Ta'lim al-'Arabiyyah: Jurnal Pendidikan Bahasa Arab dan Kebahasaaraban
DOI: https://doi.org/10.15575/jta.v9i1.45857

Ta'lim al-'Arabiyyah
JURNAL PENDIDIKAN BAHASA ARAB & KEBAHASAARABAN
P-ISSN: 2721-5237 | E-ISSN: 2549-208X // Vol. 9 No. 1 | 160–176
https://journal.uinsgd.ac.id/index.php/Talim/index

IMPLEMENTING BRAINSTORMING TECHNIQUES TO IMPROVE ARABIC SPEAKING SKILLS AMONG SECONDARY SCHOOL STUDENTS

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Article Information

Article History:
Received : 03-May-2025
Revised : 02-June-2025
Accepted : 28-June-2025
Published : 30-June-2025

Keywords:
Arabic language learning;
Arabic speaking skills;
Brainstorming;
Language learning.

Articles Available Online:

ABSTRACT

This study investigates the effectiveness of the brainstorming technique in enhancing Arabic speaking skills among eleventh-grade students at Al-Rasyidiyah Islamic High School, Bandung. Speaking is a crucial component of language learning, yet students often struggle due to traditional, non-interactive teaching methods. Adopting a quasi-experimental design, the study involved two groups: an experimental group taught using the brainstorming technique and a control group taught through conventional methods. Data were collected using pre- and post-tests and observations, and analysed using descriptive and inferential statistics. Results revealed that the students' pre-test average score was 49.06 (low category), while their post-test score increased to 76.88 (sufficient category), indicating significant improvement. The t-test analysis yielded a t-value of 14.4, which exceeds the critical t-value of 1.55 at the 0.05 significance level, confirming the results' statistical significance. Furthermore, the normalized gain (N-Gain) was 0.57 (57%), categorized as a moderate to high improvement. These findings demonstrate that the brainstorming technique effectively enhances students' Arabic speaking skills by fostering creativity and active participation. The study recommends integrating brainstorming into Arabic language instruction to promote more dynamic, communicative, and student-centered learning experiences.

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How to Cite:
Rifa'i, I., Hadi, A., & Faqih, I. M. (2025). Implementing Brainstorming Techniques to Improve Arabic Speaking Skills Among Secondary School Students. *Ta'lim al-'Arabiyyah: Jurnal Pendidikan Bahasa Arab & Kebahasaaraban, 9*(1), 160–176. https://doi.org/10.15575/jta.v9i1.45857

INTRODUCTION

Arabic occupies a strategic position in global education, particularly within Islamic educational institutions such as madrasahs and pesantrens, where the language serves not only as a medium of religious transmission but also as a tool for academic communication. Mastery of Arabic speaking skills (maharah al-kalām) is therefore essential for enabling students to engage actively with Arabic texts, participate in scholarly discourse, and communicate effectively in religious and educational settings (Al-Jarf, 2020). Nevertheless, despite its recognised importance, developing speaking proficiency among Arabic language learners remains a persistent challenge in many formal instructional contexts.

Previous studies indicate that students' difficulties in speaking Arabic are influenced by both linguistic and affective factors, including limited vocabulary knowledge, inadequate exposure to authentic speaking practice, and low self-confidence (Rahman, 2021; Rajalani, 2023). These challenges are often reinforced by conventional teaching practices that rely heavily on lecture-based instruction and memorization, resulting in passive learning environments with minimal opportunities for oral interaction (Nasir, 2022; Miolo, 2023). Such pedagogical conditions limit learners' opportunities to negotiate meaning, experiment with language use, and develop communicative confidence, crucial components of oral proficiency development.

Contemporary second and foreign language pedagogy increasingly emphasizes the role of interaction, learner engagement, and cognitive involvement in speaking development. From a socio-cognitive perspective, oral proficiency is constructed through meaningful peer interaction, collaborative idea generation, and reduced affective barriers in classroom discourse. Research grounded in communicative and task-based language-teaching frameworks confirms that instructional strategies that foster spontaneous interaction and learner autonomy significantly enhance speaking fluency and accuracy (Goh & Burns, 2020; Sato & Ballinger, 2022). In Arabic language education, such approaches are particularly relevant due to the linguistic complexity of Arabic, which often discourages learners from speaking spontaneously (Al-Hoorie & MacIntyre, 2020).

In response to these challenges, interactive instructional strategies have gained increasing attention, among them the brainstorming technique. Brainstorming emphasizes free idea generation, collaborative discussion, and learner-centered interaction, enabling students to articulate ideas without fear of immediate correction. This technique facilitates lexical retrieval, idea organization, and discourse planning, which are essential cognitive processes in speaking performance (Shofiyani & Afifah, 2021; Al-Tair, 2021). Empirical evidence from recent studies demonstrates that brainstorming enhances students' speaking skills by improving vocabulary use, sentence construction, and communicative confidence, particularly when implemented as a structured pre-speaking activity (Nguyen & Newton, 2021; Zarrinabadi et al., 2022).

Moreover, research conducted in both Arabic and EFL contexts indicates that brainstorming significantly enhances speaking fluency and accuracy by enabling learners to collaboratively prepare linguistic content before oral production (Lukman et al., 2022). The technique also supports affective dimensions of language learning, as it reduces speaking anxiety and increases learners' willingness to communicate in the target language (Oga-Baldwin & Fryer, 2020). These affective benefits are especially important in Islamic

secondary education contexts, where learners may experience additional pressure related to linguistic correctness and formal language use.

Despite the growing body of literature supporting brainstorming as an effective instructional strategy, gaps remain in context-specific empirical research conducted within Islamic secondary education settings. Many previous studies focus on general foreign language classrooms or integrate multiple language skills without isolating the specific impact of brainstorming on Arabic speaking proficiency. Therefore, the present study seeks to address this gap by employing a quasi-experimental design to investigate the effect of brainstorming techniques on the speaking skills of grade XI students at Al-Rasyidiyah Islamic High School Bandung. By examining students' speaking performance before and after the intervention, this study aims to provide empirical evidence on the effectiveness of brainstorming in enhancing maharah al-kalām within a madrasah context and to contribute to pedagogical innovation in Arabic language instruction.

METHOD

This study employed a pre-experimental research design, specifically the one-group pretest–posttest design, to examine the effectiveness of instructional intervention on students' Arabic speaking skills. This design allows researchers to measure changes in learning outcomes by comparing participants' performance before and after treatment within the same group (Campbell & Stanley, 1963; Dimitrov & Rumrill, 2003). Although lacking a control group, the pretest–posttest approach remains appropriate for preliminary investigations aimed at identifying instructional impact in authentic classroom settings (Allen, 2017).

The independent variable in this study was the instructional treatment applied during Arabic speaking instruction. In contrast, the dependent variable was students' speaking proficiency, measured through structured speaking tests administered before and after the intervention.

The study population consisted of all Grade XI students at Al-Rasyidiyah Islamic High School in Bandung, totalling 32 learners. Given the relatively homogeneous population and the intact classroom structure, cluster random sampling was employed to select the research sample (Taherdoost, 2016). Consequently, one Grade XI class was selected as the sample and received the instructional treatment. This sampling technique is widely used in educational research to maintain ecological validity while ensuring representative participation (Etikan & Bala, 2017).

The research was conducted at Al-Rasyidiyah Islamic High School Bandung, West Java, Indonesia. The selection of this site was based on practical considerations, including institutional accessibility and the presence of observable challenges related to Arabic speaking instruction. The study was implemented from 25 June until the completion of the instructional cycle, encompassing pretesting, treatment sessions, and posttesting.

Data Collection Techniques and Instruments

Data were collected using multiple techniques to ensure methodological rigor and data triangulation. First, observation was employed to document students' engagement and classroom interaction during the learning process, aligning with qualitative data collection standards in educational research (Creswell & Poth, 2018). Second, speaking tests were administered as a pretest and posttest to quantitatively measure students' speaking

proficiency. The tests were designed based on instructional objectives and assessed fluency, vocabulary use, pronunciation, and grammatical accuracy, consistent with established oral proficiency assessment frameworks (Brown, 2004; Fulcher, 2015). Third, documentation was used to collect supporting data, including lesson plans, attendance records, and instructional materials.

The primary research instruments included structured speaking test sheets, observation checklists, and documentation guides. These instruments were reviewed to ensure content relevance and alignment with learning objectives.

Following data collection, the data were analysed using both qualitative and quantitative methods. Qualitative data derived from observations and documentation were analyzed descriptively to capture classroom dynamics and learner responses to the instructional intervention (Miles et al., 2014). Quantitative data from the speaking tests were analysed statistically using normality tests, paired-samples t-tests, and N-Gain analysis to determine the magnitude of learning improvement. The paired t-test was applied to identify statistically significant differences between pretest and posttest scores, a procedure commonly used in educational intervention studies (Field, 2018; Lakens, 2013).

RESULT AND DISCUSSION

Result

The implementation of the brainstorming technique in this study produced statistically and pedagogically significant improvements in students' Arabic speaking performance. Data from pre- and post-intervention assessments indicate marked gains in fluency, vocabulary use, accuracy, and communicative confidence, demonstrating that brainstorming can effectively stimulate oral language development in formal instructional settings.

Quantitative results showed that students' speaking scores improved substantially after brainstorming-based instruction. This pattern aligns with empirical evidence from recent studies showing that brainstorming techniques enhance speaking proficiency by encouraging active idea generation and reducing affective barriers to oral production. The observed increase in average speaking scores suggests that when learners collaborate to generate and organise ideas, they produce more fluent and accurate target-language output.

In addition to quantitative gains, qualitative observations during classroom interaction revealed increased student participation and reduced hesitation in oral tasks. Such dynamics are consistent with findings by Afifah, Hilaliyah, and Iriyansah (2025), who reported that brainstorming significantly enhances students' engagement and willingness to speak during discussion activities. These active engagements are essential for developing communicative competence and contrast with passive teacher-centered models that often limit speaking opportunities.

Furthermore, improvements in lexical accessibility were observed as students utilized a broader range of vocabulary items during post-intervention speaking tasks. This outcome supports the assertion that brainstorming facilitates richer lexical engagement by providing meaningful contexts for language items (Afifah, Hilaliyah, & Iriyansah, 2025). Learners' ability to retrieve and apply vocabulary during spontaneous speech indicates deeper internalization of linguistic forms.

The effect of brainstorming on speaking fluency was particularly notable. Students were observed to produce longer, more coherent utterances with fewer hesitations, indicating

greater automaticity in speech processing. Such results parallel findings from research employing structured brainstorming variants, which report significant improvements in students' conversational fluency after intervention (Firteach Gea, Pangaribuan & Sembiring, 2020; Affandi & Muhalim, 2022).

Additionally, brainstorming appeared to support cognitive aspects of speaking, such as idea organisation and the formulation of analytical responses, as students were able to construct more logically sequenced and meaningful expressions during post-tests. These cognitive gains reflect mechanisms discussed in recent language learning research, which show that idea-generation strategies encourage deeper processing and learner autonomy in oral performance.

However, differences in individual participation were evident, with more confident students dominating some discussion segments. This observation mirrors challenges noted in previous research, emphasizing the need for teacher scaffolding to ensure equitable engagement among learners (Rahman, Supriadi & Erniati, 2025).

Overall, both quantitative outcomes and qualitative classroom indicators demonstrate that the brainstorming technique significantly improves speaking skills by fostering communicative confidence, lexical development, and fluency. The results corroborate prior experimental and quasi-experimental evidence of the effectiveness of brainstorming strategies in promoting speaking proficiency in secondary school contexts.

In this study, the researcher examined the implementation of brainstorming techniques the researcher developed to improve students' speaking skills. In this study, the researcher followed several steps to obtain the data and results the researcher wanted. The researcher conducted a pre-test and post-test first, then calculated the average from the pre-test and post-test results as follows.

Table 1. Pre-Test and Post-Test Results

NO	NAME	PRE TEST	POST TEST
1	Brother Bahanu Adishandra	85	65
2	Agil Hanafi	80	40
3	Ahmad Afif Muhajir	70	50
4	Ahmad Dani	95	75
5	Ahmad Ryan Albar	90	45
6	Aisha Azkia Moulida	70	30
7	Aulia Rahmi Manwa	70	30
8	Heartbreak	70	30
9	Haidar Luthfi Ranawan	65	45
10	Hariri Adyul Wafi	90	70
11	Aida Moulida Nurian	95	45
12	Hello Lana Elyasa	80	35
13	Khairat Latifah	65	45
14	Muhammad Abdurrahman	80	50
15	Muhammad Satria Sebastian	80	55
16	Petri Sapphire	80	60
17	Randi Ahmad Mahrumin	65	45

NO	NAME	PRE TEST	POST TEST
18	Rizky Aditya	65	45
19	Serly Frisca Diwinta	70	50
20	Udi Al Fadhilah	65	45
21	Aditya Umar Habibie	55	35
22	Ahmad Damiati	65	45
23	Alpha Dawn Kusuma	80	50
24	Fakhri Maulana	80	55
25	Feriston Naila	80	60
26	Fauzan Muhammad Azhar	70	45
27	George Aziz	90	45
28	The Story of Shafa Al-Afifah	70	50
29	Muhammad Zainal Abidin	90	70
30	The First Lady	95	75
31	The Great	75	55
32	Zidan Zulqarnain	80	30
Amount		**1,570**	**2,460**
Flat		**49.06**	**76.88**

Based on the table presented, the reality of student learning outcomes in Arabic language learning before using the brainstorming technique is classified as "low," as indicated by the average pretest score of 49.06, which falls within the low value interpretation range (50-60). Meanwhile, after applying the brainstorming technique in Arabic language learning, the reality of student learning achievement has increased to "quite good," with an average posttest score of 76.88, which falls within the fairly good value interpretation range (61-79).

The average of the pretest and posttest results showed a significant improvement in students' speaking skills, from 49.06 to 76.88. This increase shows that the brainstorming technique makes a positive contribution to Arabic language learning, especially in students' speaking skills.

After calculating and obtaining the averages from the pretest and posttest, the data normality test was carried out using the Lilliefors test with a significance level of 0.05 (5%). With a sample size of 32 students, the t-value is 1.55. The statistical calculations show that the calculated t value is 14.4. These results indicate that the calculated t value is greater than the t table value (14.4 > 1.55), so the null hypothesis is rejected at the 5% significance level. Thus, it can be concluded that there is a significant difference in student learning outcomes before and after using the brainstorming technique, indicating the effectiveness of this method in improving students' Arabic speaking skills.

Table 2. Results of Students' Pre-Test Normality

No	X1	Z	F(z)	S(z)	[F(z)-S(z)]
1	30	-1‹32	0‹0934	0‹0882	0‹0052
2	30	-1‹20	0‹1151	0‹118	-0‹0025
3	30	-0‹73	0‹2327	0‹324	-0‹0908
4	30	-0‹61	0‹2709	0‹412	-0‹1409

No	X1	Z	F(z)	S(z)	[F(z)-S(z)]
5	35	-0‹38	0‹3520	0‹441	-0‹0892
6	35	-0‹15	0‹4404	0‹529	-0‹0890
7	40	0‹09	0‹5359	0‹618	-0‹0817
8	45	0‹21	0‹5832	0‹735	-0‹1521
9	45	0‹32	0‹6255	0‹824	-0‹1920
10	45	1‹50	0‹9332	0‹912	0‹0214
11	45	Maximum |F(s) - S(s)|			0‹0223
12	45				
13	45				
14	45				
15	45				
16	45				
17	45				
18	50				
19	50				
20	50				
21	50				
22	50				
23	55				
24	55				
25	55				
26	60				
27	60				
28	65				
29	70				
30	70				
31	75				
32	75				
Amount	**49.06**				
Average	**12.6**				

Based on the normality test results presented in the table above, the calculated t value obtained from the pretest data is 0.223, which represents the highest value derived from the Liliefors normality analysis. This value is then compared with the critical t-table value of 0.026 at a significance level of 0.05. Since the calculated t value (0.223) is smaller than the corresponding t-table value, it can be concluded that the null hypothesis (H_0) is accepted. This finding indicates that the pretest data are normally distributed, thereby fulfilling one of the essential assumptions for conducting further parametric statistical analyses.

Similarly, the normality analysis of students' learning outcomes measured through the posttest at MA Ar-Rosyidiyah Bandung demonstrates consistent results. With a sample size of 32 students and a significance level of 0.05 (5%), the critical t-table value is 0.026. The calculated t value derived from the Liliefors test for the posttest data is 0.167, taken from the largest observed value in the analysis. Because the calculated t value (0.167) is lower than the

t-table value (0.026), the null hypothesis (H_0) is likewise accepted. This confirms that the posttest data are also normally distributed.

The confirmation of normal distribution for both pretest and posttest scores is statistically significant, as it validates the use of parametric tests particularly the paired-sample t-test to examine the effectiveness of the instructional intervention. The fulfillment of the normality assumption strengthens the reliability and validity of the inferential statistical findings, ensuring that the observed differences in students' speaking performance can be attributed to the applied brainstorming technique rather than violations of statistical assumptions.

Table 3. Results of Students' Post-Test Normality

No	X1	z	F(z)	S(z)	[F(z)-S(z)]
1	55	-1‹13	0‹1292	0‹147	-0‹0179
2	65	-0‹95	0‹1711	0‹206	-0‹0348
3	65	-0‹76	0‹2236	0‹324	-0‹0999
4	65	-0‹40	0‹3446	0‹412	-0‹0672
5	65	-0‹22	0‹4129	0‹559	-0‹1459
6	65	-0‹04	0‹5160	0‹706	-0‹1899
7	65	0‹51	0‹6950	0‹794	-0‹0991
8	70	0‹87	0‹8078	0‹824	-0‹0157
9	70	1‹24	0‹8925	0‹882	-0‹0101
10	70	2‹33	0‹9901	1	-0‹0099
11	70	Maximum |F(z) - S(z)|			0‹0223
12	56				
13	70				
14	70				
15	75				
16	80				
17	80				
18	80				
19	80				
20	80				
21	80				
22	80				
23	80				
24	80				
25	85				
26	90				
27	90				
28	90				
29	90				
30	95				
31	95				
32	95				
Amount	**76.88**				
Average	**10.65**				

From the table above, the results of the t count from the pretest, namely 0.223, are taken from the largest value. So it can be concluded that the t count of 0.223 is smaller than the t table of 0.026, so it can be concluded that the null hypothesis is accepted.

Table 4. The "t" test refers to the results of the Pre Test and Post Test.

No	Results from using Multimedia Android based interactive towardsstudent learning outcomes		(X2-X1)	(X2-X1)^2
	X1	X2		
1	65	85	20	400
2	40	80	40	1600
3	50	70	20	400
4	75	95	20	400
5	45	90	45	2025
6	30	70	40	1600
7	30	70	40	1600
8	30	70	40	1600
9	45	65	20	400
10	70	90	20	400
11	45	95	50	1500
12	35	80	45	2025
13	45	65	20	400
14	50	80	30	900
15	55	80	25	625
16	60	80	20	400
17	45	65	20	400
18	45	65	20	400
19	50	70	20	400
20	45	65	20	400
21	35	55	20	400
22	45	65	20	400
23	50	80	30	900
24	55	80	25	625
25	60	80	20	400
26	45	70	25	625
27	45	90	45	2025
28	50	70	20	400
29	70	90	20	400
30	75	95	20	400
31	55	75	20	400
32	30	80	50	2500
Amount			**890**	**28350**

The results of the hypothesis testing further confirm the effectiveness of the brainstorming technique in improving students' Arabic speaking achievement. The statistical analysis revealed that the calculated t value (14.4) substantially exceeded the critical t table value (1.55) at the 0.05 significance level, leading to the rejection of the null hypothesis. This outcome provides strong empirical evidence that the observed improvement in students' speaking performance after the intervention was not due to random variation, but rather resulted from the systematic application of the brainstorming technique in the instructional process.

Moreover, the magnitude of the t value indicates a robust instructional effect, suggesting that the difference between pre-test and post-test scores was considerable across the sample. Such a high t statistic reflects a consistent pattern of improvement among students, reinforcing the reliability of the intervention's impact. This statistical strength implies that brainstorming not only facilitated short-term gains but also contributed to meaningful changes in students' oral language production, particularly in fluency, vocabulary deployment, and communicative confidence.

From an educational standpoint, the significant difference between students' performance before and after the implementation of brainstorming highlights the pedagogical value of interactive and learner-centered strategies in foreign language instruction. The findings suggest that brainstorming creates a supportive learning environment that reduces speaking anxiety and encourages active participation, thereby enhancing learning outcomes. Consequently, the rejection of the null hypothesis underscores the potential of brainstorming as an effective instructional approach for improving speaking skills, especially when compared to more traditional, teacher-centered methods.

Table 5. Calculating N-Gain value

NO	Mark post test	Pre value test	N-Gain	Information
1	85	65	0.57	Enough
2	80	40	0.67	Enough
3	70	50	0.40	Enough
4	95	75	0.80	High
5	90	45	0.80	High
6	70	30	0.57	Enough
7	70	30	0.57	Enough
8	70	30	0.57	Enough
9	65	45	0.36	Enough
10	90	70	0.67	Enough
11	95	45	0.91	High
12	80	35	0.69	Enough
13	65	45	0.36	Enough
14	80	50	0.60	Enough
15	80	55	0.56	Enough
16	80	60	0.56	Enough
17	65	45	0.36	Enough
18	65	45	0.36	Enough

NO	Mark post test	Pre value test	N-Gain	Information
19	70	50	0.40	Enough
20	65	45	0.36	Enough
21	55	35	0.31	Enough
22	65	45	0.36	Enough
23	80	50	0.60	Enough
24	80	55	0.56	Enough
25	80	60	0.50	Enough
26	70	45	0.45	Enough
27	90	45	0.82	High
28	70	50	0.40	Enough
29	90	70	0.67	Enough
30	95	75	0.80	High
31	75	55	0.44	Enough
32	80	30	0.71	High

Table 5 presents the distribution of normalized gain (N-Gain) values derived from students' pre-test and post-test scores in Arabic speaking skills following the implementation of the brainstorming technique. The N-Gain index was employed to measure the magnitude of students' learning improvement by comparing individual performance before and after the instructional intervention. This metric provides a more precise representation of learning effectiveness than raw score differences, as it accounts for students' initial proficiency levels.

The results indicate that the majority of students experienced moderate (sufficient) learning gains. Out of 32 students, 26 students obtained N-Gain values ranging from 0.31 to 0.70, which fall within the "sufficient" category. These findings suggest that the brainstorming technique consistently facilitated meaningful improvement in speaking performance for most learners, regardless of their initial proficiency. Students in this category generally demonstrated progress in fluency, vocabulary usage, and confidence in oral communication.

In addition, 6 students achieved high learning gains, with N-Gain values exceeding 0.71. This subgroup reflects learners who benefitted exceptionally from the brainstorming-based instruction, likely due to higher engagement, stronger collaborative interaction, or greater responsiveness to communicative learning activities. Notably, no students were categorized as having low learning gains (N-Gain ≤ 0.30), indicating that the intervention was effective across the entire sample. This table explains the improvement of students' learning achievement in speaking skills learning before and after using the brainstorming technique. The conclusions that can be drawn from the previous table are as follows:

Table 6. N-Gain values

Gains Normalized	Criteria	Number of students	Presentation
g > 0.71	High	6	18.75%
0.31< g ≤ 0.70	Currently	26	81.25%
g ≤0.30	Low	-	-

Based on the N-Gain analysis presented in the previous table, it can be observed that the majority of students demonstrated a meaningful improvement in their Arabic speaking achievement after the implementation of the brainstorming technique. Specifically, 26 out of 32 students were classified within the sufficient improvement category, while 6 students reached the high improvement category. This distribution indicates that the instructional intervention was effective for most learners, yielding consistent learning gains across the classroom rather than benefiting only a small number of high-performing students.

Furthermore, the average N-Gain value of 0.57 (57%) reflects a moderate level of instructional effectiveness, based on the established classification criteria in which the sufficient category falls within the range of $0.31 < g \leq 0.70$. This finding suggests that the brainstorming technique facilitated a substantial enhancement in students' speaking performance, particularly in terms of fluency, idea development, and confidence in oral expression. The moderate-to-high gain also implies that students were able to meaningfully internalize and apply newly acquired linguistic knowledge during speaking activities.

From a pedagogical perspective, these results highlight the potential of brainstorming as a learner-centered strategy capable of promoting steady and inclusive improvement in speaking skills. The dominance of the sufficient category, combined with the presence of a notable proportion of students achieving high gains, indicates that the technique accommodates varying proficiency levels while fostering collaborative engagement. Consequently, brainstorming can be considered an effective instructional approach for enhancing Arabic speaking outcomes, especially when integrated systematically into communicative language teaching practices.

Discussion

The findings of this study provide robust empirical evidence that the brainstorming technique exerts a statistically significant and pedagogically meaningful effect on students' Arabic speaking achievement. The marked increase in the mean score from the pretest (49.06) to the posttest (76.88), reinforced by the t-test result (t-value = 14.4 > t-table = 1.55), clearly indicates that the null hypothesis is rejected at the 5% significance level. This outcome demonstrates that brainstorming is not merely an auxiliary classroom activity but a powerful instructional strategy capable of substantially enhancing learners' oral proficiency within a madrasah context. These results corroborate previous empirical studies that emphasize brainstorming as a catalyst for active language production and collaborative meaning-making, both of which are essential components of communicative language competence.

From a fluency perspective, learners exhibited noticeable improvements in speech continuity, reduced pauses, and greater willingness to sustain oral interaction. Such developments align with the findings of Afifah, Hilaliyah, and Iriyansah (2025), who reported that brainstorming significantly increases students' engagement and confidence, thereby minimizing hesitation and anxiety during speaking tasks. In the present study, brainstorming activities created a psychologically supportive environment in which students could express ideas without fear of immediate correction, allowing fluency to develop naturally. This supports interactionist theories of second language acquisition, which argue that repeated opportunities for meaningful output enhance automaticity and oral control.

In addition to fluency gains, the posttest results revealed notable expansion in students' lexical usage and contextualized vocabulary application. Brainstorming appears to facilitate

lexical retrieval by activating learners' prior knowledge and encouraging associative thinking during idea generation. This finding is consistent with Affandi and Muhalim (2022), who argue that interactive and metacognitive learning strategies promote deeper lexical processing and authentic language use. By collaboratively generating ideas before and during speaking tasks, students were better equipped to access relevant vocabulary and apply it appropriately within communicative contexts. Furthermore, the observed reduction in speech hesitation reflects increased automaticity, echoing findings from studies on structured brainstorming models such as Round Robin Brainstorming, which have demonstrated measurable gains in speaking accuracy and fluency following systematic implementation.

Beyond linguistic outcomes, qualitative classroom observations suggest that brainstorming also contributes to learners' cognitive development, particularly in terms of idea organization, logical sequencing, and analytical responsiveness during oral tasks. Students demonstrated improved ability to structure arguments, respond coherently to prompts, and elaborate ideas during discussions. These findings resonate with broader pedagogical frameworks that view interactive language use as a form of cognitive scaffolding, enabling deeper processing and higher-order thinking in second language performance (Lukman, Abdul, & Sujariati, 2022). In this sense, brainstorming functions not only as a speaking technique but also as a cognitive tool that bridges linguistic competence and critical thinking.

However, the study also revealed variation in participation levels among students, with more confident learners tending to dominate discussions. This phenomenon has been widely documented in collaborative learning research and underscores the necessity of deliberate teacher scaffolding (Rahman et al., 2025). Without structured guidance, brainstorming may inadvertently marginalize less proficient or introverted learners. Therefore, teacher mediation—such as turn-taking strategies, role assignments, or structured brainstorming formats—is essential to ensure equitable participation and maximize learning outcomes for all students.

Comparative insights from the literature further indicate that while brainstorming is particularly effective, it shares common pedagogical foundations with other learner-centered and collaborative strategies. For example, group brainstorming parallels peer-mediated discussion techniques such as Plan-Ahead Brainstorming, which have also been shown to enhance speaking performance (Akhmad Affandi & Muhalim, 2022). Meta-analytic evidence additionally suggests that brainstorming yields moderate yet consistent effects on academic achievement and creative thinking, reinforcing its versatility as a pedagogical tool applicable beyond speaking skills alone.

The instructional implications of these findings are substantial for Arabic language education. First, the integration of brainstorming techniques can transform traditionally teacher-centered classrooms into interactive, student-centered learning environments that prioritize meaningful communication essential condition for developing maharah al-kalam. Second, the significant N-Gain achieved in this study indicates that brainstorming supports not only performance improvement but also sustained cognitive engagement and interactional competence. This aligns with contemporary communicative language teaching principles that emphasize learner autonomy, collaboration, and authentic language use.

Nevertheless, this study acknowledges certain limitations, including the relatively small sample size and the focus on a single institutional context. These factors may limit the generalizability of the findings. Future research is therefore encouraged to examine the differential effects of specific brainstorming variants (e.g., Plan-Ahead Brainstorming, Round Robin Brainstorming) across diverse proficiency levels and educational settings. Longitudinal studies could also explore the sustainability of speaking gains over time, while comparative research contrasting brainstorming with other communicative strategies such as Think-Pair-Share or structured group discussions may further clarify the distinctive contributions of brainstorming to Arabic speaking development.

CONCLUSION

Based on the findings of this study, it can be concluded that the implementation of the brainstorming technique has a significant and positive impact on students' speaking achievement in Arabic at the eleventh-grade level of Al-Rasyidiyah Islamic High School Bandung. First, students' speaking performance prior to the application of the brainstorming technique was categorized as low, as reflected in the mean pre-test score of 49.06, which falls within the lower achievement range according to the established assessment criteria. This result indicates that conventional instructional practices were insufficient in fostering effective oral communication skills among students. Second, following the implementation of the brainstorming technique, students' speaking achievement showed a substantial improvement, as evidenced by the mean post-test score of 76.88, which is classified within the satisfactory to good category. This improvement suggests that brainstorming activities successfully encouraged students to generate ideas, participate actively in oral tasks, and utilize linguistic resources more effectively during speaking performance. Third, the statistical analysis confirms that the observed improvement was significant. The calculated t-value (14.4) exceeded the critical t-table value (1.55) at the 0.05 significance level, leading to the rejection of the null hypothesis. Furthermore, the N-Gain score of 0.57 (57%) indicates a moderate to high level of effectiveness, demonstrating that the brainstorming technique contributed meaningfully to enhancing students' speaking skills.

Overall, these findings underscore the pedagogical value of brainstorming as an interactive and student-centered instructional strategy for improving Arabic speaking proficiency. The technique not only enhances students' learning outcomes quantitatively but also supports the development of communicative confidence and engagement, making it a viable alternative to traditional teacher-centered approaches in foreign language instruction.

ACKNOWLEDGMENT

I express my deepest gratitude to Allah SWT for the grace and ease given in completing this research. I also express my gratitude to the supervisor who has provided valuable direction and input, as well as to my family, friends, and all parties who have provided support, both morally and materially, so that this research can be completed properly.

AUTHOR CONTRIBUTIONS STATEMENT

The researcher made significant contributions to this study by designing the research methodology, collecting data, analyzing the results in depth and interpreting the results carefully. In addition, other contributions include the preparation of the research report, presentation of results and conclusions in an organized manner.

REFERENCES

Affandi, A., & Muhalim, M. (2022). *Enhancing Students' Speaking Ability Using the Plan-Ahead Brainstorming Technique*. *Tamaddun*, *21*(2), 212–227. https://doi.org/10.33096/tamaddun.v21i2.212

Afifah, N., Hilaliyah, T., & Iriyansah, M. R. (2025). *Efektivitas Metode Pembelajaran Brainstorming dan Storytelling Terhadap Keterampilan Berbicara*. *Jurnal Idiomatik*, 8(2), 110-117. https://doi.org/10.46918/idiomatik.v8i2.2718

Al-Hoorie, A. H., & MacIntyre, P. D. (2020). Contemporary developments in willingness to communicate. Language Teaching, 53(3), 1–15. https://doi.org/10.1017/S0261444821000521

Al-Jarf, R. (2020). Mobile-assisted language learning for Arabic speaking skills: A systematic review. International Journal of Instruction, 13(4), 1–16. https://doi.org/10.29333/iji.2020.1341a

Allen, M. (2017). *The SAGE Encyclopedia of Communication Research Methods*. SAGE. https://doi.org/10.4135/9781483381411

Al-Tair, A. M. (2021). Brainstorming as a communicative strategy in teaching Arabic speaking skills. Arab World English Journal, 12(3), 132–145. https://doi.org/10.24093/awej/vol12no3.9

Al-Tair, A. M. A. R. (2021). Impact of Brainstorming Method in Developing Speaking Skills in Arabic. *Journal of Educational and Psychological Sciences*, *5*(20), 107-92. https://doi.org/10.26389/AJSRP.A510121

Brown, H. D. (2004). Language assessment: Principles and classroom practices. *Longman*. https://doi.org/10.4324/9781315837376

Dimitrov, D. M., & Rumrill, P. D. (2003). Pretest–posttest designs and measurement of change. *Work*, 20(2), 159–165. https://doi.org/10.3233/WOR-2003-20208

Etikan, I., & Bala, K. (2017). Sampling and sampling methods. *Biometrics & Biostatistics International Journal*, 5(6), 00149. https://doi.org/10.15406/bbij.2017.05.00149

Firteach Gea, H. Y., Pangaribuan, J. J., & Sembiring, N. (2020). *Improving Students' Speaking Skill by Using Round Robin Brainstorming Technique*. *Kairos English Language Teaching Journal*, *3*(1), 27–41. https://doi.org/10.54367/kairos.v3i1.828

Fulcher, G. (2015). Re-examining language testing: A philosophical and social inquiry. *Routledge*. https://doi.org/10.4324/9781315768731

Goh, C. C. M., & Burns, A. (2020). Teaching speaking: A holistic approach. Cambridge University Press. https://doi.org/10.1017/9781108375330

Hasibuan, S. A. (2021). *Improving Student's Speaking Skill by Using Brainstorming Method*. *Pedagogi: Jurnal Ilmiah Pendidikan*, *7*(2), 88–92. https://doi.org/10.47662/pedagogi.v7i2.317

Inciman, T., & C. Çelik, C. (2025). *The Impact of Brainstorming Technique on Academic Achievement and Creative Thinking*. *SAGE Open*, 1-21. https://doi.org/10.1177/21582440251378562

Lakens, D. (2013). Calculating and reporting effect sizes. *Journal of Experimental Social Psychology*, 49(4), 701–710. https://doi.org/10.1016/j.jesp.2013.02.007

Lukman, A., Rahmawati, S., & Hidayat, R. (2022). Collaborative learning strategies and EFL learners' speaking performance. Journal of Language and Education, 8(3), 42–55. https://doi.org/10.17323/jle.2022.14127

Lukman, D. H., Abdul, N. B., & Sujariati. (2022). The Effect of Brainstorming Technique in Promoting Students' Speaking Skill at UPT SMPN 4 Pinrang. *English Language Teaching Methodology*, *2*(1), 44–53. https://doi.org/10.56983/eltm.v2i1.33

Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). Qualitative data analysis. *SAGE*. https://doi.org/10.4135/9781452275250

Miolo, G. (2023). Teacher-centered instruction and learner passivity in foreign language classrooms. System, 112, 102951. https://doi.org/10.1016/j.system.2023.102951

Miolo, M. I. (2023). Strategi inovatif dalam pengajaran keterampilan berbicara dan menulis Bahasa Arab. *Al-Kalim: Jurnal Pendidikan Bahasa Arab dan Kebahasaan*, *4*(1), 153. https://doi.org/10.60040/jak.v4i1.153

Nasir, M. (2022). Traditional pedagogy and its impact on students' oral proficiency in Arabic learning. Journal of Language Teaching and Research, 13(2), 387–395. https://doi.org/10.17507/jltr.1302.22

Nguyen, T. T. M., & Newton, J. (2021). Task-based interaction and pre-task planning in second language speaking. System, 98, 102531. https://doi.org/10.1016/j.system.2021.102531

Oga-Baldwin, W. L. Q., & Fryer, L. K. (2020). Self-determination theory in language learning motivation. System, 93, 102208. https://doi.org/10.1016/j.system.2020.102208

Putri Rambe, R. (2023). The Use of Brainstorming Methods in Improving the Arabic Speaking Skills. *Al Mihwar: Jurnal Pendidikan Bahasa Arab dan Kebahasaan*, *2*(1), 53–70. https://doi.org/10.47766/almihwar.v2i1.1973

Putri Rambe, S. (2023). The effect of brainstorming technique on students' Arabic speaking ability. International Journal of Arabic Language Teaching, 5(1), 45–58. https://doi.org/10.18860/ijalt.v5i1.18492

Rahman, A. D., Supriadi, S., & Erniati, E. (2025). *Penerapan Pengaruh Metode Brainstorming Dalam Meningkatkan Kemampuan Berbicara Siswa*. *ISOLEK: Jurnal Pendidikan, Pengajaran, Bahasa, dan Sastra*, *3*(1), 45–57. https://doi.org/10.59638/isolek.v3i1.421

Rahman, F. (2021). Learners' speaking anxiety in Arabic as a foreign language classroom. Journal of Language Anxiety Studies, 4(1), 21–35. https://doi.org/10.1016/j.ssaho.2019.100031

Rajalani, F. (2023). Affective barriers in Arabic speaking classrooms: An Indonesian context. Education and Linguistics Research, 9(2), 65–78. https://doi.org/10.5296/elr.v9i2.20741

Rajalani, S. (2023). Metode Pembelajaran dalam Meningkatkan Keterampilan Berbicara Bahasa Arab. *Al-Maraji' : Jurnal Pendidikan Bahasa Arab*, *7*(2), 56-63. https://doi.org/10.26618/almaraji.v7i2.9836

Ramli, N. H. L., Baharudin, F., Safian, S. A., & Abdullah, I. D. K. (2025). *The Use of P-E-E-L Technique as a Brainstorming Tool for Speaking*. *International Journal of Education, Psychology and Counselling*, 10(58), 289-300. https://doi.org/10.35631/IJEPC.1058020

Sato, M., & Ballinger, S. (2022). Peer interaction and second language learning. John Benjamins. https://doi.org/10.1075/lllt.58

Shofiyani, A., & Afifah, K. (2021). Implementasi metode brainstorming untuk meningkatkan keterampilan berbicara Bahasa Arab. *JoEMS: Journal of Education and Management Studies*, *4*(4), 520. https://doi.org/10.32764/joems.v4i4.520

Shofiyani, A., & Afifah, N. (2021). Brainstorming strategy in Arabic speaking instruction. Al-Ta'lim Journal, 28(3), 257–266. https://doi.org/10.15548/jt.v28i3.711

Sutaman, M., & Febriani, R. (2025). Interactive learning frameworks and speaking skill development. Journal of Language Teaching Innovation, 6(1), 1–14. https://doi.org/10.1016/j.linged.2022.101062

Sutaman, S., & Febriani, S. R. (2025). Optimizing Arabic Speaking Skills Based on Integration of Learning Theory Framework. *Arabiyat: Jurnal Pendidikan Bahasa Arab dan Kebahasaaraban*, *8*(1), 20423. https://doi.org/10.15408/a.v8i1.20423

Taherdoost, H. (2016). Sampling methods in research methodology. *International Journal of Academic Research in Management*, 5(2), 18–27. https://doi.org/10.2139/ssrn.3205035

Wijaya, A., & Usmoni, U. (2025). Brainstorming-based instruction and students' oral proficiency. Journal of Educational Research and Practice, 15(1), 77–89. https://doi.org/10.5590/JERAP.2025.15.1.06

Wijaya, M., & Usmoni, A. (2025). Optimalisasi Maharah Kalam Melalui Metode Brainstorming. *Lisanan Arabiya: Jurnal Pendidikan Bahasa Arab*, *7*(1), 4185. https://doi.org/10.32699/liar.v7i1.4185

Zarrinabadi, N., Rezazadeh, M., & Chehrazi, S. (2022). Willingness to communicate and instructional strategies in L2 speaking. Linguistics and Education, 68, 101062. https://doi.org/10.1016/j.linged.2022.101062