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The Effectiveness of Using the Mingle Model as a Teaching Strategy to Improve Students' Speaking Skills

Sari Fatmawati[1], Indah Tri Purwanti[2], Novitri[3]
[1,2,3] English Study Program, Riau University, Pekanbaru, Riau

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Corresponding Author:
Sari Fatmawati
saryfatmawaty844@gmail.com
English Study Program,
Riau University,
Pekanbaru, Riau

Abstract

This study aims to determine the effectiveness of the Mingle Model in improving the speaking skills of 10th grade students at State Vocational High School. This study was motivated by students' low self-confidence, limited vocabulary, and lack of fluency in speaking English. This study used a quantitative approach with a one-group pre-test–post-test pre-experimental design. The research sample was determined using the cluster random sampling technique, and the selected class was class X Samsung - Software and Game Development 2, consisting of 37 students. The Mingle Model was implemented in six sessions. Data were collected using a monologue recount text speaking test before and after the treatment, which were assessed based on the aspects of grammar, vocabulary, pronunciation, and fluency. The results showed that the average pre-test score of 46 increased to 81 on the post-test. The paired sample t-test showed a significant difference between the pre-test and post-test results (t = -42.409, Sig. = 0.000). In addition, the N-Gain analysis result of 0.66 showed that the Mingle Model was fairly effective. Based on these results, it can be concluded that the Mingle Model is effective in improving students' speaking skills through communicative and interactive learning.

1. Introduction

In the current era of global interconnection, English plays a dominant role in international communication, making proficiency in speaking increasingly essential. Speaking enables learners to articulate thoughts, feelings, and opinions

clearly (Leong & Ahmadi, 2017; Rebecca, 2016). However, speaking remains one of the most challenging skills to master in EFL contexts (Brown, 2001), particularly due to low confidence, limited vocabulary, and fear of making mistakes.

This issue was identified by the researcher at State Vocational High School as the research site. Based on classroom observations, many students demonstrated low English-speaking proficiency. This condition was influenced by low self-confidence, limited vocabulary, and students' fear of making mistakes. Furthermore, most students were reluctant to use English during classroom interactions due to feelings of embarrassment and a lack of motivation. These circumstances indicate the need for English language instruction to implement more engaging and interactive teaching models in order to encourage students' active participation and improve their speaking skills.

In vocational education settings, many students lack confidence when speaking English. They often feel shy, afraid of making mistakes, and reluctant to speak in front of classmates (Nurjanah & Vierdasari, 2025). At State Vocational High School, this challenge is particularly important because students need English proficiency for effective communication in future workplace contexts. However, opportunities for active practice, such as discussions, role-plays, or group conversations, remain limited, making it difficult for students to optimally develop their speaking skills (Endang Susilowati et al., 2024).

Harmer (2007) asserted that a supportive learning environment is crucial for developing positive attitudes toward speaking, especially among shy or anxious students. Speaking skills are influenced by key factors such as teaching methods, motivation, and self-confidence, while peer collaboration can further enhance participation and communication (Kizi, 2025).

A teaching strategy that has recently attracted attention for its potential to enhance speaking performance is the Mingle Model. According to Irdmurni (2018), "mingle" refers to pupils working together to attain a common goal during the learning process. The conceptualisation of the Mingle Model was first introduced by Pollard and Hess (1997, as cited in Darmayenti & Nofiadri, 2015), with a particular emphasis on active oral communication and student movement during learning. The approach fosters a dynamic and interactive classroom atmosphere, in contrast to more passive learning methods.

Yahya and Salih's (2021) study revealed that the implementation of the Mingle model resulted in a substantial enhancement in students' achievement and confidence in English communication. In a similar study, FR and Inayaturrohmah (2020) reported that the implementation of the Mingle Model resulted in enhanced student fluency and engagement in speaking activities. Furthermore, Agustin (2023) discovered that participating in mingling activities significantly enhances students' motivation and willingness to articulate themselves in English.

The findings of this study demonstrate that the implementation of the Mingle Model in English as a Foreign Language classroom fosters meaningful

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communication and facilitates the use of natural language.

Although the Mingle Model has been proven effective, empirical evidence using systematic quantitative analysis remains limited. For instance, Daeli et al. (2023) applied Classroom Action Research (CAR), which primarily emphasizes cyclical classroom improvement and does not rely on comprehensive quantitative measurements such as pre-tests, post-tests, or inferential statistical analysis. Other studies on the Mingle Model or Mingle Game, such as Karsudianto (2020), concentrated mainly on enhancing students' motivation and self-confidence rather than measuring improvements in specific speaking components. Similarly, Mufidah et al. (2021) provided qualitative insights into the implementation of the Mingle Game and identified supporting factors for its success, but did not report measurable learning outcomes across multiple aspects of speaking skills.

As a result, empirical evidence remains limited regarding the comprehensive effectiveness of the Mingle Model in improving key speaking components, including grammar, vocabulary, pronunciation, and fluency, based on multi-aspect speaking rubrics and quantitative analysis. This gap highlights the need for further research employing more systematic measurement and statistical evaluation to assess the impact of the Mingle Model on students' overall speaking proficiency.

This study aims to investigate the effectiveness of the Mingle Model as a strategy to improve students' English-speaking skills at State Vocational High School. Specifically, this study seeks to answer the following research question: "Is the Mingle Model effective in improving the speaking skills of Grade X students at State Vocational High School?" To address this question quantitatively, the study formulates the following hypotheses: (H0) there is no significant improvement in the speaking skills of Grade X students at State Vocational High School after the implementation of the Mingle Model; and (H1) there is a significant improvement in the speaking skills of Grade X students at State Vocational High School after the implementation of the Mingle Model.

The objective of this study is to determine the effectiveness of the Mingle Model in improving students' English-speaking skills. The novelty of this study lies in its application of the Mingle Model in a vocational education context, where English instruction is closely linked to workplace communication demands. Vocational learners differ from general secondary students in that they are required to develop immediate communicative readiness for industry settings, including spontaneous interaction, functional language use, and collaborative communication.

This study contributes new insights into how an interactive, student-centered learning strategy such as the Mingle Model can enhance communicative competence and active participation among vocational students who typically demonstrate low engagement and limited confidence in English speaking activities.

2. Method

This study employed a quantitative approach and used a pre-experimental one-group pretest-posttest design to assess the effectiveness of the Mingle Model in improving speaking skills. It took place at State Vocational High School during the 2025/2026 academic year.

The population of this study consisted of all 10th grade students (904 students in 24 classrooms). Due to the large population size, cluster random sampling was employed. Class X Samsung - Software and Game Development 2 (37 students) was selected randomly using the Wheel of Names web application.

The primary instrument for data collection was a monologue speaking test. The speaking test included 10 recount text topics for both pre- and post-tests. Pre-test topics focused on personal experiences, such as memorable events, school incidents, and first-time experiences. Post-test topics were different but of similar difficulty, covering childhood memories, celebrations, and challenging situations. This ensured that improvements reflected students' actual speaking ability rather than familiarity with the topics. This test was designed to evaluate students' speaking abilities in four areas: grammar, vocabulary, pronunciation and fluency. To ensure the scores were objective and reliable, all student performances were assessed by three independent raters. These raters were two university lecturers and one certified English teacher from State Vocational High School. The raters evaluated the students' speaking abilities using a rubric adapted from the English for Nusantara Teacher Handbook, which was published by the Indonesian Ministry of Education and Culture. This rubric defined performance levels ranging from 1 (Poor) to 5 (Excellent) for each assessment component (Damayanti et al., 2022).

Data were gathered in two stages: pre-test and post-test. In the pre-test, students chose one of ten recount text topics, given 30 minutes to prepare a monologue, and delivered it individually and recorded. This duration was considered sufficient because the topics were based on their personal experiences, allowing them to recall events quickly and organize their stories effectively. Video recordings of students' speaking performances are used solely for research purposes. Students' identities are anonymized using initials. During the recording process, students are not allowed to look at their notes so that the recordings reflect their authentic speaking abilities. The post-test used the same format as the pre-test, but new recount text topics were chosen to avoid practice effects. Although this design allows for the observation of changes in students' speaking performance following the implementation of the Mingle Model, it is subject to limitations related to internal validity, such as history, maturation, and testing effects, which should be considered when interpreting the results.

Treatment using the Mingle Model was carried out in six sessions, each lasting 90 minutes and integrated into regular English classes. All sessions were taught by researchers to maintain consistency in implementation. The Mingle Model was implemented based on a pre-designed lesson plan and consistent

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learning procedures in each session. The only variation in the implementation of the treatment was the topic of the recount text used in each session. The procedure followed seven stages adapted from Darmayenti and Nofiadri (2015). The details of the procedure are presented in Table 4.

Table 4. Mingle Model Design in the Classroom the Implementation of the Mingle Model in the Classroom (Recount Text)

Pre-Activities	Preparation	The teacher introduces the recount topic, explains the text structure, provides examples, and prepares guiding question cards. Students choose a topic and prepare short recount texts.
Main Activities	Informing Topic	The teacher divides students into inner and outer circles and explains how the Mingle activity will be conducted.
	Warming-Up	The students review their topic and prepare to interact using guiding questions.
	Set the Rules	The teacher explains rules, interaction flow, and rotation time during the Mingle activity.
	Act (Mingle Model)	The students move around, share their recount stories with several classmates, and practice speaking interactively. The teacher supervises and assists as needed.
Post-Activities	Presentation	After the Mingle session, students return to their seats. The students individually present their recount texts in front of the class, and the teacher provides feedback.
	Review and Reflection	The students submit their notes as part of assessment. The teacher guides students to reflect on what they learned and closes the lesson.

Due to the relatively small sample size (less than 50 participants), data normality was tested using the Shapiro–Wilk test, which is generally recommended for small samples due to its sensitivity. Following confirmation of the data's normality, a paired sample t-test was conducted using SPSS version 25 to ascertain the existence of a statistically significant difference between the mean pre-test and post-test scores. The significance level was set at $\alpha = 0.05$ (Sugiyono, 2020). The mean N-Gain score was interpreted to measure the improvement in students' speaking skills, based on Hake and Reece's (1999) criteria: The effectiveness of the intervention is categorized as follows: 0.40 (ineffective), 0.40–0.55 (less effective), 0.56–0.75 (fairly effective), and > 0.76 (effective).

In order to ensure the validity and reliability of the study, several measures were implemented. The instruments used in the pre-test and post-test were validated through an expert judgment procedure involving two experienced English teachers. The validation was conducted using a structured validation sheet that assessed aspects such as clarity of instructions, relevance to the curriculum,

appropriateness of recount text topics, suitability of tasks for students' speaking ability, and feasibility of classroom implementation. Based on the validators' evaluations and written suggestions, revisions were made to the instruments, including improvements to instructional detail, time allocation, and task requirements. The revised instruments were then used in the data collection process. Additionally, the rubric used by the raters was adapted from an official, government-published handbook to ensure alignment with national educational standards (Damayanti et al., 2022).

Reliability was ensured through the use of multiple raters. The final score for each student was the average of these three ratings, thus helping to mitigate the impact of any individual rater bias and enhance the consistency and objectivity of the measurements. In addition, the inter-rater reliability test was conducted to assess the consistency of students' speaking performance ratings by several fixed raters using the Intraclass Correlation Coefficient (ICC) with a Two-Way Mixed Model and Consistency Type, processed through SPSS. As stated by Koo and Li (2016), an ICC of less than 0.50 is indicative of poor reliability, 0.50–0.75 is moderate reliability, 0.75–0.90 is good reliability, and greater than 0.90 is excellent reliability.

3. Result

Description of Pre-test Results

Table 1 illustrates the speaking ability of class X Samsung - Software and Game Development 2 at State Vocational High School before the implementation of the Mingle Model, providing a clear description of the students' initial speaking performance.

Table 1. Students' Pre-Test Speaking Score Ranges

Score Range	Number of Students	Percentage	Category
90 – 100	0	0.0%	Excellent
80 – 89	0	0.0%	Very Good
70 – 79	0	0.0%	Good
60 – 69	2	5.41%	Fair
1 - 59	35	94.59%	Unsatisfactory
TOTAL	37	100.0%	

As shown in Table 1, the results of the pre-test showed that the majority of students demonstrated low speaking proficiency, with over 90% (94.59%) falling into the *unsatisfactory* category. Only 5.41% of students reached the *fair* level, with no students achieving the *good*, *very good* or *excellent* categories. These results suggest that students' speaking skills were very limited before the implementation of the Mingle model. The findings suggest that students experienced difficulties in

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various aspects of speaking, including pronunciation, fluency, vocabulary and grammatical accuracy, which contributed to their low pre-test scores.

Table 2 is presented to illustrate the students' basic abilities before the treatment was given. The average scores for each aspect can be seen below:

Table 2. Students' Speaking Ability for Each Aspect (Pre-Test)

No	Each Aspect of Speaking	Average Score	Category
1.	Grammar	46	Unsatisfactory
2.	Vocabulary	46	Unsatisfactory
3.	Pronunciation	43	Unsatisfactory
4.	Fluency	47	Unsatisfactory
	Average	46	Unsatisfactory

As illustrated in Table 2, the pre-test results revealed that students' speaking performance in all aspects such as grammar, vocabulary, pronunciation and fluency was classified as unsatisfactory. The average scores for each aspect ranged from 43 to 47. The lowest score, 43, was for pronunciation, indicating that students had significant difficulty producing accurate sounds and stress patterns. Both grammar and vocabulary scored 46, showing that students lacked the knowledge required to form correct and varied sentences. Although fluency received the highest score (47), it remained in the *unsatisfactory* category, implying that students often hesitated and struggled to express ideas smoothly. The overall mean score was 46, confirming that students' speaking ability was very limited before the treatment.

Table 3 is presented to show the consistency of the raters' assessments on the pre-test based on the ICC results.

Table 3. Reliability Test Result (Pre-Test)

Intraclass Correlation Coefficient

		95% Confidence Interval		F Test with True Value 0			
	Intraclass Correlationb	Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.541a	.352	.708	4.532	36	72	.000
Average Measures	.779c	.619	.879	4.532	36	72	.000

As presented in Table 3, the average ICC value was 0.779 with a significance level of 0.000, indicating *good* reliability. This finding indicates that the three raters

applied consistent evaluation criteria for assessing students' speaking performance, ensuring the reliability of the scores for statistical analysis.

Description of Post-test Results

Table 4 illustrates the speaking ability of class X Samsung - Software and Game Development 2 at State Vocational High School after the implementation of the Mingle Model.

Table 4. Students' Post-Test Speaking Score Ranges

Score Range	Number of Students	Percentage	Category
90 – 100	6	16.22%	Excellent
80 – 89	14	37.84%	Very Good
70 – 79	15	40.54%	Good
60 – 69	2	5.41%	Fair
1 - 59	0	0.0%	Unsatisfactory
TOTAL	37	100.0%	

As illustrated in Table 4, the post-test results showed that the students had made significant progress in terms of their speaking skills. A substantial majority of learners made considerable progress, with over 90% achieving a *good* to *excellent* level of category. Notably, the largest percentage of students were in the *good* category, followed by those in the *very good* and *excellent* categories, reflecting a consistent upward trend in performance. Only a small proportion remained in the *fair* category, and no students scored in the *unsatisfactory* category. These results indicate that the Mingle Model effectively improved students' speaking abilities, helping most learners achieve improved speaking proficiency after the intervention.

Table 5 is presented to illustrate the students' abilities after the treatment was given. The average scores for each aspect can be seen below:

Table 5. Students' Speaking Ability for Each Aspect (Post-Test)

No	Each Aspect of Speaking	Average Score	Category
1.	Grammar	80	Very Good
2.	Vocabulary	84	Very Good
3.	Pronunciation	76	Good
4.	Fluency	84	Very Good
	Average	81	Very Good

As demonstrated in Table 5, the post-test results indicated a significant

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improvement in all aspects of students' speaking performance. The mean score increased to 81, which is categorized as very *good*, reflecting that vocabulary and fluency were among the highest-performing aspects, while grammar also demonstrated notable progress within the same category. Although pronunciation received a slightly lower score, it nevertheless fell into the good classification, thereby indicating that there was a considerable improvement in the grammar, vocabulary, pronunciation and fluency of the students after the treatment.

Table 6 is presented to show the consistency of the raters' assessments on the post-test based on the ICC results.

Table 6. Reliability Test Result (Post-Test)

Intraclass Correlation Coefficient

		95% Confidence Interval		F Test with True Value 0			
	Intraclass Correlationb	Lower Bound	Upper Bound	Value	df1	df2	Sig
Single Measures	.392a	.189	.592	2.933	36	72	.000
Average Measures	.659c	.412	.813	2.933	36	72	.000

As shown in Table 6, the post-test ICC value was 0.659 with a significance level of 0.000, indicating *moderate* reliability. This finding indicates that the three raters demonstrated acceptable consistency in evaluating the students' speaking skill, ensuring the reliability of the scores for further analysis.

Comparison of Pre-Test and Post-Test Scores

Table 7 is shown to illustrate the mean difference between pre-test and post-test scores after the treatment was given. This table aims to provide an information about the improvement in students' speaking skills after the treatment was given.

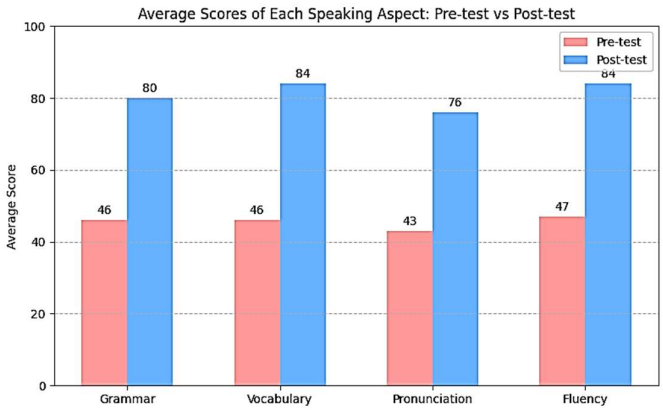
Table 7. Mean Differences Between Pre-Test and Post-Test Results

Statistic	Pre-Test	Post-Test	Mean Difference
Mean	46	81	35

As illustrated in Table 7, the mean speaking score demonstrated a marked improvement, increasing from 46 in the pre-test to 81 in the post-test, indicating a 35-point enhancement. This significant increase indicates that the treatment effectively enhanced students' speaking performance.

Figure 1 presents the average scores of students across four speaking aspects: Grammar, Vocabulary, Pronunciation, and Fluency, before and after the Mingle Model.

Figure 1. Comparison of Pre-test and Post-test Scores for Each Speaking Aspect



As shown in Figure 1, all speaking aspects improved from the pre-test to the post-test. Grammar scores increased from 46 to 80, vocabulary from 46 to 84, pronunciation from 43 to 76, and fluency from 47 to 84. These results show consistent improvement across all assessed components after the intervention.

The Result of Normality Test

Table 8 is presented to show the results of the normality test on pre-test and post-test data using Shapiro–Wilk.

Table 8. The Result of Normality Test

Tests of Normality

	Shapiro-Wilk		
	Statistic	df	Sig.
Pre-Test	.949	37	.092
Post-Test	.969	37	.377

Based on Table 8, the Shapiro–Wilk results in the Tests of Normality show that the significance value for the pre-test was 0.092, and for the post-test, it was 0.377. Since both significance values were greater than 0.05 ($p > 0.05$), it indicates that the pre-test and post-test data were normally distributed.

The Result of Paired Sample t-test

Table 9 is presented to show the results of the Paired Sample t-test comparing pre-test and post-test scores.

Table 9. The Result of Paired Sample t-test

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Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	Pre-Test - Post-Test	-35.27027	5.05881	.83166	-36.95696	-33.58358	-42.409	36	.000

As presented in Table 9, the Paired Sample t-test results demonstrated a mean difference of 35.27 points between the pre-test and post-test, with a significance value of 0.000 ($p < 0.05$). This finding indicates a statistically significant improvement in students' speaking performance after the treatment. Additionally, the effect size was calculated to be $d = 6.97$, which according to Cohen's (1988) classification, indicates a *very large* effect size, showing that the treatment had a highly substantial impact on students' skills

The Result of N-Gain Score and Percentage on Students' Speaking Skills

Table 10 shows the results of students' speaking ability based on N-Gain scores and percentages. This table is used to determine the level of improvement after the treatment was given.

Table 10. The Result of Students' Speaking Skills Based on N-Gain Score and Percentage

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
NGain_score	37	.51	.90	.6604	.09282
NGain_persen	37	50.77	90.00	66.0417	9.28232
Valid N (listwise)	37				

As demonstrated in Table 10, the N-Gain analysis revealed an average score of 0.66 (66.04%), indicating a *fairly* effective enhancement in students' speaking skills. The findings indicate that the majority of students demonstrated consistent progress following the implementation of the treatment, and the learning method proved to be an effective enhancement to their speaking performance.

4. Discussion

The findings of this study demonstrate a considerable enhancement in students' performance following the implementation of the Mingle Model. The

mean pre-test score of 46 (*Unsatisfactory*) increased to 81 (*Very Good*) in the post-test, with an N-Gain score of 0.66, which is categorized as *fairly* effective according to Hake and Reece (1999). These findings indicate that the effectiveness of the Mingle Model in enhancing students' speaking abilities is significant, effectively addressing the research problem. The improvement was most notable in vocabulary and fluency, followed by grammar and pronunciation. Students' improvement in speaking can be explained through multiple learning theories. CLT emphasizes meaningful communication (Richards & Rodgers, 2014), and the Mingle Model provided interactive tasks that promoted language use in context. From a social constructivist perspective, peer interaction and scaffolding likely supported gains in vocabulary and fluency (Harmer, 2007).

Students exhibited noticeable gains in their ability to express ideas with fluency and confidence, and to use a more extensive vocabulary accurately, following repeated interactive communication. This finding is consistent with those reported by Yahya and Salih (2021) and Karsudianto (2020) who found that the Mingle Strategy enhances students' fluency and vocabulary through peer interaction and supportive environments. In addition, studies by Mufidah et al. (2021), Amran and Syahputri (2025) and Novitasari and Prawiro (2023) have also confirmed that the Mingle Game encourages active participation and meaningful language use, leading to better fluency and vocabulary retention. In addition, Harmer's (2007) and Agustin's (2023) assertions indicate that communicative interaction fosters fluency and confidence in speaking.

Although the improvement in grammar was not as big as the improvement in fluency, the findings show that students could understand and use grammatical structures well through communication that was meaningful, rather than just remembering rules. According to Brown (2004), grammar improves more effectively through authentic and contextual practice. This finding is also in line with other recent studies which show that interactive dialogue and communicative exchanges in language learning environments can improve grammatical accuracy by giving learners meaningful exposure and opportunities to use the language in real contexts (Gao et al., 2024).

Additionally, while pronunciation enhancement remains limited, it demonstrates an emerging recognition of English phonetic structures. Repeated exposure and peer interaction have been identified as contributing factors to this progress, as evidenced by the research of Borzova (2014) and the recent findings of Liu et al. (2025) and Sun (2023). These studies suggest that pronunciation accuracy tends to improve gradually as learners engage in natural communication environments.

The Intraclass Correlation Coefficient (ICC) decreased from the pre-test (ICC = 0.779), which indicated *good reliability*, to the post-test (ICC = 0.659), which indicated *moderate reliability*. Despite this decrease, the value is still within statistically acceptable limits. This decrease likely reflects the increased diversity

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and complexity of student responses after the intervention. According to McNamara (1996), higher-level language performance tends to produce more varied and less predictable responses, thereby increasing the interpretive demands on raters. In line with this, Fulcher (2010) states that communicative language tasks often result in greater variation in assessment between raters due to the emphasis on authentic language use rather than uniform linguistic forms. In this study, the Mingle Model encouraged students to use a variety of language strategies, resulting in richer language production and ultimately causing a slight decrease in inter-rater agreement on the post-test.

Overall, the significant increase in the average score from the pre-test to the post-test, supported by a t-test significance value of 0.000 ($p < 0.05$), indicates that the increase is statistically significant. In addition, N-Gain scores were calculated to measure the level of improvement in student abilities. The average N-Gain score of 0.66 falls into the *fairly effective* category based on Hake's (1999) classification. Although the raw score increased by 35 points, this increase does not directly indicate a very high level of effectiveness, because N-Gain measures the improvement in learning outcomes relative to the maximum score that can be achieved, not based on the absolute score increase. As stated by Hake (1999), a large increase in raw scores can still result in a moderate N-Gain value if the pre-test scores are not too low or when the maximum score has not been fully achieved.

Therefore, the fairly effective classification accurately represents the normalized increase in learning outcomes. These results indicate that the Mingle model is effective in improving students' speaking skills. This finding is in line with FR and Inayaturrohmah (2020), who reported that the Mingle Model improves students' speaking skills, especially in terms of vocabulary and fluency, because students actively exchange ideas with each other during the activity.

Similarly, Daeli et al. (2023) and Novitasari and Prawiro (2023) found that the Mingle Game encourages more interactive communication, resulting in a significant improvement in the speaking performance of secondary school students. The focus of the Mingle Model on collaboration and peer engagement provides students with opportunities to communicate with multiple partners. The present study strengthens these previous findings by applying the Mingle Model in a vocational school context, demonstrating its adaptability and effectiveness beyond general secondary education.

The novelty of this study lies in the use of comprehensive quantitative analysis, including pre-tests, post-tests, t-tests, and N-Gain to objectively measure the effectiveness of the Mingle Model. This study also provides empirical data showing a measurable improvement in students' speaking skills within the school context examined. Despite significant improvements, this study has some limitations: no control group was used, students' familiarity with the test format may have influenced post-test results, and only short-term outcomes were measured, as no delayed post-test was conducted to assess long-term retention.

Practically, teachers can implement the Mingle Model by organizing small groups or rotations to maximize peer interaction. Materials should be task-based and relevant to students' interests or vocational contexts. Classroom management is crucial to maintain engagement, ensure equal participation, and provide timely feedback. Even in larger classes, structured mingle activities can foster meaningful communication and boost speaking confidence.

For future studies, it is recommended to conduct similar research with larger and more diverse groups of people, including different vocational programs, to verify the adaptability and effectiveness of the Mingle Model. Researchers could also look at using digital tools or multimedia to improve speaking skills, especially when it comes to pronunciation and complex language structures. Finally, it would be really interesting to find out what happens in the long-term when students use the Mingle Model in real workplaces. This could help us understand more about how to teach students and how they can use the skills they learn in the future.

5. Conclusion

Based on the results of the study, it can be concluded that the Mingle model has proven to be effective in improving the speaking skills of 10th grade students at State Vocational High School. The mean score increased from 46 (*Unsatisfactory*) to 81 (*Very Good*), with a significance value of 0.000 ($p < 0.05$) and an N-Gain of 0.66, indicating a *fairly* effective improvement. The application of this model has had a positive impact, especially in terms of fluency and vocabulary mastery, which showed the most significant improvement as a result of repeated interactions and intensive language use.

However, grammar and pronunciation still need further reinforcement as they did not show as much improvement as other aspects. Overall, the Mingle model can be categorized as an effective learning strategy that supports the students' speaking skills in a vocational education environment. The novelty of this study lies in its application of the Mingle Model within a vocational school context, combined with rubric-based, multi-aspect speaking assessments and the use of rater reliability measures. While pre-test/post-test designs are common, the specific focus on vocational learners' communicative competence and the objective evaluation of multiple speaking dimensions strengthen the study's contribution.

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