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## The Effect of Talking Stick Learning with Spinner Application on Elementary Students' Speaking Skills

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**EN Abstract**

**Background:** Speaking skills are essential in students' academic and daily life. However, many elementary students face difficulties such as lack of confidence, anxiety, and limited vocabulary. This study aims to examine the effect of the talking stick learning method supported by a spinner application on students' speaking skills.

**Methods:** This quasi-experimental study involved fourth-grade elementary school students. Data were collected using speaking tests and analyzed through normality, homogeneity, and paired-sample t-tests.

**Results:** The experimental class improved from a pre-test mean score of 63.54 to a post-test mean of 77.41, while the control class only increased slightly from 61.71 to 62.96. Statistical analysis confirmed significant differences ( $p = 0.000 < 0.005$ ), indicating the effectiveness of the method.

**Conclusions:** The talking stick method integrated with a spinner application significantly enhances elementary students' speaking skills. The approach encourages active participation, reduces anxiety, and increases students' motivation to speak. Further research could explore its application in different subjects or levels.

**EN Keywords**

Learning Methods; Talking Stick; Spinner Application; Speaking Skills.

**ID Abstrak**

**Latar Belakang:** Keterampilan berbicara merupakan kemampuan penting dalam akademik maupun kehidupan sehari-hari. Namun, masih banyak siswa sekolah dasar yang menghadapi kendala seperti kurang percaya diri, rasa cemas, dan keterbatasan kosakata. Penelitian ini bertujuan untuk mengetahui pengaruh metode talking stick berbasis aplikasi spinner terhadap keterampilan berbicara siswa sekolah dasar.

**Metode:** Penelitian ini menggunakan desain kuasi-eksperimen dengan subjek peserta didik kelas IV sekolah dasar. Data diperoleh melalui tes berbicara dan dianalisis menggunakan uji normalitas, homogenitas, serta paired-sample t-test.

**Hasil:** Rata-rata nilai pre-test kelas eksperimen meningkat dari 63,54 menjadi 77,41 pada post-test, sedangkan kelas kontrol hanya naik sedikit dari 61,71 menjadi 62,96. Analisis statistik menunjukkan perbedaan signifikan ( $p = 0,000 < 0,005$ ), yang menegaskan efektivitas metode tersebut.

**Kesimpulan:** Metode talking stick berbasis aplikasi spinner terbukti dapat meningkatkan keterampilan berbicara siswa sekolah dasar secara signifikan. Pendekatan ini mendorong partisipasi aktif, mengurangi kecemasan, serta meningkatkan motivasi belajar. Penelitian lanjutan dapat mengkaji penerapannya pada mata pelajaran atau jenjang pendidikan lain.

**ID Kata Kunci**

Metode Pembelajaran; Talking Stick; Aplikasi Spinner; Keterampilan Berbicara.

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## 1. INTRODUCTION

Speaking is widely acknowledged as one of the most essential language skills in 21st-century education, serving both academic and social functions for learners. In elementary school contexts, speaking ability is closely related to students' confidence, cognitive development, and interaction with peers and teachers. Without adequate speaking competence, students often fail to articulate their thoughts clearly and struggle to engage in classroom communication (Sari & Dewi, 2021; Agustiani et al., 2022). Recent studies in Indonesian EFL settings have highlighted persistent challenges: learners tend to experience speaking anxiety, lack of self-efficacy, and limited vocabulary, which altogether reduce willingness to communicate (Putri & Hidayat, 2020; Mulyana & Puspitasari, 2023).

Despite the importance of oral proficiency, classroom practices in many schools remain predominantly teacher-centered. Teachers often dominate explanations, while students become passive recipients of knowledge (Iskandar et al., 2019). Such approaches hinder active participation and limit opportunities for meaningful interaction. To overcome this, scholars have proposed student-centered and cooperative learning methods that emphasize participation, fairness, and interactive turn-taking. One method that has gained recognition is the talking stick strategy, which involves passing a stick to determine speaking turns. Evidence shows that it fosters confidence, motivates students to speak, and promotes equal opportunity for oral expression (Fathurrohman, 2019; Hamdani & Rambe, 2022; Pratiwi et al., 2021).

This study is situated within Indonesia's classroom culture, where teacher-led recitation and asymmetric participation patterns remain common, often limiting opportunities for equitable oral engagement among young EFL learners. Recent classroom dialogue research shows that structured turn-taking practices can redistribute opportunities to speak, support student voice, and foster more inclusive participation norms. Positioning the intervention within this sociocultural lens, the present work responds to a persistent need to design low-cost, scalable routines that render participation both expected and safe for children (Sedova et al., 2025).

Concurrently, research on random call and related equity-oriented routines suggests that when thoughtfully implemented—paired with adequate wait time, clear purposes, and supportive norms—random selection can reduce participation bias and broaden the distribution of voice. The present study therefore examines whether combining a cooperative talking-stick structure with a lightweight digital spinner can produce both cognitive gains in speaking performance and affective gains in confidence, while aligning with equitable classroom discourse in a local Indonesian setting (Waugh & Andrews, 2020; Aguillon et al., 2020).

In parallel, the use of digital gamification tools has been increasingly integrated into elementary classrooms. Applications such as the spinner (spin-the-wheel) have been developed to allocate turns randomly, create a playful atmosphere, and sustain student motivation (Huda, 2020; Puteri & MintoHari, 2022; Nugroho et al., 2023). Recent studies indicate that gamified learning media enhance learners' engagement, attentiveness, and enjoyment during lessons (Syahputra & Fauziah, 2021). Nevertheless, these digital tools are often applied in isolation for vocabulary practice or general classroom participation, with limited attention to how they may directly enhance speaking skills.

Taken together, prior research provides evidence of the effectiveness of the talking stick method on speaking outcomes, and the spinner application on student motivation. Yet, the specific integration of both approaches remains underexplored. To date, very few empirical studies have investigated how combining a structured cooperative strategy with digital gamification can simultaneously reduce anxiety, distribute speaking turns fairly, and improve elementary learners' oral proficiency. This gap indicates the need for further investigation into the synergy between traditional cooperative methods and simple technology-enhanced learning tools.

Therefore, the present study seeks to examine the effect of the talking stick learning method supported by a spinner application on elementary students' speaking skills. The novelty of this study lies in its contribution to bridging traditional cooperative learning and digital gamification in an elementary EFL setting. The

findings are expected to provide theoretical insights into active learning strategies that combine cooperative methods with digital aids and practical guidance for teachers seeking low-cost, scalable interventions to foster speaking proficiency among young learners.

## 2. LITERATURE REVIEW

### 2.1. Theoretical Framework

**Speaking Skills.** Speaking is widely regarded as a core indicator of communicative competence because it requires the integration of linguistic accuracy, fluency, vocabulary range, and pragmatic appropriateness. For young learners, speaking is not merely the ability to produce sounds but also a medium for building self-confidence, cognitive development, and social interaction. Empirical work suggests that students with stronger speaking competence tend to demonstrate higher overall academic achievement and social adaptability (Bahadorfar & Omidvar, 2014; Brown & Yule, 1983). Recent studies also emphasize that speaking skills in elementary education are shaped by both linguistic exposure and the availability of classroom interaction opportunities (Sari & Dewi, 2021; Agustiani et al., 2022). Developing effective strategies to foster speaking proficiency therefore remains an urgent educational priority.

**Learning Methods in Language Education.** The choice of learning method is a determinant of instructional success. Traditional lecture-based teaching often limits interaction and results in passive learning behaviors. By contrast, active learning strategies—such as cooperative learning, peer teaching, and gamification—have been shown to enhance engagement and learning outcomes in language classrooms when they create meaningful interaction, reduce learner anxiety, and allow students to practice language in authentic ways (Nugroho et al., 2023). For elementary learners, approaches that combine playfulness with structure are especially effective, as they align with children's developmental needs for exploration, fairness, and enjoyment.

**Talking Stick Method.** The talking stick method is a cooperative learning strategy adapted from Native American traditions in which holding a stick grants the right to speak. Within education, this technique encourages equal participation, ensures that all students take turns, and

discourages monopolization of discussions by a few dominant voices. Prior research has shown that the method can increase learners' confidence, reduce anxiety, and stimulate spontaneous oral expression (Fathurrohman, 2019; Hamdani & Rambe, 2022). Studies have also found that the talking stick promotes listening skills, as students are compelled to attend to peers' contributions while awaiting their turn (Pratiwi et al., 2021). Nonetheless, limitations include potential nervousness when students are suddenly prompted to speak and time-management challenges in larger classes.

**Spinner Application.** Gamification has emerged as a key innovation in contemporary classrooms, with the spinner application (spinning wheel) being a prominent example. The spinner randomly selects names, tasks, or topics, thereby creating an element of unpredictability and fairness. Empirical evidence shows that spinners can enhance attention, maintain classroom discipline, and increase participation across diverse subjects (Huda, 2020; Puteri & Mintohari, 2022; Syahputra & Fauziah, 2021). In addition, spinners reduce teacher bias in assigning turns, giving every student an equal chance to participate. Despite these benefits, most studies have applied spinners in general learning activities such as quizzes, vocabulary review, or classroom management; their direct role in systematically developing complex skills like speaking has received limited attention.

### 2.2. Previous Studies

Several studies have examined the talking stick method in language learning contexts. Handayani and Hidayat (2018) reported significant improvements in students' speaking performance by encouraging learners to articulate ideas during structured turn-taking. Hamdani and Rambe (2022) found similar results, noting that students became more confident and less anxious when using the talking stick. Likewise, Pratiwi et al. (2021) demonstrated that talking-stick activities foster collaborative learning and promote mutual respect during group discussions. Collectively, these studies suggest that talking-stick strategies hold promise for strengthening oral communication skills.

Meanwhile, research on spinner applications has primarily focused on motivation and engagement. Huda (2020) used a digital spinner in

Arabic grammar classes and reported improved student participation. Puteri and Mintohari (2022) showed that spinner-based activities in elementary science lessons increased attentiveness and enthusiasm. Recent investigations confirm that gamification tools such as spinners can sustain motivation, reduce boredom, and encourage active classroom involvement (Nugroho et al., 2023). However, few of these studies examined speaking proficiency as a learning outcome, focusing instead on behavioral indicators of engagement.

A smaller body of work has begun to explore the intersection of cooperative methods and digital gamification. For instance, Syahputra and Fauziah (2021) reported that integrating cooperative tasks with gamified tools enhanced both motivation and learning outcomes. Yet, systematic studies that combine the talking stick method with spinner applications for speaking instruction in elementary schools remain rare.

### 2.3. Critical Synthesis

Gamification meta-analyses report small-to-moderate positive effects on cognitive, motivational, and behavioral outcomes, supporting the use of simple game-like mechanics to sustain attention and readiness to speak (Sailer & Homner, 2020; Li et al., 2023). At the same time, intervention studies on equitable classroom dialogue show that structured participation protocols can shift opportunity-to-talk from a few vocal students to the broader class, especially when routines such as random call are implemented with adequate wait time and clear, supportive norms (Waugh & Andrews, 2020; Aguillon et al., 2020; Sedova et al., 2025). The gap, however, lies in integrating these strands for young EFL learners in Southeast Asian primary classrooms. By merging a fairness-enforcing talking stick with a minimal-tech spinner, the present study tests whether gamified randomization enhances the equity function of structured turn-taking and, in turn, yields measurable gains in speaking performance.

Taken together, the reviewed literature highlights two important strands: the talking stick method effectively promotes fairness, confidence, and equal participation in oral activities, and the spinner application provides gamified engagement, motivation, and equitable turn-taking. Yet few studies have investigated their

combined use as a unified pedagogical strategy to improve speaking proficiency in elementary learners. Existing research either examines cooperative turn-taking without technological integration or explores digital gamification without direct focus on speaking skills.

This study addresses that gap by integrating the talking stick method with a spinner application in a quasi-experimental design. The novelty lies in merging a traditional cooperative strategy with a digital gamified tool to create a low-cost, scalable, and interactive approach that directly targets speaking skills in young learners. By bridging these two strands of research, the present study contributes theoretically—by extending the literature on technology-supported cooperative learning—and practically—by offering educators an evidence-based model to enhance speaking proficiency in elementary education.

## 3. METHODS

In order to address the research gap identified in the literature review, a rigorous methodological approach was required to evaluate the effect of integrating the talking stick method with a spinner application on elementary students' speaking skills. The methodological choices were designed to ensure internal validity, maintain ecological authenticity in the classroom context, and produce findings that are both reliable and replicable. This section outlines the procedures undertaken in detail, beginning with the research design, followed by the description of population and sample, instruments and procedures for data collection, the implementation of the intervention, the techniques of data analysis, ethical considerations, and the supporting materials used. Such a comprehensive account is essential to ensure transparency and to allow other researchers to replicate or extend the present study.

### 3.1. Research Design

This study employed a quasi-experimental design with a non-equivalent control group pre-test–post-test model. The choice of this design was motivated by the realities of classroom-based educational research, where random assignment is often infeasible. In Indonesian schools, students are typically grouped administratively, and teachers cannot ethically or practically reassign them for the sake of

experimentation. The quasi-experimental model therefore offers a pragmatic yet scientifically rigorous way of examining the effect of interventions while maintaining the integrity of naturally existing classes.

The design's strength lies in its ability to compare the outcomes of an experimental group and a control group while still allowing for baseline equivalence checks through pre-testing. This feature reduces the likelihood that differences in outcomes are simply due to pre-existing disparities. In this study, both experimental and control groups completed the same speaking test before and after the intervention. This enabled the researchers to detect both within-group improvements and between-group differences, thereby providing evidence of causality. By structuring the design in this manner, the study aligned itself with best practices in applied linguistics and education research, where the balance between ecological validity and methodological control is critical.

### 3.2. Population and Sample

The population of the study comprised all fourth-grade students at an Islamic elementary school in Yogyakarta, Indonesia, during the 2023/2024 academic year. From this population, two intact classes were purposively selected, resulting in an experimental group of twenty-eight students and a control group of twenty-seven students. Both groups shared comparable characteristics in terms of age (9–10 years), exposure to English instruction, and socio-academic background. This comparability was essential to ensure that any differences in outcomes could be reasonably attributed to the intervention rather than to demographic disparities.

Although purposive sampling restricts the degree of generalizability to broader populations, its use was justified in this context for two reasons. First, intact classes preserve the authenticity of school-based learning environments, thereby increasing ecological validity. Second, the overall sample size of fifty-five students exceeded the threshold suggested by Cohen's (1992) power analysis for detecting medium effect sizes at the 0.05 significance level. This ensured that the study was statistically powered to capture meaningful differences,

lending robustness to its findings despite the absence of randomization.

### 3.3. Data Collection

The primary data collection instrument was a speaking performance test administered twice, once as a pre-test and once as a post-test. The test consisted of communicative tasks requiring students to introduce themselves, describe familiar objects, and respond to simple questions posed by the teacher. Each performance was audio-recorded to facilitate reliable scoring and subsequent verification. The analytic rubric used to evaluate the performances measured four dimensions: fluency, vocabulary use, pronunciation, and grammatical accuracy. This rubric was adapted from Brown (2004), a widely cited authority in language assessment, and underwent expert validation by two senior lecturers in English language education.

To ensure reliability, two independent raters assessed all speaking samples following a calibration session using anchor samples until inter-rater agreement reached substantial levels. Inter-rater agreement was calculated using Cohen's kappa coefficient, yielding a value of 0.82, which is considered strong. These procedures ensured that the scoring remained consistent and objective while minimizing subjectivity in performance evaluation. In addition to test scores, qualitative evidence was collected through structured classroom observations and teacher field notes to capture classroom atmosphere, student participation, and engagement—elements that complement quantitative outcomes.

### 3.4. Intervention Procedure

The intervention was conducted over a two-week period and consisted of six instructional sessions for both the experimental and control groups. In the experimental group, the talking stick was used as a physical symbol of speaking rights, while the spinner application was projected digitally to randomly determine the student who would hold the stick and thus be responsible for speaking. This combination was designed to foster fairness in turn-taking, reduce anxiety by introducing an element of playfulness, and increase students' willingness to speak. The integration of a traditional cooperative strategy with a digital gamification tool reflects an innovative pedagogical approach aligned with the principles of 21st-century learning.

To safeguard implementation quality, intervention fidelity was monitored with a checklist that documented adherence to turn-taking rules, visibility of the spinner to all students, appropriate timing, and feedback routines after each speaking turn. In contrast, the control group received conventional teacher-centered instruction delivered through explanation, repetition, and limited question-and-answer exchanges, reflecting common pedagogical practice. While the curricular content was identical across groups, the absence of structured interactive routines in the control condition highlighted the added value of the talking stick and spinner integration. After six sessions, both groups completed a post-test using equivalent but non-identical prompts to minimize practice effects while ensuring comparability with the pre-test.

### 3.5. Data Analysis

All quantitative data were analyzed using SPSS version 25. Initially, descriptive statistics were computed to summarize central tendencies, variation, and distribution patterns. Normality was assessed using the Shapiro–Wilk test, while homogeneity of variance was evaluated through Levene’s test to determine the suitability of parametric procedures. Baseline equivalence between groups was examined via independent-samples tests on pre-test scores and relevant demographic descriptors to verify comparability at the outset.

Primary inference used analysis of covariance (ANCOVA), with post-test score as the dependent variable, group as the fixed factor, and pre-test score as the covariate, thereby adjusting for any residual baseline differences. This model was complemented by within-group paired-sample tests to assess pre–post improvements and by between-group gain comparisons to provide an additional, easily interpretable estimate of impact. Effect sizes were reported alongside p-values, and 95% confidence intervals were provided for means, mean differences, and effect sizes to convey the precision and practical magnitude of the results in line with international reporting standards. Sample size justification and statistical reporting followed current recommendations to move beyond sole reliance on null-hypothesis significance testing by incorporating effect sizes and confidence intervals.

### 3.6. Supporting Materials

To ensure transparency and replicability, comprehensive supporting materials were prepared. These included detailed lesson plans for both experimental and control groups to maintain consistency in content coverage while differing only in method of delivery. Sample speaking prompts, the full scoring rubric, and rater calibration notes were compiled in the appendices to enable replication or adaptation. Screenshots of the spinner application and concise classroom implementation guidelines were documented to illustrate how the digital tool was integrated into instructional routines.

Observer checklists and teacher field notes were also compiled to triangulate findings and provide contextual depth. These supplementary materials strengthen the credibility of the study by documenting not only what was taught, but also how it was taught and how students responded. By making these resources available, the study contributes both to theoretical advancement and to pedagogical practice, offering a replicable model for educators seeking to adopt innovative methods in similar contexts.

## 4. RESULTS AND DISCUSSION

The primary aim of the data analysis was to determine whether the integration of the talking stick method with a spinner application had a measurable effect on the speaking skills of elementary students. To achieve this, both descriptive and inferential statistics were examined.

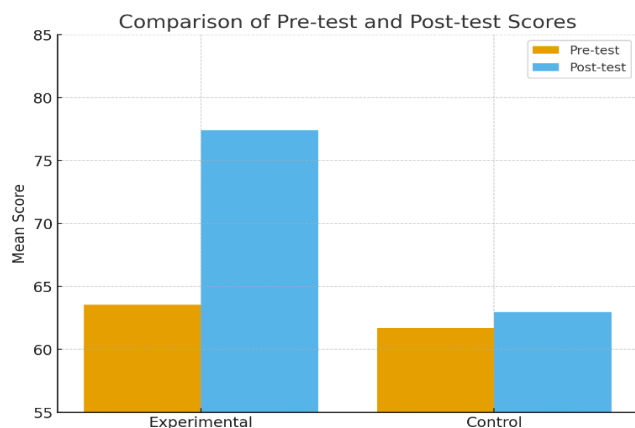
As shown in Table 1, both groups exhibited similar levels of speaking proficiency prior to the intervention. The mean pre-test scores of the experimental group ( $M = 63.54$ ,  $SD = 6.21$ ) and the control group ( $M = 61.71$ ,  $SD = 5.94$ ) did not differ significantly, indicating that the groups were comparable at baseline. This strengthens the internal validity of the study, as initial differences between groups are unlikely to account for post-test outcomes.

**Table 1. Descriptive Statistics of Pre-test and Post-test Scores**

Group	N	Pre-test Mean	Pre-test SD	Post-test Mean	Post-test SD	Gain Score
Experimental	28	63.54	6.21	77.41	5.82	+13.87
Control	27	61.71	5.94	62.96	6.02	+1.25

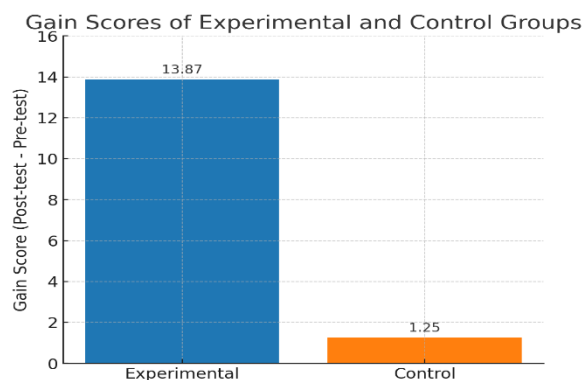
The post-test scores revealed a marked divergence between groups. The experimental group achieved a mean of 77.41 (SD = 5.82), representing an average improvement of 13.87 points, while the control group only improved marginally, with a gain of 1.25 points. This descriptive evidence strongly suggests the effectiveness of the intervention.

**Figure 1. Comparison of pre-test and post-test mean scores between experimental and control groups**



To statistically verify these findings, paired-sample t-tests were conducted within each group. The experimental group showed a highly significant improvement from pre-test to post-test ( $t = 11.23$ ,  $p < 0.001$ ), while the control group's improvement was not statistically significant ( $t = 1.04$ ,  $p > 0.05$ ). Further, an independent-sample t-test comparing gain scores between groups confirmed a significant difference ( $t = 8.72$ ,  $p < 0.001$ ), with a large effect size (Cohen's  $d = 1.35$ ). This indicates that the intervention had not only statistical significance but also substantial practical importance, consistent with educational research standards that emphasize reporting effect sizes alongside p-values.

**Figure 2. Gain scores (post-test minus pre-test) of experimental and control groups, illustrating the effectiveness of the intervention**



Exact p-values are reported where appropriate, and extremely small values are presented as  $p < .001$ . For transparency, 95% confidence intervals accompany group means, mean differences, and effect sizes (Cohen's  $d$ ) to indicate the precision and practical magnitude of the estimates. A brief sensitivity check indicated that the observed effects were detectable with high statistical power at  $\alpha = .05$ .

In addition to test scores, qualitative observations supported these quantitative findings. Teacher field notes indicated that students in the experimental group appeared more motivated, demonstrated greater willingness to speak, and engaged more actively in classroom discussions compared to those in the control group. These observations provide convergent validity for the test results and offer richer insights into how the intervention influenced students' behaviors and attitudes.

The results demonstrate that integrating the talking stick method with a spinner application significantly enhances speaking skills among elementary school students. This finding supports the theoretical claim that cooperative learning strategies, when combined with digital gamification, create a powerful learning environment that addresses both cognitive and affective dimensions of language learning.

From a cognitive perspective, the structured turn-taking enforced by the talking stick ensured that every student had an opportunity to speak. This is consistent with prior studies highlighting the method's role in promoting fairness and active participation (Handayani & Hidayat, 2018; Hamdani & Rambe, 2022). The digital spinner further amplified this effect by introducing an element of randomness and anticipation, which sustained attention and encouraged students to remain prepared. Such mechanisms align with the literature on gamification, which emphasizes its ability to increase engagement and focus in learning contexts (Puteri & Mintohari, 2022; Nugroho et al., 2023).

From an affective perspective, the intervention appeared to mitigate common barriers such as speaking anxiety and lack of confidence. Prior research has documented that many elementary learners hesitate to speak due to fear of making mistakes or being judged (Sari & Dewi, 2021). By normalizing participation through

randomized selection and cooperative support, the intervention created a classroom climate where speaking became an expected, collective responsibility rather than an individual risk. This finding resonates with Syahputra and Fauziah (2021), who argue that gamified cooperative learning can create a psychologically safe environment that reduces anxiety.

Framed within a sociocultural view of classroom discourse in Indonesian primary schools, these results indicate that equitable turn-taking routines can normalize student voice and redistribute opportunity-to-speak beyond a small subset of volunteers. The spinner's randomization helps reduce selection bias, but its use should be paired with teacher orchestration that sustains psychological safety—explicit purpose setting, adequate wait time before speaking, brief pair-planning prior to public turns, and error-friendly norms. In this configuration, the talking stick provides a fairness structure while the spinner sustains attentional readiness, together shaping participation as a shared classroom norm rather than an individual risk.

Theoretically, this study contributes to the field by bridging two previously separate strands of research: cooperative learning methods and digital gamification tools. While earlier works on the talking stick emphasized fairness in oral participation (Fathurrohman, 2019; Pratiwi et al., 2021), and studies on spinners focused primarily on motivation and classroom management (Huda, 2020), few have combined the two to examine direct effects on speaking proficiency. The present study provides empirical evidence that such integration produces synergistic effects, thereby extending the literature on active learning and educational technology.

Practically, the results have important implications for teachers in resource-constrained contexts. The spinner application is free, simple to use, and requires only basic classroom technology, making it highly accessible. Its integration with the talking stick offers a scalable, low-cost strategy for enhancing speaking instruction without requiring major curricular changes. Teachers, however, should remain mindful of potential challenges, such as ensuring sufficient time for each student to speak and providing scaffolding for those with weaker language abilities.

Finally, it is important to acknowledge the study's limitations. The research was conducted in a single school with a modest sample size, which limits the generalizability of the findings. Future studies should expand the sample across multiple schools and cultural contexts, employ longitudinal designs to track long-term effects, and incorporate mixed-methods approaches to capture not only outcomes but also students' perceptions of the intervention. Such extensions would further validate and enrich the current findings, solidifying the role of cooperative-gamified methods in enhancing language learning.

## 5. CONCLUSIONS

This study demonstrated that integrating the talking stick method with a spinner application significantly improved elementary students' speaking skills. The experimental group showed a substantial gain compared to the control group, as confirmed by both descriptive and inferential statistics, with a large effect size indicating strong practical significance. These findings validate the potential of combining cooperative learning strategies with gamified digital tools to foster more equitable participation, reduce speaking anxiety, and enhance oral proficiency.

Theoretically, the results contribute to the literature by bridging cooperative learning and gamification, two areas often studied separately. The intervention demonstrated how traditional methods such as the talking stick can be revitalized through technology, thereby offering a model for innovation in language pedagogy. Practically, the approach is highly accessible for teachers, requiring only simple materials and free applications, making it a cost-effective solution for resource-limited classrooms.

Despite its strengths, the study was limited to one school and a relatively small sample size, restricting generalizability. Future research should expand to larger and more diverse populations, incorporate longitudinal designs to examine sustained impacts, and explore qualitative perspectives to capture learners' experiences more deeply. Such extensions would enrich understanding of how cooperative-gamified approaches can be optimized across varied educational settings.

## 6. ACKNOWLEDGMENTS

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## 7. AUTHOR CONTRIBUTIONS

The author contributed to the conception and design of the study, the collection and analysis of the data, and the preparation and revision of the manuscript. Academic supervision and constructive feedback were provided by faculty members, ensuring the quality and integrity of the work.

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This research received no external funding. The study was conducted independently within the framework of academic activities at Universitas Islam Negeri (UIN) Syarif Hidayatullah Jakarta.

## 9. CONFLICT OF INTEREST

The author declares no conflict of interest related to the research, authorship, or publication of this article

## 10. DATA AVAILABILITY

The data that support the findings of this study are available from the author upon reasonable request. To protect participant confidentiality, the raw data are not publicly accessible.

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