Exploring the Effectivenss of Critical Thinking Skills in Speaking Skills: Insights from a Vocational School Context

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Abstract

This study explores the impact of the Talking Chips strategy on enhancing critical thinking during English speaking tasks among vocational students. While these students often excel in practical skills, they struggle with critical thinking in English, leading to a skills gap in English as a Foreign Language (EFL) education. Using a quasi-experimental design, two eleventh-grade classes from a Tourism and Travel Business program at vocational schools participated in a pretest-posttest speaking assessment. The experimental group (n = 25) used the Talking Chips strategy, while the control group (n = 25) followed conventional methods. The speaking assessments were evaluated using an analytic rubric, with high inter-rater reliability (0.87). Mann-Whitney U analysis revealed a significant treatment effect (U = [insert value], p = .001, r = [insert effect size]), indicating that the Talking Chips strategy effectively improved students' analytical reasoning and reflective responses. These findings suggest that cooperative learning strategies, like Talking Chips, can enhance higher-order thinking skills in EFL speaking classrooms. The study concludes that incorporating turn-taking structures in speaking tasks helps foster deeper reasoning and encourages more purposeful argumentation, recommending that teachers use such techniques to promote critical thinking in vocational EFL settings.

Keywords: Critical thinking; Speaking skills; Talking chips; Cooperative learning; Vocational education

INTRODUCTION

In vocational education, particularly in Tourism and Travel Business programs, English language proficiency is a key employability skill that equips students with the necessary tools to engage professionally with clients, colleagues, and the broader tourism sector (Hanifa & Muhajir, 2022; Sari et al., 2022). Effective communication in English, especially in a professional context, has become indispensable in meeting the demands of an increasingly globalized labor market. In the tourism sector, English is not only essential for conveying information but also for negotiating meaning, engaging in professional discourse, and providing high-quality customer service. As industries grow and evolve, so too do the expectations placed on vocational students, who must now demonstrate not only linguistic competence but also the ability to think critically in real-world scenarios. Critical thinking, the ability to analyze, evaluate, and synthesize information, has thus become an essential component of vocational training, especially in sectors such as tourism where decision-making and problem-solving are integral to daily operations (Darwin et al., 2022; Caesar, 2023). The importance of integrating critical thinking with English language skills has therefore become a priority in the curriculum for vocational

schools, as this combination enables students to meet the cognitive demands of modern professional environments (Fajri et al., 2024; Liu et al., 2023).

Despite the growing recognition of its importance, critical thinking remains underdeveloped among many Indonesian EFL learners, particularly in vocational education. A number of classroom-based studies have pointed to the persistent challenge of fostering critical thinking among vocational students. These students often rely on rote memorization and exhibit limited engagement with course materials, rarely questioning or critically evaluating the information they encounter (Fitriani et al., 2020; Handayani et al., 2023). This reliance on memorization undermines the development of higher-order cognitive skills, leaving students ill-equipped to engage in analytical reasoning or reflective thinking—skills essential for success in modern work environments. One of the primary reasons for this gap is the prevalence of teacher-centered instructional practices that dominate many EFL classrooms. In these settings, students are typically passive recipients of information, with few opportunities to participate actively or engage in deeper cognitive processes (Al-Khasawneh & Al-Bahrani, 2021; Sriyanda & Priyana, 2024). These instructional practices, which emphasize knowledge transmission over skills development, stand in stark contrast to current educational demands that prioritize the cultivation of analytical reasoning and problem-solving capabilities. The gap between students' linguistic abilities and their critical thinking skills has become a significant issue, as it limits their ability to engage in reflective discourse or to navigate complex professional tasks, such as those encountered in the tourism sector.

Further complicating this issue is the perception held by many vocational students that English is primarily a practical tool for employment rather than a medium for intellectual engagement and critical thinking. In vocational settings, particularly in tourism and hospitality, students often view English proficiency as a necessary skill for communication, with little emphasis placed on its cognitive functions, such as reasoning, argumentation, and evaluation (Melani et al., 2023). This perspective undermines the potential for developing critical thinking skills through English language instruction, as students fail to recognize the value of using English not only for functional purposes but also for reflective and reasoned communication. This gap in perception contributes to a lack of opportunities for students to practice reasoning through spoken interaction, further hindering their cognitive development in the language classroom.

In response to these challenges, there has been growing interest in cooperative learning strategies, which are designed to foster active participation, collaborative interaction, and deeper engagement with course content. Recent studies have highlighted the potential of strategies such as Talking Chips and Think–Pair–Share to improve participation equity, speaking fluency, and learner confidence in EFL classrooms (Ghasemi et al., 2021; Ismail et al., 2024; Sriyanda & Priyana, 2024). These strategies emphasize structured interaction, providing students with opportunities to engage in dialogue, exchange ideas, and reflect on their contributions. While these strategies have been successful in enhancing communicative outcomes and increasing learner engagement, their cognitive impact—particularly in the development of critical thinking skills—remains underexplored. Although previous research has shown that cooperative learning techniques can facilitate participation and boost speaking confidence, little attention has been paid to how these methods can be intentionally aligned to foster analytical reasoning and reflective thinking, especially in vocational settings. Thus, there is a need for further investigation into how cooperative learning strategies can be adapted to address the cognitive dimensions of language learning, particularly in relation to critical thinking in vocational EFL classrooms.

The present study seeks to fill this gap by exploring how the Talking Chips strategy can be used to enhance critical thinking skills during speaking activities. While

traditionally employed as a tool for managing participation, Talking Chips has the potential to be repurposed as a pedagogical strategy that promotes analytical reasoning and reflective communication. By introducing structured turn-taking and requiring students to articulate their thoughts before passing the "chip" to the next speaker, this strategy encourages students to think critically about their contributions and engage in deeper cognitive processes. In this study, the Talking Chips strategy is repositioned as an instructional model that not only supports communicative competence but also stimulates higher-order thinking skills, such as analysis, evaluation, and inference.

The theoretical framework of this study draws on recent developments in cooperative learning and critical thinking pedagogy (Muttaqien et al., 2021; Amanda & Suryani, 2020), which have highlighted the benefits of integrating cooperative structures with cognitive engagement. The study aims to extend these concepts by applying them to vocational EFL instruction, offering practical insights into how cooperative learning strategies can be designed to promote both linguistic development and critical thinking. By focusing on a vocational context, this research will contribute to the growing body of literature on EFL teaching in vocational education, with particular emphasis on how to meet the cognitive demands of industry-specific language use.

The primary objectives of this research are to assess the impact of the Talking Chips strategy on vocational students' critical thinking skills, identify which aspects of critical thinking are most enhanced by the strategy, and explore the pedagogical implications of using cooperative learning techniques to promote analytical reasoning in EFL contexts. Specifically, the study will examine the effects of the strategy on students' abilities to interpret, analyze, evaluate, infer, and explain during speaking tasks. Through this investigation, the study seeks to offer a novel contribution to the field by demonstrating how structured participation techniques can be leveraged to cultivate both communicative competence and critical thinking in vocational EFL classrooms.

This study is novel in its focus on vocational education and its application of the Talking Chips strategy to develop critical thinking in speaking activities. While the use of cooperative learning strategies has been well-documented in general EFL contexts, their application to vocational settings—especially in relation to cognitive outcomes—remains largely unexplored. By addressing this gap, the study provides valuable insights into how EFL instruction can be adapted to meet the evolving needs of vocational learners and better prepare them for the cognitive demands of the professional world.

METHOD

Research Design

This study employed a quasi-experimental design with a non-equivalent control group model to investigate Developing Critical Thinking Skills in Speaking: Insights from a Vocational School Context. Two intact classes were assigned as the experimental group (Talking Chips strategy) and the control group (conventional teacher-centered instruction). This design was selected because it allows the investigation of cause-and-effect relationships in natural classroom settings where random assignment is not feasible.

Lesson Dose and Treatment Fidelity

The intervention consisted of three instructional sessions, each lasting 90 minutes, for a total of 270 minutes of treatment. To ensure fidelity in the implementation of the strategy, several measures were put in place. A fidelity checklist was completed by two observers during each session to track key elements of the strategy, such as the use of chips, the enforcement of equal turn-taking, and the teacher's role in facilitation rather than providing direct explanations. Additionally, the teacher maintained a logbook to document adherence to the instructional steps and to note any unexpected deviations from

the plan. To further verify consistency, audio recordings of the sessions were reviewed to confirm that the implementation of the strategy remained consistent across all three meetings. These measures helped ensure that the intervention was delivered as intended and that the results accurately reflected the effects of the Talking Chips strategy on students' critical thinking skills.

Table 1. Threats to Validity and Mitigations

Potential Threat	Mitigation Strategy
Selection bias due to intact classes	Purposive sampling based on similar mid-semester speaking scores.
History and maturation during four-week study	Experimental and control groups followed identical schedules and tasks.
Instrumentation differences	Same rubric, same prompts, and the same two raters for pre/post tests.
Testing effect	Two parallel but equivalent speaking tasks for pre/post.
Teacher effect	Both groups taught by the same teacher using a standardized lesson plan.

The quantitative approach facilitated objective measurement of changes in critical thinking performance through pretest–posttest comparisons.

Participants

Participants were 50 eleventh-grade students enrolled in the Tourism and Travel Business program at SMKN 4 Mataram during the 2025/2026 academic year. Class XIA (n = 25) served as the experimental group, and Class XIB (n = 25) served as the control group. Students were aged 15–16 years (32 females, 18 males). Baseline speaking proficiency was comparable across groups (M = 73.4, SD = 6.1, range = 62–86). No attrition occurred during the study.

Research Instruments

Critical thinking performance was assessed through pretest and posttest speaking tasks based on situational tourism scenarios designed to elicit interpretation, analysis, evaluation, inference, and explanation skills, in line with Facione's (2016) critical thinking framework. The tasks were structured to encourage students to demonstrate these cognitive skills in practical, real-world contexts relevant to the tourism industry. An analytical rubric, which aligned with the five critical thinking dimensions, was used to score the students' responses. Sample prompts included: "A guest complains that the tour package differs from the brochure. Explain the information needed and justify the options you would offer," and "Your group must choose the best eco-tour destination. Present and justify your choice." To ensure reliable and consistent scoring, two trained raters completed a calibration session using sample recordings and standardized scoring guidelines. Independent scoring was then conducted, resulting in an inter-rater reliability coefficient of r = .87, with a 95% confidence interval of [.78, .93], indicating high consistency and reliability in the evaluation of the students' critical thinking performance. This rigorous assessment process ensured that the evaluation of critical thinking skills was both accurate and dependable across all participants.

Data Collection Procedures

The data collection process was carried out over a period of four weeks, comprising four main stages: pretest administration, treatment implementation, posttest administration, and data verification. During the pretest stage, both the experimental and

control groups were administered an identical speaking assessment designed to evaluate their baseline levels of critical thinking performance prior to the intervention. The test required students to respond to communicative tasks involving reasoning, explanation, and evaluation in tourism-related contexts.

Following the pretest, the treatment phase was implemented over three instructional sessions, each lasting 90 minutes. The experimental group received instruction using the Talking Chips strategy, a cooperative learning technique that promotes equitable participation by requiring each student to contribute ideas through the use of chips as turn-taking tokens during group discussions. This approach was designed to encourage active engagement, structured communication, and the development of analytical reasoning through collaborative interaction. In contrast, the control group was taught using conventional, teacher-centered instruction, characterized by teacher explanations and question–answer sessions without structured participation procedures. Both groups discussed comparable tourism-related topics such as handling guests, giving directions, and describing tourist destinations, ensuring content consistency while differing only in instructional strategy.

After the completion of the treatment, the posttest was administered to both groups using the same instrument as the pretest. This step aimed to assess potential improvements in students' critical thinking indicators—specifically interpretation, analysis, evaluation, inference, and explanation—following the instructional intervention. Finally, during the data verification stage, all recorded oral responses were transcribed and evaluated based on the analytical rubric adapted from Facione's (2016) critical thinking framework. To ensure accuracy and objectivity, scores were independently rated by two evaluators and cross-checked for inter-rater reliability before proceeding to statistical analysis.

Data Analysis

Data from both the pretest and posttest were analyzed using SPSS version 26. Prior to hypothesis testing, normality and homogeneity tests were conducted to verify the suitability of parametric analysis. The Shapiro–Wilk test was used to assess data normality, and Levene's test was used to check variance homogeneity. Since the data violated both assumptions, the study proceeded with the non-parametric Mann–Whitney U test to determine whether there was a significant difference between the control and experimental groups. The significance level was set at 0.05 ($p < 0.05$). Additionally, descriptive statistics (mean, range, and standard deviation) were used to describe students' performance in each dimension of critical thinking. To interpret the magnitude of the observed effect, effect size (r) was calculated based on the standardized z- value from the Mann–Whitney U output.

The results of these analyses provided both statistical and pedagogical insights into how the Talking Chips strategy influenced the development of critical thinking in speaking. The interpretation of these results and their implications for English language teaching in vocational contexts are elaborated in the subsequent section.

RESULTS AND DISCUSSION
Results

The results of this study present the comparative findings of students' critical thinking performance between the experimental and control groups after the implementation of the Talking Chips strategy. The analysis includes tests of normality and homogeneity, hypothesis testing through the Mann–Whitney U test, descriptive statistics, and visualization of students' performance trends across critical thinking indicators.

Normality and Homogeneity Tests

Preliminary analyses were performed to ensure the appropriateness of the statistical tests. The Shapiro–Wilk test revealed that the experimental group's data were not normally distributed ($p < 0.05$), whereas the control group's data met the assumption of normality ($p > 0.05$). The Levene's test for homogeneity of variance indicated unequal variances across the two groups ($p = 0.003 < 0.05$). Therefore, non-parametric analysis using the Mann–Whitney U test was deemed suitable for comparing the groups' performances.

Descriptive Statistics of Critical Thinking Scores

Descriptive statistics of pretest and posttest results are summarized in Table 1. The mean pretest score of the experimental group (M = 36.36, SD = 12.20) was slightly higher than that of the control group (M = 31.32, SD = 4.48), suggesting similar baseline critical thinking levels. Following the intervention, the experimental group's posttest mean score increased to M = 41.52 (SD = 10.75), while the control group achieved M = 34.16 (SD = 3.05). This result indicates a marked improvement in the experimental group's critical thinking performance after being taught through the Talking Chips strategy.

Table 1. Descriptive Statistics of Students' Critical Thinking Scores

Group	N	Min	Max	Mean	SD
Pretest – Experimental	25	17	68	36.36	12.20
Posttest – Experimental	25	32	74	41.52	10.75
Pretest – Control	25	25	43	31.32	4.48
Posttest – Control	25	29	43	34.16	3.05

Mann–Whitney U Test Results

To test the research hypothesis, the Mann–Whitney U test was applied. The results in Table 2 show a U-value of 148.5 with a p-value of 0.001 ($p < 0.05$), indicating a statistically significant difference between the experimental and control groups' posttest scores. Therefore, the alternative hypothesis (Ha) is accepted, confirming that the Talking Chips strategy had a significant positive effect on students' critical thinking skills in speaking.

Table 2. Mann–Whitney U Test Results

Variable	Mann–Whitney U	Wilcoxon	Z	Asymp. Sig. (2-tailed)	Decision
Critical Thinking Outcomes	148.500	473.500	-3.194	0.001	Ha Accepted

The effect size (r) was calculated using the formula $r = Z / \sqrt{N}$, resulting in r= -3.194 / $\sqrt{50}$ = 0.45, which indicates a moderate effect size (Cohen, 1988). This suggests that the Talking Chips strategy had a meaningful impact on enhancing students' critical thinking skills in speaking, though the improvement was moderate rather than large in magnitude.

Trends Across Critical Thinking Indicators

A deeper analysis was conducted to explore improvements in each dimension of critical thinking—interpretation, analysis, evaluation, inference, and explanation. Figures 1 and 2 visualize the comparative trends between the control and experimental groups before and after the treatment.
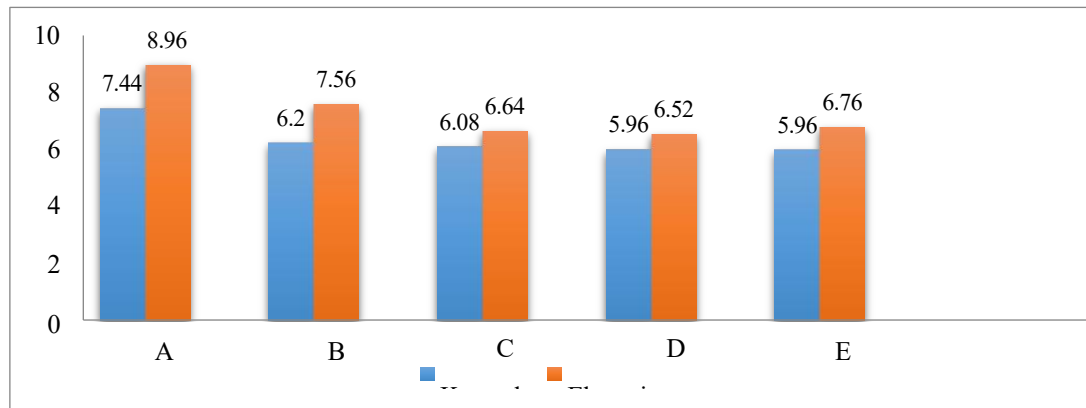
Figure 1. Average Pretest Scores Per Indicator of Critical Thinking Skills

As illustrated in Chart 1, both groups demonstrated relatively similar levels of performance across all five critical thinking indicators during the pretest stage. However, the experimental group showed slightly higher mean scores in each dimension, suggesting a marginally stronger baseline in critical thinking. Specifically, the experimental class achieved mean scores of 8.96 in interpretation, 7.12 in analysis, 6.80 in evaluation, 6.68 in inference, and 6.50 in explanation, whereas the control group recorded lower corresponding means. Despite these minor variations, no statistically significant difference was found prior to the intervention, indicating comparable starting points for both groups.
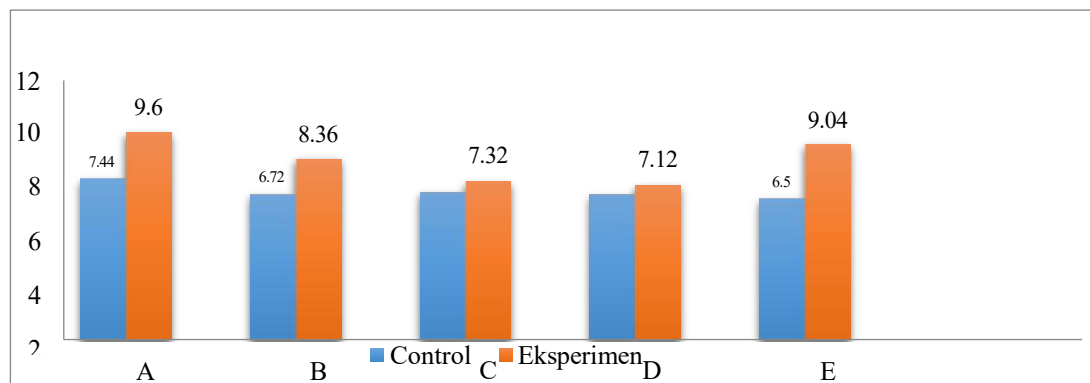

Figure 2. Average Posttest Scores Per Indicator of Critical Thinking Skills

Chart 2 illustrates a clear divergence in performance between the experimental and control groups after the application of the Talking Chips strategy. The experimental group exhibited noticeable gains across all five indicators. The interpretation dimension increased to 9.60, indicating improved comprehension and contextual understanding during speaking tasks. The analysis dimension rose to 8.36, reflecting greater ability to examine ideas critically. Similarly, evaluation improved to 7.32 and inference to 7.12, showing enhanced reasoning and judgment in expressing ideas. The explanation indicator displayed the most pronounced improvement, reaching 9.04, suggesting that students were able to elaborate and justify their opinions more effectively during discussions.

In contrast, the control group exhibited only marginal improvements in most indicators, with posttest means ranging narrowly between 6.5 and 7.4. The consistent superiority of the experimental group across all dimensions demonstrates that the Talking Chips strategy effectively stimulated higher cognitive engagement and reasoning articulation during communicative tasks.

In summary, the results indicate that the Talking Chips strategy significantly improved students' critical thinking skills in speaking, as evidenced by the Mann–Whitney U test ($U = 148.5$, $p = 0.001 < 0.05$, $r = 0.45$). The descriptive and visual analyses further confirmed consistent enhancement across all five indicators of critical thinking, with the most substantial gains in interpretation and explanation. These findings provide empirical support for the integration of structured cooperative learning strategies, such as Talking Chips, in English speaking instruction—demonstrating that collaborative dialogue, when guided by equitable participation mechanisms, can effectively foster analytical reasoning and reflective communication among vocational students.

Discussion

In this study, the Talking Chips strategy was employed to enhance critical thinking skills in English speaking tasks among vocational students, specifically those enrolled in the Tourism and Travel Business program. The findings from the pretest and posttest assessments show a significant improvement in the experimental group's critical thinking abilities, aligning with the theoretical frameworks and prior studies that suggest the efficacy of structured cooperative learning in fostering critical thinking (Ghasemi et al., 2021; Ismail et al., 2024). The study revealed that the experimental group, after engaging in cooperative tasks facilitated by the Talking Chips strategy, demonstrated enhanced skills in interpretation, analysis, evaluation, inference, and explanation, indicating that cooperative learning can be a valuable tool in promoting higher-order cognitive skills in speaking tasks.

These results resonate with previous research that has shown the positive impact of cooperative learning strategies on students' cognitive development. Studies by Maulida et al. (2021) and Putri and Yuliana (2022) found that structured group discussions and reasoning prompts can significantly enhance EFL learners' analytical and evaluative skills. Furthermore, similar findings have been documented in the context of EFL learning, where strategies like Think-Pair-Share and Talking Chips were shown to improve participation and confidence, which are foundational to fostering critical thinking (Ismail et al., 2024; Sriyanda & Priyana, 2024). However, this study extends previous research by not only confirming the efficacy of cooperative learning strategies in enhancing participation and fluency but also by providing empirical evidence of its impact on cognitive dimensions of critical thinking, which had been underexplored in prior work (Muklas, 2020; Ghasemi et al., 2021).

A key finding from this study is the significant effect of the Talking Chips strategy on improving students' ability to justify their reasoning during speaking tasks. The experimental group showed substantial improvements in their ability to interpret, analyze, and explain ideas, with the most marked improvement observed in the explanation dimension. This finding is consistent with the work of Mulyadi and Fitri (2021), who suggested that structured turn-taking and cooperative dialogue can promote metacognitive processes such as planning and evaluating, which are essential for reflective thinking. The Talking Chips strategy, by facilitating turn-taking, ensured that all students actively participated in the discussion, thereby creating an environment conducive to deeper cognitive engagement. This approach aligns with research by Truong and Nguyen (2023), who emphasized that balanced participation in speaking activities can enhance students' cognitive processing by compelling them to articulate their thoughts in a structured manner.

Moreover, the use of authentic vocational scenarios—such as handling customer complaints or choosing eco-tourism destinations—likely contributed to the high level of student engagement observed in the experimental group. Research has shown that authenticity in language tasks increases motivation and enhances cognitive involvement,

as students are able to see the relevance of the tasks to real-world contexts (Kusumawati et al., 2022; Sulastri & Mahdi, 2023). By integrating vocationally relevant topics into speaking tasks, the study not only promoted critical thinking but also provided students with the opportunity to practice reasoning in a context they would encounter in their future careers. This contextualization of language learning is consistent with the findings of Fitriani et al. (2020), who highlighted that authentic tasks are crucial for fostering critical thinking skills in vocational education, as they connect theoretical knowledge with practical application.

The results of this study also support the theoretical framework proposed by Facione (2016), which defines critical thinking as a cognitive process that involves interpretation, analysis, evaluation, inference, and explanation. The improvements across all these dimensions in the experimental group suggest that the Talking Chips strategy effectively facilitated the development of these higher-order thinking skills. This aligns with the theory of cooperative learning, which posits that structured group interactions not only promote communicative skills but also foster critical thinking by encouraging students to engage in collaborative problem-solving (Muttaqien et al., 2021; Amanda & Suryani, 2020). By requiring students to take turns and contribute justifications for their opinions, the strategy ensured that they actively engaged in reasoning, which is essential for developing critical thinking abilities.

However, while the results are promising, they also raise questions about the potential limitations of the intervention. Despite the significant improvements observed, the effect size of the intervention was moderate ($r = 0.45$), suggesting that while the Talking Chips strategy had a meaningful impact, there may be other factors—such as prior knowledge, individual differences, or teacher facilitation—that could have influenced the results. The relatively short duration of the intervention, with only three sessions dedicated to the Talking Chips strategy, may also have limited the depth of the impact. Future studies could explore longer interventions to determine whether sustained exposure to cooperative learning techniques leads to stronger and more lasting improvements in critical thinking. Additionally, incorporating qualitative methods such as discourse analysis could provide deeper insights into how students' reasoning processes evolve during cooperative tasks.

In comparison to studies that primarily focus on language fluency or affective outcomes, this research provides valuable contributions to the understanding of how cooperative learning strategies can be specifically designed to foster cognitive engagement and critical thinking in vocational EFL contexts. The use of the Talking Chips strategy as a tool for promoting reflective communication in vocational English classes is a novel approach that could be widely adopted in other vocational programs, particularly in fields where critical thinking is essential for professional success. By encouraging students to actively engage in reasoning during group discussions, this strategy not only improves their speaking skills but also equips them with the cognitive tools necessary to succeed in the modern workplace.

This study provides compelling evidence that the Talking Chips strategy is an effective method for enhancing critical thinking in English speaking tasks, particularly in vocational education. The findings suggest that integrating cooperative learning strategies into EFL instruction can foster deeper cognitive engagement, improve students' analytical reasoning, and better prepare them for the intellectual demands of their future careers. Given the increasing emphasis on critical thinking in educational curricula worldwide, this study contributes to the growing body of research advocating for the integration of cooperative learning strategies to promote both linguistic proficiency and cognitive development in vocational education. Future research should explore longer-term interventions and consider other factors that may influence the effectiveness of such

strategies, providing further insights into the ways in which structured group interactions can enhance critical thinking in language learning.

CONCLUSION

The findings of this study provide robust evidence supporting the effectiveness of the Talking Chips strategy in enhancing critical thinking skills during English speaking tasks among vocational students. The use of this cooperative learning technique was shown to significantly improve students' abilities to interpret, analyze, evaluate, infer, and explain ideas in speaking tasks, which are essential cognitive skills required in both academic and professional settings. The significant differences in posttest scores between the experimental and control groups underscore the potential of the Talking Chips strategy to foster deeper cognitive engagement, moving beyond mere linguistic fluency to a more comprehensive development of critical thinking. This study expands on previous research by demonstrating that cooperative learning strategies, particularly those designed to ensure equitable participation and structured turn-taking, can significantly contribute to the development of higher-order thinking skills in vocational EFL classrooms. These findings align with theoretical perspectives on cooperative learning and critical thinking (Muttaqien et al., 2021; Amanda & Suryani, 2020), which emphasize the importance of collaborative discourse in enhancing students' reasoning and reflective capabilities. Furthermore, the use of authentic vocational scenarios in the speaking tasks ensured that the students were not only practicing their English language skills but also engaging in reasoning that is directly applicable to real-world situations, a factor that likely contributed to the students' increased motivation and cognitive involvement.

The implications of this study are significant for both theory and practice in vocational education. Theoretically, the results add to the growing body of literature on the integration of critical thinking and cooperative learning in EFL contexts, particularly in vocational settings where language learning is often seen as purely functional. By demonstrating the effectiveness of the Talking Chips strategy in developing critical thinking alongside speaking fluency, this study challenges the traditional view of English education in vocational settings as merely a tool for communication and highlights the importance of fostering cognitive skills that are essential for professional success. Practically, the findings suggest that educators in vocational EFL classrooms can benefit from incorporating structured cooperative learning strategies like Talking Chips into their teaching practices. Such strategies not only enhance student participation but also create opportunities for deeper cognitive engagement, encouraging students to think critically and reflectively about the content of their discussions. For vocational instructors, this study provides a valuable pedagogical model that combines language learning with critical thinking, helping students develop the analytical reasoning skills necessary for success in the workplace. Moving forward, future research should explore the long-term effects of such interventions, investigate the role of different student characteristics in the success of cooperative learning strategies, and examine the integration of other cognitive development frameworks to further enrich vocational EFL teaching practices.

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