

The Use of Baamboozle to Enhance Students' Speaking Fluency and Confidence A Quasi-Experimental Research at SMPN 4 Woja

Dessy Kusumawati*, Saiful, Asriati

Universitas Muhammadiyah Makassar, Indonesia

Email: dessykusumawati29@gmail.com*, saiful@unismuh.ac.id, sittiasriati@unismuh.ac.id

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Abstract

The Use of Baamboozle to Enhance Students' Speaking Fluency and Confidence: A Quasi-Experimental Research at SMPN 4 Woja. Supervised by Saiful and St. Asriati. The purpose of this study is to examine the effectiveness of Baamboozle in improving students' speaking fluency and confidence amongst seventh-grade students at SMPN 4 Woja. This research employed a quasi-experimental design, specifically a non-equivalent control group design. Data were collected through pre-tests and post-tests for speaking performance, as well as a questionnaire to identify students' perceptions. The results of this study indicated that the use of Baamboozle led to significant improvements in students' oral competence. Statistical analysis using the Independent Samples t-test for speaking fluency revealed a significance value of 0.002 ($p < 0.05$) with a large effect size ($d = 1.61$). Similarly, the results for speaking confidence indicated a significance value of 0.000 ($p < 0.05$) with a very large effect size ($d = 2.59$). These results indicate that the experimental group achieved more substantial gains compared to the control group. Furthermore, the questionnaire results showed an overall mean score of 4.04 (high category). In conclusion, the findings imply that Baamboozle is an effective instructional tool to improve students' speaking fluency and confidence in an English as a Foreign Language (EFL) context. The students reported a positive perception towards the integration of Baamboozle, reporting that the platform rendered learning more engaging and helped reduce speaking anxiety. Based on these results, it is recommended that English teachers utilise digital game-based learning tools to create a more interactive learning environment.

INTRODUCTION

Teaching English as a Foreign Language (TEFL) aims to develop students' communicative competence through meaningful interaction, as emphasised by McCarthy and Carter (2006). In this context, Harmer (2007) states that instruction should enable students to use English for daily communicative purposes. As a productive skill, speaking involves complex cognitive processes, including planning and articulating ideas in real-time (Levitt, 1989). However, many students in EFL contexts still struggle to express their thoughts orally, which indicates that speaking remains the most challenging skill to master (Brown, 2007).

This condition highlights the need for effective speaking instruction that encourages students to be actively involved in communicative activities (Harmer, 2007). Such an environment is essential to help students develop speaking fluency, which refers to the ability to speak smoothly, naturally, and continuously with minimal hesitation (Thornbury, 2005). Fluency develops when students achieve a certain level of automaticity in language use through frequent and meaningful practice, allowing them to focus more on conveying

meaning rather than monitoring grammatical accuracy (Harmer, 2007). Therefore, teachers must create supportive and engaging learning environments to help students overcome their linguistic and affective barriers, as fluency is a key indicator of successful speaking performance (Ambawani et al., 2025; Andriani et al., 2024; Husnaini et al., 2024; Roslan & Zainal, 2025; Windriya et al., 2025; Zega, 2025).

Previous studies support the role of interactive learning in improving students' speaking fluency. Ad and Dm (2021) stated that students who participated in communicative and game-based speaking activities showed improvement in fluency. Pratama and Hastuti (2023) found that digital game-based learning encouraged spontaneous speech and reduced hesitation during speaking activities. These findings indicate that engaging instructional strategies contribute positively to students' fluency development. However, fluency was often treated as a secondary component rather than the main focus of investigation. In addition, speaking performance is not only influenced by linguistic aspects such as fluency, but also by affective factors.

Confidence is an affective factor that significantly influences students' speaking performance. Speaking confidence is closely related to students' anxiety, motivation, and self-perception, which affect their willingness to communicate in the target language (Horwitz, 2001). Students with higher confidence tend to participate more actively in speaking activities and take risks in using English (Brown, 2007). Confidence enables students to use their language knowledge more freely during communication. Therefore, confidence plays a crucial role in successful speaking instruction.

Previous studies support the relationship between confidence and students' speaking performance. Sari and Marhum (2021) stated that students demonstrated higher speaking confidence when learning activities were conducted in supportive and interactive environments. Nuralika et al. (2023) found that reduced speaking anxiety positively influenced students' oral participation. These studies suggest that learning environments that minimise anxiety can enhance students' confidence in speaking English. Nevertheless, confidence was rarely examined together with fluency as main variables in previous studies.

To address both linguistic and affective challenges in speaking, teachers need to implement engaging and interactive learning strategies. Recent studies within the last five years support the effectiveness of game-based and interactive learning in teaching speaking skills. Several studies stated that such approaches improved students' speaking fluency, motivation, and confidence. Zakaria and Zakaria (2025) found that students became more fluent and confident speakers when learning speaking through digital game-based platforms. However, most previous studies focused on general speaking performance rather than examining specific speaking components such as speaking fluency and speaking confidence.

The novelty of this research lies in several distinctive contributions. First, this study examines speaking fluency and speaking confidence simultaneously as co-dependent variables, recognising their reciprocal relationship—fluency practice builds confidence, and confidence enables fluency. Second, this study employs a quasi-experimental design with pre-test and post-test comparisons, enabling causal inferences about Baamboozle's effectiveness. Third, this study identifies Active Participation as the most dominant factor triggered by Baamboozle's interface, serving as the bridge between positive student perceptions and actual linguistic output. Fourth, this study provides empirical evidence from

a rural Indonesian junior high school context, extending previous research conducted in urban or university settings. Fifth, this study uses a multi-instrument approach (speaking tests, rubrics, questionnaire) to triangulate findings from multiple perspectives.

Based on previous studies, many researchers have investigated the use of game-based learning to improve students' speaking skills in EFL classrooms. However, limited studies have examined speaking fluency and speaking confidence simultaneously as main variables of investigation, as most research has emphasised general speaking performance rather than focusing on specific speaking aspects. In addition, many previous studies employed descriptive or qualitative approaches, whilst fewer studies applied quasi-experimental designs to examine the effectiveness of specific digital platforms in improving particular speaking aspects. This condition indicates a clear research gap in terms of research focus and methodological approach.

One digital platform that can support game-based speaking activities is Baamboozle. In relation to the theoretical foundation of digital game-based learning, the use of Baamboozle is grounded in game-based learning theory, which emphasises the integration of game elements into learning activities to enhance motivation and engagement (Prensky, 2001). Prensky argues that digital games create an enjoyable learning environment that encourages students to participate actively and practise language skills without fear of making mistakes. In addition, Baamboozle aligns with Digital Game-Based Learning, where technology-based games are used to support learning through interaction and repetition (Gee, 2003). These theoretical perspectives suggest that Baamboozle can facilitate speaking fluency through repeated oral practice whilst simultaneously increasing speaking confidence by reducing students' anxiety.

Previous and recent studies have provided empirical support for the use of Baamboozle in EFL classrooms. Simangunsong et al. (2024) reported that Baamboozle improved students' speaking fluency by encouraging spontaneous responses and reducing hesitation during speaking activities. More recent research by Lestari (2024) found that Baamboozle increased students' speaking confidence, as students were more willing to speak and participate actively in game-based speaking tasks. These findings indicate that Baamboozle is a promising digital platform for improving both speaking fluency and speaking confidence in EFL contexts.

Despite the potential of Baamboozle, preliminary observations conducted by the researcher at SMPN 4 Woja revealed that students still face significant difficulties in producing fluent speech, particularly in terms of smoothness, automaticity, and spontaneity. Students often struggled to maintain a conversation and showed high levels of hesitation. This situation represents a clear empirical gap, where the existing teaching methods still rely on conventional textbooks and teacher-centred instruction, occasionally supplemented with social media content like TikTok. However, these media have not been optimally designed to trigger structured interaction, as they often focus on passive consumption where students only watch or listen without being required to produce language actively.

Based on the theoretical framework and empirical evidence discussed in the background of the study, as well as the identified research gaps related to the teaching of speaking fluency and confidence through interactive digital games, this study is conducted to answer the following research questions: (1) Is the use of Baamboozle more effective than existing methods in enhancing students' speaking fluency at SMPN 4 Woja? (2) Is the use of

Baamboozle more effective than existing methods in fostering students' speaking confidence at SMPN 4 Woja? (3) What are students' perceptions of Baamboozle for learning to speak at SMPN 4 Woja?

In line with the research questions and the focus of this study on the use of Baamboozle in enhancing students' speaking fluency and confidence, this research aims to achieve the following objectives: (1) To verify whether the use of Baamboozle is more effective than existing methods in enhancing students' speaking fluency. (2) To verify whether the use of Baamboozle is more effective than existing methods in fostering students' speaking confidence. (3) To investigate students' perceptions towards the use of Baamboozle in the speaking classroom.

RESEARCH METHOD

This study employed a quasi-experimental research design, specifically the non-equivalent control group design. The purpose of this design was to examine the effectiveness of Baamboozle-based learning in improving students' speaking fluency and speaking confidence at SMPN 4 Woja by comparing an experimental group and a control group. In this study, two existing classes were selected as intact groups. One class served as the experimental group and the other as the control group. Both groups were given a pre-test to measure their initial speaking performance. The experimental group received treatment in the form of Baamboozle-based speaking activities, whilst the control group was taught using conventional methods. At the end of the treatment, a post-test was administered to both groups to measure and compare the improvement.

The independent variable in this study was the use of Baamboozle as a learning medium, whilst the dependent variables were students' speaking fluency and speaking confidence. This design allowed the researcher to identify the improvement in students' speaking performance by comparing the results of the pre-test and post-test between the two groups.

Table 1. Research Design (Pre-test and Post-test Control Group Design)

Group	Pre-Test	Treatment	Post-Test
Experimental Group (VII-A)	O ₁	X (Baamboozle-based Learning)	O ₂
Control Group (VII-B)	O ₁	– (Conventional Learning)	O ₂

Notes:

O₁: Pre-test to measure students' initial speaking fluency and speaking confidence

X: Treatment using Baamboozle-based learning

–: Conventional teaching method (teacher-centred learning)

O₂: Post-test to measure students' speaking fluency and speaking confidence after the treatment

Step 1: Pre-Test

Before the treatment sessions were began, students in both the experimental and control groups took a speaking pre-test. The purpose of the pre-test was to measure students' initial

speaking fluency and speaking confidence. The teacher first explained the instructions for the speaking task and introduced the topics. Subsequently, each student was asked to perform the task individually for approximately one to three minutes based on the following topics:

- a. My School Subject
- b. My Online Class
- c. My Study Habits

These topics were selected due to their relevance to the seventh-grade English learning materials in the Kurikulum Merdeka framework. During the pre-test, each student spoke individually in front of the teacher. Their speaking performances were recorded to ensure accurate evaluation. Students' performances were assessed using speaking rubrics measuring speaking fluency and speaking confidence. The results of the pre-test served as the baseline data for both groups.

Step 2: Treatment

The treatment was conducted over six sessions. The experimental group was treated with Baamboozle, while the control group was taught with conventional methods.

Experimental Group (Baamboozle-Based Learning)

The students in the experimental group received six treatment sessions using Baamboozle-based speaking activities.

1. At the beginning of each session, the teacher introduced the speaking topic and explained the learning objectives.
2. Students were divided into small groups to create a collaborative learning environment.
3. The teacher displayed the Baamboozle game on the classroom screen.
4. Each group took turns selecting a question, and one student from the group answered the question orally.
5. Group members were allowed to briefly discuss ideas before the student responded.
6. Students received points for correct responses, which created a competitive and enjoyable atmosphere.
7. After each response, the teacher provided feedback focusing on fluency and confidence.

Control Group (Conventional Learning)

The students in the control group also underwent the same duration of study as the experimental group to ensure a fair comparison. However, they were taught using a conventional teacher-centered approach. In these sessions, the teacher delivered the material regarding My School Subject, My Online Class, and My Study Habits through traditional methods such as lecturing, reading from the textbook, and completing written exercises. Unlike the experimental group, the control group did not use Baamboozle or any game-based interactive media. This group served as a baseline to determine whether the improvement in the experimental group was truly caused by the Baamboozle media or simply by regular classroom instruction.

Population and Sample

Population

The population of this study consisted of all seventh-grade students of SMPN 4 Woja in the academic year 2025/2026. Seventh-grade students were chosen because they followed the same English curriculum and had similar learning objectives, particularly in developing speaking fluency and speaking confidence within the Kurikulum Merdeka framework. The

total population comprised 45 students from two parallel classes, namely Class VII-A and Class VII-B.

Sample

This study used a purposive sampling technique to select the sample. Unlike simple random sampling, purposive sampling allowed the researcher to select classes that already existed as intact groups and possessed similar characteristics suitable for the research objectives. Both classes in the seventh grade were involved in this study. Class VII-A, consisting of 23 students, was selected as the experimental group which received Baamboozle-based learning activities. Meanwhile, Class VII-B, consisting of 22 students, was selected as the control group which was taught using conventional methods. These classes were chosen because they represented the required characteristics for the study, such as having a similar average English proficiency level and comparable active participation in classroom activities.

Research Instruments

Before describing the research instruments, the variables of this study were defined as follows. The independent variable was the use of Baamboozle-based learning in speaking activities. The dependent variables consisted of two aspects: (1) students' speaking fluency and (2) students' speaking confidence. To collect data related to these variables, this study employed four research instruments: a speaking test, a speaking fluency rubric, a speaking confidence rubric, and a questionnaire.

Speaking Test (Pre-test and Post-test)

The speaking test was used to measure students' speaking performance before and after the treatment in both the experimental and control groups. The purpose of the test was to identify students' speaking fluency and confidence and to examine whether there was a significant difference in improvement between students taught using Baamboozle and those taught using conventional methods.

Pre-test

The pre-test was administered to both groups to obtain baseline data of their speaking ability. Students were asked to speak for approximately 1–3 minutes on familiar topics so they could express their ideas naturally. Pre-test topics:

1. My School Subject
2. My Online Class
3. My Study Habits

Post-test

The post-test was conducted after the treatment period to evaluate students' improvement in speaking fluency and confidence. Students performed similar speaking tasks for 1–3 minutes on the same topics used in the pre-test.

Post-test topics:

1. My School Subject
2. My Online Class
3. My Study Habits

All students' speaking performances were audio-recorded and analysed using the speaking fluency rubric and speaking confidence rubric. This ensured that the assessment was consistent and objective for both groups.

Speaking Fluency Rubric

The speaking fluency rubric was used to assess students' level of fluency during the speaking test. The rubric was adapted from Brown (2004) and focused on observable fluency indicators including smoothness, pauses and fillers, automaticity, and spontaneity. Each criterion was scored on a four-point scale, ranging from 1 (poor) to 4 (excellent).

Table 2. Speaking Fluency Rubric (Adapted from Brown, 2004)

Criteria	4 – Excellent	3 – Good	2 – Fair	1 – Poor
Smoothness, Pauses, and Fillers	Speech is very smooth with natural flow; pauses and fillers are minimal and do not interfere with meaning.	Generally smooth; occasional pauses or fillers occur but meaning remains clear.	Speech is frequently disrupted with noticeable pauses and fillers that interrupt the flow.	Speech is very choppy with excessive pauses and fillers; communication often breaks down.
Automaticity (Speed)	Speaks at a natural and appropriate speed; ideas are expressed quickly and automatically.	Slightly slow but still able to express ideas clearly.	Speech is slow; student struggles to maintain natural speed and often hesitates.	Very slow speech with long delays and difficulty initiating speech.
Spontaneity	Responds immediately and spontaneously with no signs of rehearsal.	Responds with minimal hesitation and some spontaneous speech.	Responds with noticeable hesitation and relies on rehearsed expressions.	Struggles to respond and shows strong dependence on preparation.

This rubric enabled the researcher to evaluate students' speaking fluency objectively based on key indicators such as smoothness, pauses, automaticity, and spontaneity.

All speaking responses were audio-recorded to ensure accuracy. The recorded data were then processed statistically using SPSS version 25, which is suitable for analyzing the data of this research's sample size.

Speaking Confidence Rubric

Speaking confidence was assessed separately using an observational rubric based on indicators proposed by Brown (2007). The rubric focused on students' observable behaviors during speaking activities, including willingness to speak, active participation, clear verbal

expression, and non-verbal confidence. Each criterion was scored using a four-point scale from 1 (not confident) to 4 (very confident).

Table 3. Speaking Confidence Rubric (Adapted from Brown, 2007)

Criteria	4	3	2	1
	Very Confident	Confident	Less Confident	Not Confident
Willingness to Speak	Actively volunteers to speak and responds immediately.	Willing to speak when asked by the teacher.	Speaks with hesitation when requested.	Avoids speaking and refuses to participate.
Active Participation	Actively participates and contributes ideas consistently.	Participates with some contribution.	Limited participation and rarely contributes.	Does not participate in speaking activities.
Clear Verbal Expression	Speaks clearly and confidently; easy to understand	Speaks clearly most of the time; minor errors	Hesitant or sometimes unclear; pronunciation may confuse	Unclear or quiet; hard to understand.
Non-verbal Confidence	Maintains eye contact, relaxed posture, and natural gestures.	Some eye contact and moderate body confidence.	Limited eye contact and nervous body language.	Avoids eye contact and shows strong anxiety.

This rubric was used to measure students' level of confidence during the speaking performance in both the pre-test and post-test.

Questionnaire on Students' Perceptions toward the Use of Baamboozle

The fourth instrument used in this study was a questionnaire designed to collect data on the experimental group's perceptions regarding their speaking fluency and speaking confidence when using Baamboozle in the English speaking class. The purpose of this questionnaire was to obtain descriptive data that complemented the speaking test results by providing insights into students' attitudes, engagement, motivation, and their own perceived improvement in their oral performance.

The questionnaire consisted of 25 statements measured on a five-point Likert scale, ranging from strongly disagree (1) to strongly agree (5). The items were carefully developed based on the specific indicators of speaking fluency and speaking confidence used in this research. For the fluency dimension, the questionnaire measured students' perceptions of their smoothness in speaking, their ability to speak with appropriate automaticity or speed, and their spontaneity in responding to prompts without excessive hesitation.

For the confidence dimension, the questionnaire focused on four key indicators: students' willingness to speak, their level of active participation during the game, their ability to produce clear verbal expressions, and their non-verbal confidence, such as feeling relaxed

and maintaining focus during the activities. By using these specific indicators, the questionnaire aimed to capture a comprehensive view of how Baamboozle influenced the students' psychological and performance aspects in speaking.

Before distribution, the questionnaire underwent an expert validation process to ensure its content validity, clarity, and relevance to the research objectives. The validation was conducted by the supervising lecturers, Dr. Radiah Hamid, S.Pd., M.Pd., and Dr. Nur Qalbi, S.S., M.Hum., who reviewed and verified the academic instrument. Feedback and suggestions obtained during the validation process were used to revise and refine the items. After the validation process, the reliability of the questionnaire was tested using Cronbach's Alpha, which produced a coefficient of 0.82, indicating that the instrument had good internal consistency for measuring students' perceptions.

The questionnaire provided detailed descriptive data regarding students' attitudes, motivation, and their perceived improvement in speaking performance through the use of Baamboozle. The data from this questionnaire were analysed using percentage descriptive analysis to describe the students' perceptions.

Data Collection

The data in this study were collected to examine the effect of Baamboozle-based learning on students' speaking fluency and speaking confidence. The data collection process involved four primary instruments: a speaking test (pre-test and post-test), a speaking fluency rubric, a speaking confidence rubric, and a questionnaire assessing students' perceptions of Baamboozle.

Speaking Fluency Test

The speaking test was administered in two stages to both the experimental and control groups. First, a pre-test was conducted before the treatment sessions began to measure students' initial speaking ability. The post-test was administered after the treatment was completed to evaluate the improvement in students' speaking performance. The data from these two stages were used to compare the progress within each group (using paired samples t-test) and to compare the final results between the two groups (using independent samples t-test). All speaking responses were audio-recorded to ensure accuracy.

Speaking Fluency Rubric

Students' speaking fluency was assessed using an analytical rubric adapted from Brown (2004). The rubric evaluated three specific criteria: smoothness of speech, automaticity, and spontaneity. Each criterion was scored on a four-point scale, ranging from 1 (poor) to 4 (excellent). This systematic scoring allowed the researcher to objectively compare the results of students' pre-test and post-test performance and to identify the specific improvement in fluency levels after the implementation of the treatment.

Speaking Confidence Rubric

Students' speaking confidence was observed and measured using a separate rubric adapted from Brown (2007). This rubric focused on four observable indicators: willingness to speak, active participation, clear verbal expression, and non-verbal confidence. Each indicator was rated on a four-point scale from 1 (not confident) to 4 (very confident). This instrument provided a clear and structured measure of students' confidence levels during their speaking performance in both the pre-test and post-test activities for both the experimental and control groups.

Questionnaire on Students' Perceptions

After the treatment was completed, a questionnaire was administered to the students in the experimental group to measure their perceptions regarding their fluency and confidence when using Baamboozle in the classroom. The questionnaire consisted of 25 statements, and the responses were recorded on a five-point Likert scale, ranging from strongly disagree (1) to strongly agree (5). The questionnaire was validated by experts in English language teaching and assessment to ensure its content validity, clarity, and relevance to the research objectives. The reliability of the instrument was tested using Cronbach's Alpha, which produced a coefficient of 0.82, indicating good internal consistency. The questionnaire provided detailed descriptive data regarding students' attitudes, motivation, and their perceived improvement in speaking performance through the use of Baamboozle.

Procedure

The data collection process in this study followed several systematic stages to ensure the validity and reliability of the findings:

First, the pre-test was administered to both groups to measure their initial speaking fluency and confidence.

Second, the treatment was conducted through six sessions. The experimental group received Baamboozle-based activities, whilst the control group followed conventional learning methods.

Third, the post-test was administered to both groups after the treatment. Finally, the questionnaire was distributed to the experimental group. Through this systematic procedure, the researcher was able to compare the scores within each group to see the improvement and between both groups to determine which method was more effective.

Data Analysis

The data analysis in this study was conducted to answer the research questions regarding the effect of Baamboozle on students' speaking fluency and speaking confidence. To ensure the accuracy of the findings, the researcher used IBM SPSS Statistics version 25 and manual calculations in Microsoft Excel.

Analysis of Speaking Fluency Scores

Students' speaking fluency was assessed using pre-test and post-test scores from both groups. The scoring was conducted using a speaking fluency rubric adapted from Brown (2004). Descriptive statistics (mean, highest, and lowest scores) were calculated. To determine the significant improvement, a paired sample t-test and an independent sample t-test were employed using SPSS 25. As suggested by Pallant (2020), this software was used to ensure the reliability of the statistical results for the sample size.

Analysis of Speaking Confidence Scores

Students' speaking confidence was analyzed using a rubric adapted from Brown (2007). Descriptive statistics were calculated to summarize students' performance in both groups. Similar to the fluency analysis, a paired sample t-test and an independent sample t-test were processed through SPSS 25 to determine whether there was a significant difference in students' speaking confidence after the treatment.

Analysis of Students' Perceptions

Students' perceptions of the use of Baamboozle were analyzed through a questionnaire administered to the experimental group after the treatment. The questionnaire consisted of 25

Likert-scale statements, with responses ranging from strongly disagree (1) to strongly agree (5). The data from the questionnaire were analyzed using descriptive statistics, including the frequency and percentage of each response category. The percentage was calculated using the following formula:

$$P = (F / N) \times 100\%$$

P = Percentage of responses

F = Frequency of responses

N = Total number of respondents

$P = (F / N) \times 100\%$

The results were interpreted descriptively to identify students' dominant perceptions regarding the use of Baamboozle, particularly in relation to its impact on their speaking fluency and speaking confidence.

RESULT AND DISCUSSIONS

The findings of this research were presented based on the data analysis of students' pre-test and post-test scores in both the experimental and control groups, as well as the questionnaire results. The analysis aimed to answer the research questions regarding the effectiveness of Baamboozle in improving students' speaking fluency and confidence.

Before conducting the hypothesis testing, prerequisite tests were performed to ensure that the data met the assumptions of parametric statistics. The Shapiro-Wilk test was used for the normality test, and Levene's Test was used to assess the homogeneity of variance. The results indicated that all significance values (Sig.) for both variables in both groups were greater than 0.05, meaning the data were normally distributed and homogeneous. Consequently, the assumption for parametric analysis was fulfilled, and the independent sample t-test was proceeded. ((The detailed statistical tables for these tests are provided in Appendix 2, Table 2.1 and Table 2.2).

After fulfilling the assumptions of normality and homogeneity, an effect size analysis was conducted using Cohen's d to measure the magnitude of the treatment effect. This analysis provides information about how substantial the difference is in practical terms, where 0.2 indicates a small effect, 0.5 indicates a medium effect, and 0.8 or higher indicates a large effect.

Table 4. Effect Size Results for Speaking Fluency

Group	Mean Difference	Cohen's d	Interpretation
Experimental	1.000	1.61	Large
Control	0.728	1.04	Large

The results in Table 4.1 suggest that the implementation of Baamboozle had a strong practical impact on improving students' ability to produce smooth speech. Although the control group also demonstrated improvement, the magnitude of the effect in the experimental group (1.61) appears to be more substantial.

Table 5. Effect Size Results for Speaking Confidence

Group	Mean Difference	Cohen's d	Interpretation
Experimental	1.478	2.59	Very Large
Control	0.954	1.67	Large

Regarding speaking confidence, Table 4.2 indicates that the experimental group achieved a Cohen's d value of 2.59, which is classified as a very large effect. This suggests that Baamboozle could be highly effective in improving students' confidence, including their willingness to speak and reduction of hesitation.

Students' Speaking Fluency

The first finding identified the improvement of students' speaking fluency. The researcher assessed fluency based on smoothness, automaticity, and spontaneity using a scale of 1 to 4. To provide a comprehensive overview, the descriptive statistics and the t-test results are presented as follows:

Table 6. Descriptive Statistics and T-Test of Speaking Fluency
(Paired Sample)

Group	N	Pre Mean	Post Mean	SD	Gain	t-Stat	Sig
Experimental	23	2.48	3.48	0.62	1.00	-8.215	0.000
Control	22	2.05	2.77	0.53	0.72	-4.125	0.000

Table 4.3 shows that the experimental group achieved a higher post-test mean (3.48) compared to the control group (2.77). The relatively small standard deviation indicates that the students' scores were clustered closely around the mean, suggesting consistent performance within each group. To further examine the difference between the experimental and control groups, an independent samples t-test was conducted.

Table 7. Independent Sample T-Test Result for Speaking Fluency
(Post-test Comparison)

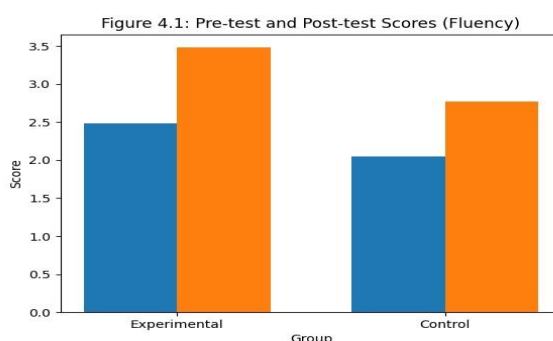
Statistical Component	Value
t-statistic (t_obs)	3.245
Df	43
Sig. (2-tailed)	0.002

The significance value of 0.002 (< 0.05) indicates a significant difference between the two groups. The effect size result ($d = 0.85$) suggests that Baamboozle may have a strong practical impact on improving students' speaking fluency. Furthermore, the findings indicate that students in the experimental group demonstrated improved fluency, particularly in terms of smoother speech production. This may support the theory that interactive learning environments facilitate automatization in language production.

Table 8. Analysis of Fluency Indicators

Indicator	Gain	Interpretation
Smoothness	1.05	Highest Effectiveness
Automaticity	0.98	Moderate
Spontaneity	0.92	Lowest

The highest improvement was found in **Smoothness (1.05)**, indicating that students were able to significantly reduce pauses and hesitations during speech production. Conversely, spontaneity showed the lowest improvement, suggesting that developing natural and unrehearsed speech remains a gradual process for EFL learners. The substantial gain in smoothness further confirms that Active Participation is the most dominant factor in this study. The game-based nature of Baamboozle created a "push factor" that compelled students to engage constantly and respond quickly. This intense level of involvement naturally trained their lexical retrieval and minimized cognitive load, allowing for more continuous speech. Therefore, Active Participation acted as the primary catalyst that bridged the gap between students' vocabulary knowledge and their ability to produce it fluently in a competitive, interactive environment.



Students' Speaking Confidence

The second finding identified the enhancement of students' speaking confidence. The improvement in speaking confidence appeared to be more pronounced compared to speaking fluency, suggesting that Baamboozle might have a stronger impact on students' psychological readiness.

Table 9. Descriptive Statistics and T-Test of Speaking Confidence (Paired Sample)

Group	N	Pre Mean	Post Mean	SD	Gain	t-Stat	Sig
Experimental	23	2.26	3.74	0.57	1.48	-12.874	0.000
Control	22	2.09	3.05	0.58	0.96	-9.218	0.000

Table 9 shows that the experimental group achieved a higher post-test mean (3.74) compared to the control group (3.05). The relatively small standard deviation indicates that the students' scores were clustered closely around the mean, suggesting consistent performance within each group. To further examine the difference between the experimental and control groups, an independent samples t-test was conducted.

Table 10. Independent Sample T-Test Result for Speaking Confidence
(Post-test Comparison)

Statistical Component	Value
t-statistic (t_obs)	4.521
Df	43
Sig. (2-tailed)	0.000

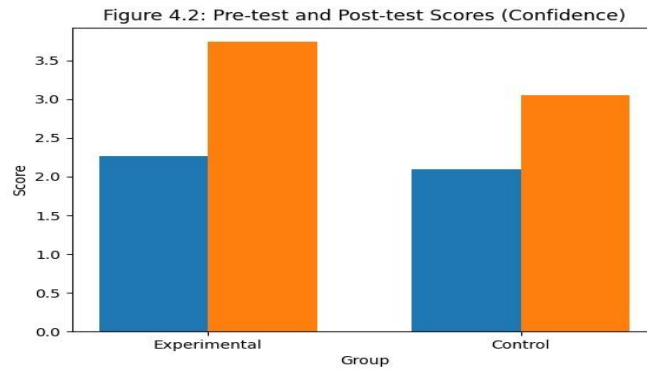
The result shows a significance value of 0.000 (< 0.05), indicating a significant difference. The effect size ($d = 1.10$) suggests that Baamboozle may have a substantial practical impact on students' confidence.

Table 11. Analysis of Confidence Indicators

Indicator	Gain Score	Interpretation
Active Participation	1.50	Highest Effectiveness
Willingness to Speak	1.42	High
Clear Verbal Expression	1.35	High
Non-verbal Confidence	1.30	Moderate

The highest **effectiveness** was found in **Active Participation (1.50)**, indicating that students became significantly more bold and engaged in expressing their ideas during speaking activities. Additionally, students exhibited a high level of **Willingness to Speak (1.42)** and **Clear Verbal Expression (1.35)**, suggesting that the interactive and competitive nature of Baamboozle effectively encouraged consistent engagement and clearer articulation. While **Non-verbal Confidence** showed a moderate result (**1.30**), it indicates that although students became more comfortable with their gestures and posture, a natural level of nervousness in a foreign language context remained.

The major psychological shift observed in these indicators was primarily driven by Active Participation, which stands as the most dominant factor in this research. Because students were intensely focused on the team-based competition and winning the game, they became more active and less worried about making linguistic mistakes. This high level of Active Participation successfully shifted their focus from "fear of failure" to "goal achievement," which significantly boosted their speaking confidence. Overall, these findings verify that Baamboozle significantly enhances students' speaking confidence by fostering a "safe-to-fail" environment where active involvement is prioritized over grammatical perfection. To provide a clearer comparison of these results, the data is also presented in graphical form in Figure 4.2.



Students' Perceptions toward the Use of Baamboozle

The third finding of this research identifies students' perceptions toward the use of Baamboozle in speaking activities. The data were collected through a questionnaire consisting of 25 items administered to 23 students in the experimental group. The responses were measured using a 5-point Likert scale ranging from Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), to Strongly Agree (5).

Table 12. Frequency and Percentage of Students' Perception

Category	Score	Frequency (f)	Percentage (%)
Strongly Agree	5	9	39%
Agree	4	10	43%
Neutral	3	3	13%
Disagree	2	1	4%
Strongly Disagree	1	0	0%
Total		23	100%

Table 12 shows that the majority of students had positive perceptions toward the use of Baamboozle. Specifically, 82% of students (combining Strongly Agree and Agree) responded positively, indicating that the learning media was well received by the students.

Table 4. 10 Mean Score Interpretation

Indicator	Mean	Category
Motivation & Interest	3.82	High
Confidence	4.09	High

Scale Interpretation

4.21 – 5.00 = Very High

3.41 – 4.20 = High

2.61 – 3.40 = Moderate

1.81 – 2.60 = Low

1.00 – 1.80 = Very Low

The overall mean score of **4.04** falls into the “**High category**”, suggesting that students tended to have strongly positive perception toward the use of Baamboozle.

Motivation and Interest

Based on the analysis, the mean score for motivation and interest was 3.82, which falls into the high category. This indicates that students appeared to be highly engaged during the learning process. Students reported that the game-based features of Baamboozle, such as points and competition, might have increased their enthusiasm and made speaking activities more enjoyable. The learning environment seemed to become more dynamic compared to conventional classroom instruction.

Confidence Building

The mean score for confidence was 4.09, which is also categorised as high. This finding indicates that Baamboozle could help students feel more confident when speaking English. Students experienced reduced anxiety and showed a potential increase in willingness to express their ideas. The team-based format provided a supportive environment that minimised fear of making mistakes.

Learning Effectiveness

In terms of perceived learning effectiveness, students indicated that Baamboozle might have helped them improve their speaking performance. Students reported faster vocabulary retrieval and better fluency during speaking tasks. The time-limited nature of the game encouraged them to think quickly and respond spontaneously, which could contribute to their speaking development.

Overall Interpretation

Overall, the findings suggest that Baamboozle is an effective and engaging learning medium that positively influences students' motivation, confidence, and perceived learning effectiveness. The high mean scores across all indicators suggest that students not only improved statistically but also may have experienced a positive psychological shift in their learning process.

The statistical data above confirms the effectiveness of the treatment. To understand the pedagogical reasons behind these improvements and how the students' perceptions align with their performance, a detailed analysis will be provided in the following Discussion section

Students' Speaking Fluency (RQ 1)

The first finding of this research demonstrates that the implementation of Baamboozle is significantly more effective in enhancing students' speaking fluency compared to the existing instructional media used in the control group. In a quasi-experimental framework, this comparison is essential to verify which approach yields better linguistic outcomes. The results indicate that while the control group showed slight progress, their fluency development remained limited compared to the experimental group.

The primary reason for this superiority is Baamboozle's ability to facilitate Smoothness, Automaticity, and Spontaneity. In the experimental class, the game-based interface acted as a constant "push factor," requiring students to produce spontaneous speech within a specific time limit. This urgency trained the students' lexical retrieval processes. This aligns with Thornbury (2005), who defines fluency as an automatization process where learners link utterances with minimal hesitation. Furthermore, the repetitive nature of the game provided the "meaningful repetition" that Harmer (2007) identifies as a core requirement for developing speaking skills.

In contrast, students in the control group, who relied on textbooks and passive TikTok viewing, lacked this interactive pressure. While TikTok provides visual input, it often results

in passive learning because it does not mandate an immediate oral response. This relates to Levelt's (1989) speech production model, which suggests that without active practice in articulating ideas, the cognitive process of planning and executing speech remains slow. These results strongly corroborate the findings of Simangunsong et al. (2024) and Pratama and Hastuti (2023), who reported that digital game-based learning serves as an effective catalyst for faster lexical retrieval. Overall, these outcomes connected students' positive perceptions with their actual performance in fluency and confidence.

Students' Speaking Confidence (RQ 2)

Regarding the second research question, the comparison reveals a profound psychological transformation. Speaking confidence is a psychological state that is not directly "taught" but is fostered through a supportive and low-anxiety learning environment. The results show that Baamboozle is more effective in triggering this confidence by significantly lowering the students' Affective Filter.

In the control class, conventional teacher-centered instruction often creates a "high-stakes" atmosphere where students feel anxious about making grammatical mistakes. This anxiety, as emphasized by Horwitz (2001), acts as a major barrier to language production. However, in the experimental class, Baamboozle's team-oriented structure shifted the students' focus from individual linguistic accuracy to collective team success. As argued by Prensky (2001), the "fun factor" in digital games can override the fear of failure.

This "safe-to-fail" environment is crucial for EFL learners. When students made mistakes during the game, the competitive yet fun atmosphere treated those errors as part of the learning process. This finding is in line with the work of Lestari (2024) and Sari and Marhum (2021), who found that students demonstrate higher confidence when learning activities are conducted in interactive settings. By reducing psychological barriers, Baamboozle encouraged what Brown (2007) describes as "linguistic risk-taking," where students become more daring to use the target language. The data further indicates that this environment specifically boosted students' Active Participation and Willingness to Speak, while also improving their Clear Verbal Expression and Non-verbal Confidence.

Students' Perceptions toward Baamboozle (RQ 3)

The third research question regarding students' perceptions clarifies the underlying mechanism of the study's success. The high favorable responses, which fell into the "High" category, suggest that students did not merely perceive Baamboozle as a game, but as a robust source of motivation. This is consistent with the theory of Digital Game-Based Learning (DGBL) by Gee (2003), which posits that games provide a distinct identity for learners as "players," thereby increasing their psychological commitment to the task. When students see themselves as players in a competition, their cognitive engagement increases, making the language learning process feel less like a formal burden and more like a rewarding challenge.

Furthermore, the students' positive perception regarding Motivation and Interest explains the high level of engagement observed during the treatment. Unlike the control group, where students often showed signs of boredom when dealing with textbooks, the experimental group reported that the point system and randomized prompts in Baamboozle created a dynamic atmosphere. This supports Prabawati et al. (2021), who emphasized that instructional media should act as a communication tool that stimulates students' thoughts and interests. The positive psychological shift experienced by the students allowed them to overcome their initial

hesitation, bridging the gap between their subjective experience and their actual linguistic performance.

The most dominant factor identified throughout this study is Active Participation. As emphasized by Nuralika et al. (2023), positive participation is a direct result of reduced speaking anxiety. In this study, Active Participation served as the "engine" that connected students' positive perceptions with their actual improvement in fluency and confidence. While textbooks and TikTok videos in the control group failed to trigger meaningful student engagement, Baamboozle "forced" even the quietest students to participate in order to help their team. This aligns with the argument by Widodo and Santoso (2023) that structured game mechanics can transform passive learners into active contributors. Therefore, the favorable perceptions of the students reinforce the idea that Baamboozle is not just an entertaining tool, but a strategic instructional medium that sustains student involvement and fosters long-term oral competence.

Based on the overall results, this research reveals a significant interplay between linguistic performance and psychological readiness. As illustrated in the Conceptual Framework (Figure 2.1), speaking fluency and confidence do not develop in isolation. Instead, they are mutually reinforcing components of communicative competence. When students achieved higher Smoothness and Automaticity through Baamboozle, their perception of their own ability improved, which in turn boosted their Willingness to Speak. This reciprocal relationship is what Brown (2007) describes as the foundation of successful oral interaction in a second language.

The comparison with the control group further clarifies that conventional media, including passive tools like textbooks and TikTok, fail to create this synergy. In the control class, the lack of interactive pressure resulted in a "stagnant" state where students remained hesitant despite having linguistic input. Conversely, Baamboozle acted as a Psychological Catalyst that forced students to break through their anxiety. The game-based structure provided a clear purpose for speaking winning the game which naturally triggered Active Participation.

CONCLUSION

Based on the findings and discussion presented in the previous chapter, several conclusions can be drawn regarding the effectiveness of Baamboozle in enhancing students' speaking fluency and speaking confidence at SMPN 4 Woja: 1) First, the results of the study revealed that there was a significant difference in students' speaking fluency between those taught using Baamboozle and those taught using conventional learning (Sig. = 0.002 < 0.05) with a large effect size ($d = 0.85$). The effectiveness was particularly evident in smoothness, automaticity, and spontaneity, driven by Active Participation which allowed students to practice spontaneous speech production more frequently. 2) Second, the findings suggest a significant difference in students' speaking confidence (Sig. 0.000 < 0.05; $d = 1.10$). Baamboozle effectively boosted students' willingness to speak, clear verbal expression, and non-verbal confidence. In contrast, the non-treatment (control) group showed stagnant progress, as conventional methods failed to trigger the same level of psychological readiness and active engagement observed in the experimental group. 3) Third, students had positive perceptions toward Baamboozle (Mean = 4.04), indicating that a supportive environment successfully sustains engagement. However, this research acknowledges certain limitations,

such as the limited treatment period and the specific sample of seventh-grade students, which may affect the long-term generalizability of the findings.

In conclusion, Baamboozle is an effective instructional tool where Active Participation serves as the primary engine that bridges positive perceptions with significant performance in speaking fluency and confidence.

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