Claims and reasons are very clear and well supported
	3	Good	Claims and reasons are mostly clear with some support
	2	Fair	Claims and reasons are somewhat unclear or weak
	1	Poor	Claims and reasons are unclear or missing

During collective reflection-based argumentation mapping activities, an observation checklist will be utilized to monitor student engagement and participation. The checklist will include items such as:

Table 3. Observation Checklist

Observation Checklist	Score	
	Yes	No
Active Participation		
Use of Argumentative Vocabulary		
Confident Level		
Peer Interaction		

Procedures

The Classroom Action Research (CAR) study was conducted to enhance primary school students' argumentative speaking skills through Collective Reflection-Based Argumentation Mapping in two cycles. In Cycle 1, the planning stage involved preparing lesson plans that introduced the argumentation mapping strategy and designing a pre-test to assess students' initial speaking abilities. During the acting stage, the pre-test was administered individually, where students expressed their opinions on a simple topic, followed by lessons that guided them to create argument maps and engage in collaborative collective reflection sessions. These activities aimed to develop their argumentative speaking skills through group discussion and practice. Throughout the lessons, observations were made to record students' participation, engagement, difficulties, and performance on the pre-test. In the reflection stage, the researcher analyzed the pre-test results and observation notes to identify areas needing improvement and planned adjustments for the next cycle.

In the second cycle, the planning involved revising the lesson materials based on insights gained from the first cycle and preparing a post-test with a different topic but assessed using the same criteria as the pre-test. The teaching phase featured more advanced argumentation mapping exercises and additional support to encourage deeper critical thinking and speaking

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practice. Following that, each student took an independent post-test. Students' fluency, pronunciation, vocabulary usage, grammatical accuracy, and clarity of argument were the main focus of the observations, which were thoroughly documented using an observation checklist. This review helped determine whether further cycles were needed or if the research goals had been met. The observation checklist used after the second cycle provided a structured way to evaluate students' active participation, use of argumentative vocabulary, confidence level, and peer interaction in collective reflection, ensuring a thorough assessment of their progress in argumentative speaking.

Data Analysis

This research employed a mixed-methods approach to data analysis, integrating both quantitative and qualitative strategies to evaluate the effectiveness of enhancing primary school students' argumentative speaking skills through collective reflection-based argumentation mapping. Quantitative analysis was conducted by comparing pre-test and post-test scores using descriptive statistics to evaluate improvements in fluency, pronunciation, vocabulary usage, grammatical accuracy, and clarity of argument. Meanwhile, qualitative analysis involved coding and interpreting data from classroom observations to uncover recurring themes related to active participation, use of argumentative vocabulary, confident level, and peer interaction. This dual analysis method enabled a comprehensive evaluation of impact collective reflection-based argumentation mapping on students' English argumentative speaking and classroom dynamics.

FINDINGS AND DISCUSSION

Findings

The present research aimed to examine the effectiveness of Collective Reflection-Based Argumentation Mapping (CR-AM) in enhancing argumentative speaking skills among primary school students in an EFL context. The research gathered data on students' speaking abilities before and after the intervention using a combination of classroom observations, student performance assessments, and reflective group discussions. Upon examination, the results indicated that students experienced a substantial ability to organize and articulate arguments and increased confidence in participating in argumentative discussions. The criteria marked the result of the pre-test and post-test show that collective reflection-based argumentation mapping has been proven to enhance primary school students' argumentative speaking skills.

This research indicates that following Collective Reflection-Based Argumentation Mapping (CR-AM), primary school students exhibit a substantial enhancement in their argumentative speaking skills. The quantitative data obtained from pre-test and post-test evaluations indicates a significant increase in average speaking scores, rising from 52.75 before the intervention to 70.25. The accomplishment of all participating students achieving the minimum mastery criterion of 65 further emphasizes the effectiveness of the CR-AM method in developing crucial language skills among English as a Foreign Language (EFL) learners. The collaborative nature of CR-AM enhanced speaking abilities and created a favourable learning environment for skill development, according to observational data gathered during the study, which also showed notable levels of student involvement and active participation. The following sections detail the specific areas of improvement observed during the research.

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Statistics

PRETEST

N	Valid	20
	Missing	0
Mean		52.75
Median		50.00
Std. Deviation		9.662
Minimum		40
Maximum		65

Figure 1. Statistical Data of Pre-Test
Source: Processed data with SPSS 29.00

The statistical data in the table above indicate that valid pre-test responses were obtained from 20 students, with no missing data. The data showed that the mean score of students' speaking skills was 52.75, indicating the average performance of the participants. The median score, representing the middle value when the scores are arranged in order, was 50.00. The standard deviation was 9.662, suggesting moderate variability in the scores. Additionally, the minimum score achieved was 40, below the minimum mastery criterion. The minimum mastery score was 65, while the maximum score was also 65; this data showed that the score met the criteria. According to that analysis, the speaking skills of most sixth-grade students were still very low. These findings underscore the necessity for tailored intervention to address the skill gap and enhance argumentative speaking skills.

Statistics

POSTTEST

N	Valid	20
	Missing	0
Mean		70.25
Median		70.00
Std. Deviation		5.250
Minimum		65
Maximum		80

Figure 2. Statistical Data of Post-Test
Source: Processed data with SPSS 29.00

The statistical data in the table above indicate that valid post-test responses were obtained from 20 students, with no missing data. The data showed that the minimum score increased from 40 in the pre-test to 65, which is the minimum mastery criterion—the maximum score from 65 in the pre-test to 80. All students met the minimum mastery criterion, as shown by the mean score of 70.25, which means that, on average, they were better at speaking than they were at the pre-test. The standard deviation also decreased to 5.250, meaning the differences between students' scores got smaller. This means that their levels of skill became more consistent. These findings indicate that the pre-test and post-test mean scores improved and showed that Collective Reflection-Based Argumentation Mapping (CR-AM) effectively enhanced students' argumentative speaking, reflected in their improved test performance.

Paired Samples Test

		Paired Differences					t	df	Significance	
					95% Confidence Interval of the Difference					
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			One-Sided p	Two-Sided p
Pair 1	PRETEST - POSTTEST	-17.500	5.501	1.230	-20.075	-14.925	-14.226	19	<.001	<.001

Figure 3. Paired Samples Statistics T-Test Result
Source: Processed data with SPSS 29.00

The results of the paired samples t-test presented in the table indicate a significant difference between this study's pre-test and post-test scores. The mean difference between the pre-test and post-test is -17.500, with a standard deviation of 5.501 and a standard error of the mean of 1.230. The 95% confidence interval for the difference extends from -20.075 to -14.925,

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indicating that the value discrepancy did not arise by coincidence. The table demonstrates that the t-value is -14.226 with 19 degrees of freedom (df), signifying a significant difference. This is supported by the p-value of <0.001 for one-sided and two-sided tests, indicating that the difference between the pre-test and post-test scores with that intervention is significant. The findings offer compelling evidence that the treatment administered to each variable resulted in quantifiable enhancements, consistent with the study's aim of improving students' speaking competency via Collective Reflection-Based Argumentation Mapping (CR-AM).

Table 4. Comparison of Argumentative Speaking Test Results of Cycle 1 and Cycle 2

Criteria	Cycle 1	Cycle 2
Number of Students	20	20
Number of Values	1,055	1,405
Average Values	52.75	70.25
Highest Value	65	80
Lowest Value	40	65
Percentage	30%	100%

The table above shows the comparison results from 20 students between the pre-test and post-test from two cycles, pointing out a significant improvement in students' argumentative speaking skills. In cycle 1, the total score was 1,055, with an average (mean) score of 52.75, and the lowest score was 40, while the highest score was 65. This shows that many students have not yet reached the standard of the minimum mastery criteria. Only 6 students achieved a score above the criteria, scoring 65. After implementing the intervention in cycle 2, we observed many improvements from the students. All 20 students successfully achieved a score above the minimum mastery criteria. The total score was 1,405, with an average (mean) score of 70.25; the lowest and highest scores improved. The lowest score was from 40 to 65, and the highest was from 65 to 80. The findings indicate that all students achieved the competency threshold, which was set at 70%. This was because the success criterion was defined as mastery of a minimum standard. The percentage of students meeting the competency standard increased from 30% in cycle 1 to 100% in cycle 2, demonstrating the effectiveness of the instructional approach in improving students' argumentative speaking skills.

Table 5. Observation Checklist Results

Observation Checklist	Frequency	Percentage
Active Participation	17 out of 20 students	85%
Use of Argumentative Vocabulary	14 out of 20 students	70%
Confident Level	15 out of 20 students	75%
Peer Interaction	18 out of 20 students	90%
The Average Percentage		80%

The table above shows the observation checklist during the implementation of Collective Reflection-Based Argumentation Mapping (CR-AM) activities in cycle 2. Observation results show that students show high engagement in learning. Based on observation data, the learning activities successfully encouraged active participation and interaction between students and improved their use of argumentative language and confidence. The majority of students showed active involvement in learning activities. 17 out of 20 students, or 80%, participated in the discussion. This reflects high enthusiasm for the CR-AM activity. 14 out of 20 students, or 70%, used argumentative vocabulary well that suited their argument. 15 out of 20 students, or 75%, showed confidence when speaking or presenting arguments. This indicates that students feel comfortable and dare to express their opinions. 18 out of 20 students, or 90%, were very active in interacting with peers, which shows that the discussion and group cooperation went very well. Overall, the observation results show that students performed well in various aspects of argumentative speaking skills. The average achievement of observation indicators is 80%, which corroborates the quantitative results that the learning process runs effectively and supports the development of students' argumentative speaking skills. Thus, the learning approach can improve students' cognitive abilities (test results) and affective and social (observation results).

Discussion

The findings show a significant improvement in student argumentative speaking from cycle 1 to cycle 2, highlighting how helpful Collective Reflection-Based Argumentation

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Mapping (CR-AM) activities are for developing English speaking skills. The improvement in the mean score and the proportion of students who fulfilled the success criteria suggests that the teaching methodology adjustment improved students' argumentative speaking skills. Accordingly, the reason for this issue was studied. The research findings indicates that CR-AM is a successful approach for enhancing primary school student's argumentative speaking skills in EFL environments. Students who combine visual argumentation tools with group reflection will be more suited to arrange their ideas, build logical arguments, and participate in meaningful discussions. This method enhances critical thinking and clarity as well as learner confidence and active participation. These results ultimately highlight the importance of supportive, interactive teaching methods in developing essential communication skills, preparing students for academic success and active engagement in society.

The findings from this study demonstrate a significant improvement in primary school students' argumentative speaking skills after applying the CR-AM instructional strategy. The quantitative data indicate a significant rise in mean test scores, from a pre-test average of 52.75 to a post-test average of 70.25, with all students above the minimum mastery criterion in the final assessment cycle. This statistically significant enhancement ($p < 0.001$) confirms the effectiveness of the CR-AM approach in fostering students' fluency, pronunciation, vocabulary usage, grammatical accuracy, and clarity of argument. This aligns with existing literature, such as (Davies, 2011), who emphasises how argument mapping can significantly enhance students' ability to formulate and analyse arguments, thereby improving general speaking proficiency. The visual representation in argumentation mapping, as articulated by (Darmawansah et al., 2022), illustrates collaborative arguments and facilitates student engagement in constructing argumentative discourse, thereby enhancing the clarity and structure of arguments.

Observational results complement these findings by showing strong student engagement and active participation, with 85% involvement and 75% confidence levels noted during collective reflection activities. The majority of students effectively incorporated argumentative vocabulary and enthusiastically interacted with peers, indicating the approach's positive impact on both cognitive and social dimensions of learning. These outcomes align with existing literature emphasizing the value of argumentation mapping and collaborative reflection in language education. As supported by studies such as those by (Davies, 2011) and (Rosen et al., 2024), the visual representation of arguments combined with peer interaction facilitates critical thinking, more transparent communication, and a deeper understanding of argumentative constructs. Furthermore, the collaborative nature of CR-AM, which promotes interaction and shared understanding, is consistent with the findings of (Quiñones et al., 2018), who highlight how collective reflection fosters a collaborative learning atmosphere and enhances the learning experience. Moreover, the improvement in students' speaking performance reflects the vital role that pedagogical strategies incorporating interactive mapping and reflection play in overcoming common challenges faced by English as a Foreign Language (EFL) learners, ultimately preparing them for active participation in a democratic society, a goal supported by (Iordanou & Rapanta, 2021).

CONCLUSIONS

This research has shown that Collective Reflection-Based Argumentation Mapping (CR-AM) is an effective method for improving the argumentative speaking skills of primary school students learning English as a Foreign Language (EFL). The study was conducted with 20 sixth-grade students at Anuban Ob-Om School in Southern Thailand and followed a Classroom Action Research (CAR) approach over two cycles. The main goal was to help students enhance their speaking abilities through structured argumentation mapping and collective reflection. The results were impressive, with average speaking scores increasing significantly from 52.75 in the pre-test to 70.25 in the post-test. Remarkably, every student met the minimum mastery score of 65, showing a complete turnaround in their speaking skills. The paired samples t-test results indicated a significant difference ($p < 0.001$) between the pre-test and post-test scores, further confirming the effectiveness of the CR-AM method. These

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findings highlight how crucial collaborative learning environments are for developing essential language skills. Additionally, observational data revealed that students were highly engaged, with 85% actively participating and 90% interacting with their peers during collective reflection activities. This collaborative approach not only boosted their speaking skills but also increased their confidence and critical thinking abilities.

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