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Improving Learning Strategies and Motivation Through Constructivism Approach in Speaking Performance

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Abstract

This study investigated the improvement learning strategies, self-determined motivation, self- regulated learning (SRL), and speaking performance among Indonesian 11th grade students through a constructivism approach. Drawing on Constructivism, Self-Determination Theory (SDT), and SRL frameworks, the study investigated how motivation and learning strategies contribute to oral proficiency. Data were collected using a Learning Strategy Questionnaire, a Motivation Scale, and a Speaking Test, and analyzed through Paired Sample T-Tests, Product Moment Correlation and One Way Annova. Findings revealed a significant improvement in speaking performance, with mean scores rising from 16.40 to 17.83 ($t = 8.509$, $p < 0.05$). Motivation showed a weak, non-significant correlation with speaking in the pre-test ($r = 0.360$, $p > 0.05$) but a strong, significant correlation in the post-test ($r = 0.675$, $p < 0.01$). Strategy comparisons further indicated that metacognitive learners significantly outperformed cognitive and socio-affective groups, by nearly 10 and 8.5 points respectively. Strategy analysis further demonstrated that metacognitive learners significantly outperformed both cognitive and socio-affective groups nearly 10 and 8.5 points, respectively, highlighting the effectiveness of planning, monitoring, and evaluating in speaking development. These findings confirm that integrating motivational support with metacognitive strategy training is a powerful pedagogical approach for improving communicative competence.

1. Introduction

In the landscape of English as a Foreign Language education, helping students speak confidently and effectively remains both a vital goal and a persistent challenge. Unlike listening or reading, speaking requires learners to think, process, and produce language in real time, while navigating cognitive demands, social interaction, and emotional pressure.

Language primarily function as a tool for interaction and communication; its grammar reflects how language serves communicative purposes. Language is not merely a set of grammatical or structural formulas, but rather a system of patterns used to convey meaning in communication (Setiyadi, 2023). Improving students' communicative speaking proficiency requires instructional models that actively promote meaningful language use, a goal that is supported in this study through three major theoretical frameworks: Constructivism Approach, Self Determination Theory (SDT) and Self-Regulated Learning (SRL). Constructivism has been widely acknowledged as an effective approach because it prioritizes learner needs and active engagement (Woolfolk, 2020). Its core principles emphasize that learners construct knowledge through reflection on prior experiences, progress at different paces according to individual talents, benefit from authentic and socially interactive environments, and require assessment integrated within meaningful tasks.

While constructivism principles have been applied in English language teaching through models such as Project-Based Learning (PBL) (Wang et al., 2024), drama-based pedagogy (Yang, 2022), and other innovative strategies (Wang, 2014; Perumal & Ajit, 2022; Zhang, 2021), research on developing the learning model to communicative speaking instruction remains scarce. To address this gap, the present study implements constructivism through the SDT and SRL, which aligns with constructivism ideals by emphasizing learner- centered, meaningful communication in English.

In the context of speaking instruction, teachers are encouraged to adopt a balanced approach by being selective in error correction while creating opportunities for learners to express their ideas in English. Such practices align with constructivism principles, promote intrinsic motivation as emphasized in Self-Determination Theory (SDT), and cultivate learner autonomy commonly referred to as self-regulated learning (Noels et al., 2003; Vallerand, Pelletier, & Koestner, 2008; Theobald, 2021). This makes speaking not just a linguistic activity, but a deeply psychological one as well. In recent years, two factors have emerged as powerful influences on speaking success: learner motivation and self-regulated learning (SRL) (Dörnyei, 2005; Zimmerman, 2002).

Self-regulated learning refers to "the self-directive processes through which learners transform their mental abilities into academic skills" (Zimmerman & Labuhn, 2012, p. 399). SRL involves setting realistic learning goals, selecting effective learning strategies, monitoring and evaluating one's progress towards goals. An important aspect of SRL is the use of various learning strategies to regulate one's learning (Bjork et al., 2013; Dent & Koenka, 2016; Pintrich, 1999; Zimmernam, 2008). Although a variety of learning strategies exist (Bjork, et al., 2013; Hattie & Donoghue, 2016), the current study focuses on meta-cognitive strategies refer to planning, monitoring and regulation of cognition and behavior (Pintrich, 1999; Zimmerman & Labuhn, 2012).

Self-regulated learners plan a course of action by setting goals, monitoring their progress towards the goals and evaluating their performance relative to the goals (Zimmerman & Labuhn, 2012). Planning is a foundational step in self-regulated learning, where learners set clear goals for what they intend to study, choose suitable learning

strategies, and analyze the demands of the task. These actions do more than organize the learning process, they also activate prior knowledge, making it easier to understand and retain new information.

Once planning is in place, the natural progression is to move into the performance phase. At this stage, monitoring becomes especially important, as learners need to stay aware of their progress and adjust their strategies to stay on track toward their goals. During monitoring, self-regulated learners check their understanding against self-set standards by using variety of technique such as self-testing and self-explanations (Bjork et al., 2013). An important role of monitoring is making learners vigilant to obstacles to reaching self- set goals thereby triggering evaluation of strategies in terms of effectiveness (Bjork et al., 2013; Zimmerman, 2011). Overall, although the uses of both cognitive and meta-cognitive strategies have been proven to be important for learning and achievement (Dent & Koenka, 2016; Pintrich, 1999; Zimmernam, 2008).

Motivation plays a crucial role in both initiating and maintaining self-regulated learning (SRL) (Boekaerts, 2010; Pintrich, 1999; Zimmerman, 2011). To effectively self-regulate, learners must stay focused on the learning process, make thoughtful decisions, and be willing to invest extra effort to achieve their goals (Zimmerman, 2011). Because of this, understanding how motivation influences SRL is essential (Zimmerman & Schunk, 2008). Although past research has explored the connection between SRL and different motivational factors such as achievement goals and attribution styles there is still much to learn about how these elements interact (Schunk & Zimmerman, 2008). The current study

focuses on Self-Determination Theory (SDT), which has three basic psychological needs; Autonomy, Competence and Relatedness. That three basic psychological needs as motivational factors are believed to play a key role in encouraging and maintaining students' involvement in self-regulated learning (Pintrich, 1999; Legault, L., & Inzlicht, M, 2012; Zimmerman, 2011).

A framework developed by Deci and Ryan (1985) that explores how different types of motivation, ranging from external pressures to internal passions, shape learning behavior. They explain motivation as a continuum ranging from high to low self-determination. At the highest level is intrinsic motivation, where individuals engage in activities for enjoyment or personal challenge (Ryan & Deci, 2000). Extrinsic motivation involves doing something for external rewards or outcomes rather than for the activity itself. At the lowest level is amotivation, where individuals lack purpose or intention, showing no internal or external drive (Guaye, 2000). These types reflect varying degrees of autonomy in human behavior.

As motivation becomes more internalized, students engage more deeply and perform better. When students are motivated by personal interest or internal goals (i.e., autonomously motivated), they are more likely to take initiative, set meaningful goals, and persist through challenges. These behaviors are essential features of self-regulated learners, who can plan, monitor, and reflect on their learning to become more effective and independent (Schunk & Zimmerman, 2008). For learners to effectively engage in self-regulation, they must not only feel confident in their ability to succeed (e.g., autonomy) but also perceive the learning task as meaningful or worthwhile (e.g., competence) (Pintrich, 1999). In short, the more internalized a student's motivation is, the greater their potential for academic success.

The three major theories discussed above serve as the foundation for developing an instructional learning model that is expected to promote learner autonomy in mastering English language skills. Final language proficiency is strongly influenced using learning strategies (Setiyadi et al., 2016; Masitoh et al., 2023; Apridayani & Thoch, 2023), while the extent to which learners employ these strategies is largely determined by their level of learning motivation (Isidro & Lasagabaster, 2020). Accordingly, this study examines three key variables as indicators of the effectiveness of the proposed model: learning motivation, the use of learning strategies, and English-speaking proficiency. These variables have been shown to be interrelated (Setiyadi et al., 2016), and the present research seeks to identify patterns of interaction among them in the context of English language learning after the implementation of the developed instructional model.

Although previous studies have contributed valuable insights into the role of motivation in self-regulated learning, several critical aspects remain insufficiently explored and need further investigation. Most of the research cited originates from Western contexts (Brenner, C. A, 2022). There is a lack of culturally grounded studies that explore how SDT and SRL principles function in non-Western educational environments, including Indonesia. In this study try to investigate these theories in the Indonesian context would enhance their cross- cultural applicability and relevance. The instruments used to measure motivation and learning strategies in this study have also been developed within the Indonesian context (Setiyadi et al., 2019) and have already been published.

While previous studies have examined motivation and self-regulated learning (SRL) as separate predictors of language success (Raoofi et al., 2014; Tseng et al., 2006), limited research has explored how these two constructs interact, particularly in relation to speaking performance within offline classroom settings. This gap is especially relevant in the Indonesian context, where schools have resumed face-to-face learning post-pandemic, offering renewed opportunities for interaction, feedback, and dynamic classroom engagement.

As a result, understanding the psychological factors that influence speaking outcomes is more crucial than ever. Moreover, much of the recent research in Indonesia has concentrated on online learning environments (Darminto & Khoirudin, 2021; Yuliana & Wibowo, 2022; De Vega & Rahayu, 2023), which differ significantly from in-person settings in terms of motivational and self-regulatory demands. This study addresses that gap by focusing on offline classrooms, which provide more authentic conditions for real-time communication

This study advances the field by proposing an integrated model that combines self-determined motivation and self-regulated learning (SRL) to examine their speaking performance in offline senior high school settings. Although the theoretical foundations of SDT (Deci & Ryan, 2000) and SRL (Zimmerman, 2002) are well-established, few empirical studies have linked the two, particularly in speaking contexts. Prior research (Syaifudin, 2019; Anita & Handayani, 2021) has examined them separately, missing their combined influence on real-world communication.

The study also highlights 11th Grade students, a group often overlooked in favor of university learners (Noels et al., 2000; Jansen et al., 2021; Rahayu et al., 2022), despite being at a critical developmental stage with evolving motivation and self-regulation. Although EFL research in Indonesia is expanding, studies connecting psychological theory and pedagogy at the high school level remain limited (Baha, 2025; Nguyen, 2019). This study addresses that gap through a localized, skill-focused approach with practical relevance for educators and learners.

Accordingly, this study aims to investigate whether there is a significant correlation between self-determined motivation, learning language strategies and self-regulated learning with students' speaking performance through constructivism approach. By examining how these constructs interact, the study seeks to contribute a contextually grounded and theoretically robust understanding of the psychological processes that underlie speaking proficiency. The findings are expected to inform the development of more learner-centered, psychologically responsive approaches to speaking instruction in English classrooms settings, one that empowers students not only to speak better, but to take charge of their own learning journey, particularly within Indonesian secondary education.

2. Method

This constructivism as based communicative teaching model adapted to the Indonesian context to improve students' motivation in learning English. The instructional model developed in this study positions English as a foreign language, consistent with its status in Indonesia, rather than as a second language. By recognizing English as a foreign language and considering the unique learning culture of Indonesian students, the model was expected to foster effective classroom interaction, thereby motivating learners and encouraging them to employ meaningful and autonomy strategies to achieve success. In conducting the research, the writer applied quantitative research as a type of research methodology that involves the use of numerical data to gather and analyze information about a particular phenomenon or problem (Creswell, 2018). To examine its effectiveness, this study employed three instruments: a Learning Strategy Questionnaire, a Motivation Scale, and a Speaking Test.

1. Learning Strategy Questionnaire

The use of learning strategies was measured using a questionnaire developed within the Indonesian context (Setiyadi, 2019b), known as the Language Learning Strategy Questionnaire (LLSQ). The LLSQ covers four categories of language learning strategies: speaking, listening, reading, and writing. It consists of 80 items, with each category containing 20 items. Each category includes strategies classified into cognitive strategies, metacognitive strategies which are considered deep learning activities and social strategies.

In the speaking category, strategies are grouped into cognitive (items 1–10), metacognitive or deep learning (items 11–15), and social (items 16–20) strategies. The use of these strategies is measured on a Likert scale ranging from 1 = never used to 5 = always used. In this study, only the strategies in the speaking category utilized, consisting of 20 items classified into cognitive, metacognitive, and social domains.

2. Motivation Scale

Learners' motivation was measured using an instrument developed and validated within the Indonesian context (Setiyadi et al., 2019a). Based on Exploratory Factor Analysis (EFA), English learning motivation among Indonesian learners is categorized into three dimensions: extrinsic motivation, intrinsic motivation, and motivation oriented toward international interaction. The instrument consists of 12 items; each rated on a five-point ordinal scale ranging from 1 (strongly disagree) to 5 (strongly agree).

3. Speaking Skill Test

The speaking assessment instrument in this study was developed based on the construct proposed by Harris et al. (1974), which encompasses five aspects: grammar, vocabulary, comprehension, fluency, and pronunciation. The following is the rubric used for assessing speaking ability, which will be translated into Indonesian to prevent potential misunderstandings.

To examine the validity of the measurement instruments for learning motivation and strategies, each questionnaire item was correlated with its respective construct, and Cronbach's alpha was calculated. A coefficient above 0.80 was expected to indicate strong reliability (Setiyadi, 2018a). Content validity was ensured by aligning the test materials with the syllabus and students' textbook, thereby confirming that the instrument represented the subject matter adequately. Items with low correlations were excluded through reliability analysis until satisfactory internal consistency was achieved (Setiyadi, 2018). For language test reliability, two peer raters the researcher and an English teacher from SMA Negeri 12 Bandar Lampung assessed students' speaking performance using the established rubric. Inter-rater reliability was then analyzed through the Product Moment Correlation in SPSS to determine the level of agreement on scores.

The researcher employed a speaking test to assess students' abilities, with scores evaluated by a single inter-rater using Haris' (1974) rubric. The model's effectiveness was analyzed through a Paired Sample T-Test (Setiyadi, 2018a). To examine the relationship between motivation and learning outcomes, a Product Moment Correlation was conducted (Setiyadi, 2018). Hypotheses were tested at a 0.05 significance level. The null hypothesis (H_0) stated no significant correlation exists between students' motivation and speaking performance, accepted if $p > 0.05$. The alternative hypothesis (H_1) posited a significant correlation, accepted if $p < 0.05$. Correlation strength was determined by r values ranging from -1 (perfect negative) to +1 (perfect positive). Finally, students' speaking performance was analyzed across five criteria: grammar, vocabulary, comprehension, fluency, and pronunciation.

3. Result and Discussion

Taken together, the results validate the central premise of this study, namely that self- determined motivation and self-regulated learning are significantly correlated with students' speaking performance. Learners who demonstrated higher levels of autonomy, competence, and relatedness, as outlined in Self-Determination Theory (Deci & Ryan, 2000), were also those who engaged more effectively in metacognitive planning, monitoring, and evaluation as described in Self-Regulated Learning frameworks (Zimmerman, 2002). This synergy between motivation and regulation produced measurable gains in oral proficiency, indicating that speaking performance is not solely a

product of linguistic knowledge but also of learners' ability to direct and sustain their own learning processes. The evidence thus underscores the importance of integrating motivational support with strategy training, particularly in environments that emphasize Constructivism principles of active participation and learner-centered instruction. In practical terms, fostering autonomy, metacognitive awareness, and intrinsic motivation emerges as an essential pedagogical pathway for improving learners' oral communication skills in second language contexts.

1. *Significantly difference between the class before and after the treatment used the implementation of the constructivism approach through self-regulated learning.*

The paired samples statistics reveal a notable improvement in students' speaking performance following the implementation of the constructivism approach through self-regulated learning.

Table 1.1 f Paired Sample Statistic

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	SP POST C2	17,83	23	,872	,182
	SP PRE C2	16,40	23	,847	,177

This improvement shows that constructivism principles of active knowledge building and is reinforced by SRL strategies that promote goal setting, monitoring, and autonomy (Piaget, 1973; Vygotsky, 1978; Bruner, 1996; Zimmerman, 2002) as reflected in the increase of the mean score from 16.40 in the pre-test to 17.83 in the post-test (a gain of approximately 1.43 points). Furthermore, the relatively small standard deviations (Pre = 0.847, Post = 0.872) and standard errors of the mean (Pre = 0.177, Post = 0.182) indicate consistency in students' performance, show that the scores are fairly consistent across students, meaning most students benefitted similarly.

The correlation coefficient (r = 0.555) indicates a moderate positive relationship between the pre-test and post-test scores. This means students who performed well in the pre-test also tended to perform well in the post-test, and those with lower pre-test scores generally maintained relatively lower post-test scores.

Table 1.2 Paired Samples Correlation

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	SP POST C2 & SP PRE C2	23	,555	,006

The p-value (0.006) is less than 0.05, showing that the correlation is statistically significant. Thus, there is a reliable relationship between students' performance before and after the intervention. The paired samples t-test was conducted to examine differences in students' speaking performance between the pre-test and post-test in the experimental class, which implemented a constructivism approach through self-regulated learning

Table 1.3 Paired Sample Test

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	SP POST C2 - SP PRE C2	1,439	,811	,169	1,088	1,790	8,509	22	,000

The analysis revealed a mean difference of 1.439 (SD = 0.811, SE = 0.169), with a 95% confidence interval ranging from 1.088 to 1.790. The obtained t-value of 8.509 (df = 22, p

< 0.05) indicates a statistically significant improvement. These results demonstrate that the intervention exerted a positive effect on improving students' communicative speaking ability, as evidenced by the higher post-test scores compared to the pre-test. The significant improvement in students' speaking performance from pre-test to post-test in the experimental class demonstrates the effectiveness of the teaching strategy in fostering oral communication skills. The mean increase of 1.439 points indicates gains not only in linguistic aspects such as vocabulary and grammar but also in fluency and confidence.

This finding supports the view that communicative classroom practices create meaningful opportunities for active language use, which in turn improves speaking competence (Richards, 2006; Harmer, 2015). As Brown (2007) notes, language learning is more effective when learners engage in real communication rather than focusing solely on grammar rules. In this study, interactive activities encouraged students to respond naturaly and express ideas confidently, contributing to the significant statistical improvement observed.

The results also align with constructivism theory, which emphasizes that learners build knowledge through active participation and collaboration. Vygotsky (1978) argues that learning is more effective when guided by peers or teachers, and in this study, peer discussions and teacher scaffolding helped students overcome barriers such as hesitation, limited vocabulary, and pronunciation issues.

Furthermore, the improvement reflects the role of confidence and motivation in speaking performance, as previous research shows that constructive feedback and interactive tasks increase motivation and fluency (Dörnyei, 2005; Nation & Newton, 2009). Consistent with findings by Nunan (2003) and Richards (2006), this study confirms that structured, interactive methods such as communicative tasks, role plays, and discussions are effective in improving students' communicative speaking ability.

2. The correlation between motivation and speaking performance.

The correlation analysis between students' motivation and speaking performance in second class experiment revealed different results in the pre-test and post-test.

Table 2.1 Correlation Between motivation and speaking before and after treatment

Correlations

		C2 PRE MOTIVATION	C2 PRE SPEAKING
C2 PRE MOTIVATION	Pearson Correlation	1	,360
	Sig. (2-tailed)		,092
	N	23	23
C2 PRE SPEAKING	Pearson Correlation	,360	1
	Sig. (2-tailed)	,092	
	N	23	23

Correlations

		C2 POST MOTIVASI	C2 POST SPEAKING
C2 POST MOTIVASI	Pearson Correlation	1	,675**
	Sig. (2-tailed)		,000
	N	23	23
C2 POST SPEAKING	Pearson Correlation	,675**	1
	Sig. (2-tailed)	,000	
	N	23	23

**. Correlation is significant at the 0.01 level (2-tailed).

The pre-test data showed that the Pearson correlation coefficient between motivation and speaking performance was r = 0.360 with a significance value of p = 0.092 (p > 0.05). This indicates that there was a positive but weak correlation, and the relationship was not statistically significant. Thus, prior to the implementation of the treatment, students' motivation and their speaking performance were not strongly associated.

In contrast, the post-test results demonstrated a substantial improvement. The correlation coefficient between motivation and speaking performance increased to r = 0.675 with a significance value of p = 0.000 (p < 0.01). This finding suggests a strong positive correlation that is statistically significant at the 0.01 level. Accordingly, after the intervention, students with higher motivation tended to achieve better speaking performance, and this relationship was both strong and meaningful.

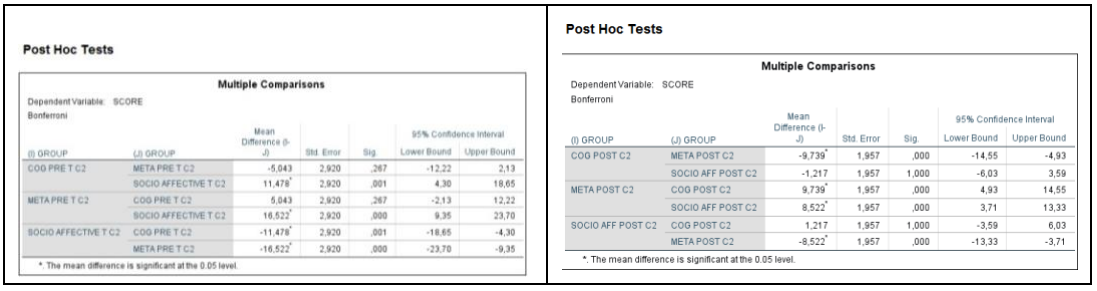
The comparison between the pre-test and post-test results highlights the strengthening of the relationship between motivation and speaking performance. Initially, motivation was not a strong predictor of speaking ability, as indicated by the weak and non-significant correlation. However, after the intervention, motivation became a significant factor influencing students' speaking performance.

These findings imply that the treatment not only improved students' speaking skills but also increased the extent to which motivation contributed to their performance. The improvement from a weak, non-significant correlation to a strong, significant one suggests that motivational factors were successfully activated during the learning process. This supports the notion that motivational engagement plays a crucial role in improving language performance, particularly in speaking**.** These findings are consistent with Dörnyei (2001) and Ushioda (2011), who emphasize that motivation is a crucial factor influencing learners' oral performance. The improvement in correlation from pre-test to post-test aligns with the view that constructivism and communicative approaches (Richards & Rodgers, 2014; Littlewood, 2004) foster both motivation and language performance.

3. The difference of students' Language Learning Strategies

This study also aimed to investigate the difference learning strategy orientations; cognitive, metacognitive, and socio-affective on students' speaking performance

Table 3.1 The difference of students' Language Learning Strategies before and after treatments.



Post Hoc Tests

Multiple Comparisons

Dependent Variable: SCORE

Bonferroni

(I) GROUP	(J) GROUP	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
COG PRE T C2	META PRE T C2	-5,043	2,920	,267	-12,22	2,13
	SOCIO AFFECTIVE T C2	11,478*	2,920	,001	4,30	18,65
META PRE T C2	COG PRE T C2	5,043	2,920	,267	-2,13	12,22
	SOCIO AFFECTIVE T C2	16,522*	2,920	,000	9,35	23,70
SOCIO AFFECTIVE T C2	COG PRE T C2	-11,478*	2,920	,001	-18,65	-4,30
	META PRE T C2	-16,522*	2,920	,000	-23,70	-9,35

*. The mean difference is significant at the 0.05 level.

Post Hoc Tests

Multiple Comparisons

Dependent Variable: SCORE

Bonferroni

(I) GROUP	(J) GROUP	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
COG POST C2	META POST C2	-9,739*	1,957	,000	-14,55	-4,93
	SOCIO AFF POST C2	-1,217	1,957	1,000	-6,03	3,59
META POST C2	COG POST C2	9,739*	1,957	,000	4,93	14,55
	SOCIO AFF POST C2	8,522*	1,957	,000	3,71	13,33
SOCIO AFF POST C2	COG POST C2	1,217	1,957	1,000	-3,59	6,03
	META POST C2	-8,522*	1,957	,000	-13,33	-3,71

*. The mean difference is significant at the 0.05 level.

At the pre-test stage, the Bonferroni multiple comparisons revealed that the socio-affective group performed significantly lower than both the cognitive and metacognitive groups. Specifically, the socio-affective group lagged the cognitive group by 11.478 points ($p = .001$) and the metacognitive group by 16.522 points ($p = .000$), indicating that students relying on socio-affective strategies such as peer support and emotional regulation began from a clear disadvantage. In contrast, the difference between the cognitive and metacognitive groups was -5.043 points ($p = .267$), which was not statistically significant, suggesting that both groups started at a comparable baseline level of speaking performance.

At the post-test stage, the Bonferroni multiple comparisons revealed there was no significant difference between the cognitive and socio-affective groups at the post-test ($MD = 1.217$, $p = 1.000$), suggesting that both groups reached a comparable level of performance after the intervention but a significant difference between the metacognitive and cognitive groups, with the metacognitive group outperforming the cognitive group by nearly ten points ($MD = 9.739$, $p < .001$). This demonstrates that students employing metacognitive strategies such as planning, monitoring, and evaluating their learning achieved a substantially higher level of speaking performance compared to those who relied on cognitive strategies alone. Similarly, the metacognitive group also performed significantly better than the socio-affective group, with a mean difference of approximately 8.5 points ($MD = 8.522$, $p < .001$). This finding underscores the effectiveness of metacognitive strategies in promoting language learning outcomes, as learners who actively regulated and reflected on their learning outperformed peers who depended on emotional support or peer collaboration.

In sum, the comparison of pre- and post-test results provides compelling evidence of the effectiveness of metacognitive strategy training in improving speaking performance. This pattern suggests that before the intervention, students relying on socio-affective strategies such as peer collaboration and emotional support were at a relative disadvantage, while those employing cognitive strategies such as repetition and memorization performed comparably to those in the metacognitive group. By the post-test, the pattern shifted substantially: the metacognitive group outperformed both the cognitive (=10 points higher) and socio-affective groups (=8.5 points higher). No difference emerged between the cognitive and socio-affective groups, suggesting limited gains in both, while the metacognitive group showed pronounced improvement. These

findings emphasize the pivotal role of metacognitive strategies in oral proficiency. Drawing on Zimmerman's (2002) Self-Regulated Learning framework, the META group's success can be linked to their training in planning, monitoring, and evaluating their learning, enabling them to adjust strategies and achieve significant gains beyond surface-level practice or peer support. Through metacognitive strategies, learners set goals, track progress, and adjust approaches skills essential for fluency, coherence, and real-time decision making in speaking.

Accordingly, the metacognitive in posttest group's superior performance can be attributed to their ability to monitor outcomes, reflect on weaknesses, and implement corrective strategies was decisive in improving speaking outcomes. Empirical evidence reinforces these findings. Previous studies have shown that metacognitive strategies improve fluency, accuracy, vocabulary, and learner autonomy more effectively than cognitive or socio- affective approaches (Putra & Rahmawati, 2025; Rahma & Anwar, 2024). Correlational evidence also indicates that metacognitive awareness and self-regulation are strong predictors of speaking success (Sari & Wijayanti, 2024; Syafri & Hamzah, 2024; Yusuf & Nur, 2023). The nearly 10-point advantage of the metacognitive group over the cognitive group and the 8-point advantage over the socio affective group in this study provide strong justification that metacognitive regulation is a decisive factor in speaking performance, whereas cognitive and socio-affective strategies alone yield more limited effects.

4. Conclusion

This study confirms that self-determined motivation and self-regulated learning (SRL) are decisive factors in developing students' speaking proficiency. Learners who actively engaged in metacognitive strategies such as planning, monitoring, and evaluation achieved significantly higher oral performance than those who relied primarily on cognitive or socio-affective strategies. The findings also show that motivation became a stronger predictor of speaking success after the intervention, indicating that motivational engagement and self-regulation interact synergistically to support oral communication.

Grounded in constructivism principles, the model effectively improved speaking skills by fostering learner autonomy, confidence, and active participation. For educators, the implication is clear; classroom practices should go beyond grammar-focused instruction to include metacognitive training and motivational support that empower learners to take ownership of their speaking development. Future research could extend this work by testing the model across different educational levels and cultural contexts to strengthen its generalizability.

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