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The Effect of Using Wordwall Games on Teaching Grammar and Pronunciation

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A B S T R A C T

Speaking accuracy is important in English language learning because students need to produce grammatically accurate and intelligible speech. However, previous studies on Wordwall have mainly focused on general speaking proficiency or vocabulary mastery, leaving limited attention to grammar and pronunciation in spoken recount texts. This research aimed to find out the effect of using Wordwall games on teaching spoken recount text. The research employed a pre-experimental design using a one-group pre-test–post-test design. The participants were 26 eighth-grade students of Junior High School in Pontianak, selected through cluster random sampling. Data were collected through speaking tests using an analytic speaking rubric. The collected data were analyzed using descriptive statistics, the Wilcoxon Signed-Rank Test, and effect size calculation. The Wilcoxon test indicated a statistically significant difference between students' pre-test and post-test results. The effect size was 0.88, categorized as a large effect. The findings indicate that Wordwall games contribute positively to enhancing students' grammar mastery and pronunciation accuracy.

Keywords: *Wordwall, Speaking Skill, Recount Text, Pronunciation, Grammar*

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INTRODUCTION

Speaking skills are essential in English as a Foreign Language (EFL) learning because they enable students to express ideas, communicate experiences, and interact with others using English. Developing speaking skills requires students to have sufficient vocabulary and to produce grammatically accurate and intelligible utterances. Therefore, opportunities to practice speaking skills are important for helping EFL learners develop confidence and accuracy (Wang et al., 2024). One form of speaking activity that can support these abilities is recount text. Recount texts are commonly used to help students describe past experiences and events. In producing spoken recount texts, students are required to use appropriate past forms and pronounce words clearly so that their messages can be understood. Thus, teaching spoken recount texts can provide students with meaningful opportunities to practice grammar and pronunciation while developing their speaking skills.

Based on the observation conducted many students still experience difficulties in speaking English. The students tend to have limited vocabulary and struggling when answering simple questions in English. This limitation makes it challenging for them to express their ideas orally, particularly when they are asked to produce sentences in past forms, which are commonly used in recount texts. Despite these difficulties, the students appeared to answer the teacher' questions confidently, even though they mixed in Bahasa Indonesia. This proves that the students still have the willingness to speak, even though they are limited by their small vocabulary.

The observation also showed that students demonstrate positive attitudes toward learning when engaging and interactive activities are introduced. When the teacher invited the students to learn new vocabulary and practice its pronunciation, the students showed great

enthusiasm and participation. This indicates that the students respond well to interactive and technology-assisted learning activities. Considering the students' willingness to speak even with limited vocabulary and their enthusiasm for interactive learning, the researcher intends to use Wordwall as an alternative for teaching speaking.

Previous studies have reported positive effects of Wordwall in English language learning. Umairoh & Agustina (2023) found that Wordwall could improve students' speaking skills, while Febrianti & Taufiq (2025) reported that Wordwall-based gamification could enhance students' vocabulary mastery. This research aims to determine whether Wordwall can improve students' grammar mastery and pronunciation accuracy to support their speaking performance or not. The findings are expected to provide useful insights for teachers in implementing technology-based media to enhance speaking activities in line with the Merdeka Curriculum. Based on the background and research gap, this study addresses the following research questions: (1) Does the use of Wordwall games have a significant effect on students' grammar mastery and pronunciation accuracy in spoken recount text? (2) If yes, what is the effect size of the use of Wordwall games on students' grammar mastery and pronunciation accuracy in spoken recount text?

Wordwall

Wordwall is a web-based educational platform that enables teachers to create interactive learning activities using gamified templates and digital exercises. The platform allows conventional teaching materials to be transformed into engaging game-based learning experiences that support student participation, practice, and assessment (Khairunisa, 2021). Wordwall provides 34 templates, with 12 available for free, including speaking cards and flashcards. As a digital learning medium, Wordwall integrates instructional content with gamification elements such as scoring systems, instant feedback, and competitive features to enhance students' motivation and participation. Through these features, traditional classroom exercises become more interactive, encouraging students to actively engage with learning materials.

Micro-Speaking

Speaking is a complex language skill consisting of several essential elements that work together to produce effective communication. Brown (2004) explains that speaking consists of several essential elements, often referred to as micro- and macro-skills, which together shape students' speaking performance. The micro-skills include the ability to produce English phonemes accurately, use appropriate stress and intonation patterns, and apply correct grammatical forms at the utterance level. In this research, the elements of speaking are centered on Brown's micro-skills, particularly students' grammar mastery and pronunciation accuracy.

Grammar in Spoken Recount Text

Grammar provides the system of rules that allows students to form correct and meaningful sentences in English. One important aspect of grammar is the past tense verb, which is primarily used to describe actions, events, or situations that happened in the past. According to Alicia (2022), the past tense is typically formed by adding -ed to regular verbs, such as play become played, while irregular verbs change their forms unpredictably, such as go become went and eat become ate. The correct use of past tense verbs is essential in recount texts because the purpose of a recount is to retell past events in chronological order. When recount texts are delivered orally, students must be able to apply past tense verbs accurately in order to produce a clear and coherent spoken recount text.

Pronunciation in Spoken Recount Text

Pronunciation is a vital element of speaking that ensures a speaker's message is intelligible. According to Kenworthy (1988), one of factor that can affect speech intelligible is key sound. Based on the intelligibility principle in pronunciation teaching, pronunciation

assessment should prioritize sounds that contribute most to comprehensibility rather than native-like accuracy. The key sounds included past tense -ed endings pronounced as /t/, /d/, and /ɪd/, final consonant sounds, and interdental sounds /θ/ and /ð/. Mispronouncing key sound, can obscure meaning of the sentence and interrupt listener comprehension.

Responsive Speaking

This type of speaking test is well-suited for EFL students because it allows them to practice producing simple responses without requiring extended or complex speech. Following Brown (2004) classification, this research employs responsive speaking tasks that ask students about their past experiences so they can give direct and meaningful answers. These tasks fit naturally with spoken recounts, as they prompt students to describe real events in brief narrative form.

Spoken Recount

A spoken recount text is a type of oral communication that retells past events or experiences in the order in which they happened. According to Chandra et al. (2024), a recount text is a piece of text that retells past events, usually arranged chronologically. In the context of speaking, a spoken recount focuses not only on organizing events in sequence but also on delivering them clearly and fluently through spoken language. The purpose of a spoken recount text is to share personal experiences, inform others about past events, or entertain the listeners.

Based on the theoretical perspectives and previous findings discussed above, Wordwall games have the potential to provide an interactive learning environment that supports students' speaking development through repeated practice, immediate feedback, and engaging activities. In the context of spoken recount texts, these features can be used to strengthen students' ability to apply appropriate past tense forms and produce key sounds accurately when responding to questions about past experiences. The use of responsive speaking tasks also provides a practical context for students to apply grammar and pronunciation in meaningful oral communication rather than learning these elements in isolation. Therefore, this study focuses on examining the effect of Wordwall games on students' grammar mastery and pronunciation accuracy in spoken recount texts. By examining both aspects and determining their effect sizes, this study is expected to provide empirical evidence regarding the potential of Wordwall as a technology-assisted medium for supporting focused speaking practice in EFL classrooms.

METHOD

Research Design

The research design used in this study was a quantitative research design. According to Creswell & Creswell (2018), quantitative research is an approach used to examine relationships among variables by collecting and analyzing numerical data. Quantitative research is appropriate when researchers seek to measure variables objectively and examine relationships or differences through statistical procedures (Apuke, 2017). In addition, quantitative research enables researchers to obtain measurable evidence that can be used to determine the effects of a particular treatment or intervention (Sukmadinata, 2017).

In this research, the researcher employed a pre-experimental design, specifically a one-group pre-test-post-test design. This design involves administering a pre-test before the treatment and a post-test after the treatment to a single group of participants (Creswell & Creswell, 2018). The researcher gave a pre-test (O1) to the eighth-grade students to determine their initial speaking ability. After the pre-test, the researcher provided two treatment sessions (X), with each treatment consisting of one meeting in which students learned speaking through Wordwall games. At the end of the treatment, the researcher administered a post-test (O2) to determine the students' speaking ability after learning through Wordwall games. According to Sugiyono (2019), the one-group pre-test-post-test design allows researchers to compare

participants' conditions before and after an intervention to identify changes associated with the treatment.

The research design can be illustrated as follows:

$$O1 \rightarrow X \rightarrow O2$$

Where:
O1 = Pre-test
X = Treatment using Wordwall games
O2 = Post-test

In quantitative research, variables are important components because they are related to the formulation of research questions and the measurement of research outcomes. In this study, the researcher focused on the relationship between the use of Wordwall games and students' speaking skills. Wordwall games functioned as the independent variable, while students' speaking skills functioned as the dependent variable. An independent variable refers to a variable that is manipulated or considered as a factor that may influence an outcome, whereas a dependent variable refers to the outcome that is measured to determine whether it changes in response to the independent variable. Similarly, Sugiyono (2019) explains that the independent variable is a variable that influences or becomes the cause of changes in another variable, while the dependent variable is the variable that is affected by the independent variable. Therefore, in this study, Wordwall games were treated as the intervention, and students' speaking skills were measured to determine the changes that occurred after the treatment.

Respondents

Population

The population in this research is eighth-grade students of one of Junior High School in Pontianak, which consists of 8 classes. The total members of the population are 247 students, generally aged 13–14 years old. The students had received English instruction as part of the school curriculum and had basic knowledge of English vocabulary, grammar, and text types, including recount texts. The population consisted of both male and female students with varying levels of English proficiency, particularly in speaking, vocabulary, grammar, pronunciation, fluency, and confidence.

Sample

In this research, the researcher used cluster random sampling to select the sample. Since the population consisted of eight existing classes, each class was considered as one cluster. The researcher listed all eight classes and assigned each class as one sampling unit. Then, the researcher used the Wheel of Names website to randomly select one class from the eight clusters. Through this random selection process, class VIII-H was selected as the sample of this research. Therefore, all students in class VIII-H were included as the research participants.

Instruments

In order to achieve the aim of this research, one instrument used. The instrument is test which are pre-test and post-test. In this research, the researcher gave the students a "question-and-answer" (Brown, 2004) to measure the students' grammar mastery and pronunciation accuracy in spoken recount texts. According to Brown, question-and-answer assessments are a form of responsive assessment. This type of assessment is particularly well-suited for junior high school students because the tests consist of short conversations and relate to everyday activities. To interpret the score, the researcher used a rubric adapted from Hughes (2003) speaking-skills scoring categories. The rubric is shown in Table 1.

Table 1. Students' Grammar and Pronunciation Scoring Rubric

Components	Assessment	Score
Grammar	Uses 8 past-tense verbs correctly. Sentences are well-formed, with correct subject–verb agreement and correct word order. Message is fully clear.	5
	Uses 6-7 past-tense verbs correctly. Sentences are well-formed, with correct subject–verb agreement and correct word order. Message is fully clear.	4
	Uses 4-5 past-tense verbs correctly in most sentences. Sentences show minor structural errors, but meaning is consistently clear.	3
	Uses 2-3 past-tense verbs correctly in most sentences. Sentences show minor structural errors, but meaning is consistently clear.	2
	Uses 1 past-tense verb correctly. Sentence structure problems occasionally cause unclear meaning.	1
Pronunciation	Produces all sentences correctly with accurate pronunciation of 16-14 key sounds.	5
	Produces 13-11 key sounds accurately, sentences meaning remains clear.	4
	Produces 10-8 key sounds accurately, sentences meaning remains clear.	3
	Produces 7-5 key sounds accurately, mispronounced key sounds occasionally affect sentences meaning.	2
	Produces 4-1 key sounds accurately, mispronounced key sounds occasionally affect sentences meaning.	1

To ensure the quality of the instrument, its content validity was established through expert judgment, while the reliability of the scoring was examined through inter-rater reliability. To support content validity, the test items were reviewed by two experienced English language teachers. Teacher A and Teacher B were asked to evaluate the test items by rating the relevance of each item using a 4-point Likert scale, ranging from not relevant to highly relevant. To quantify the degree of agreement among experts, the ratings were analysed using Aiken's V. The result of the content validity calculation is presented in Table 2.

Table 2. Content Validity Result

Item	V1	V2	Aiken's V	Category
1	4	3	0.83	Valid
2	4	3	0.83	Valid
3	3	4	0.83	Valid
4	3	4	0.83	Valid

To measure inter-rater reliability, teacher A and teacher B independently assessed the speaking test samples of 10 students. The inter-rater reliability analysis was conducted using the "Intraclass Correlation Coefficient (ICC) a two-way random-effects model with absolute agreement type" (Shrout & Fleiss, 1979), which is considered an appropriate statistical method for measuring the level of agreement among raters who assess the same subject using numeric scoring scales. The researcher calculated ICC using Microsoft Excel add-ins such as Real Statistics, which allow direct calculation of the ICC. The result of the ICC calculation is presented in Table 3.

Table 3. ICC Computation Result

ICC Class	Two-Way Random
ICC Type	Absolute Agreement
k	2
n	10
Alpha	0.05
ICC value	0.950

The ICC value is 0.950, indicating an excellent level of agreement between the two raters. According to Koo & Li (2016), ICC values above 0.90 represent excellent reliability. Therefore, the scoring rubric of students' grammar and pronunciation can be considered consistent and reliable.

Procedures

This research was conducted over four weeks, consisting four sessions, with one session held each week. Each session lasted 105 minutes and was conducted in person in the classroom. The research procedures are carried out through several stages. The first stage is to give a pre-test to students to find out the initial pronunciation ability before being given treatment. The data for the pre-test collected through a speaking test in the form of a question-and-answer session. Students asked four questions related to their past experiences and required to answer in complete sentence (subject + verb 2 + object) using past tense verb forms. After the pre-test was carried out, the researcher provided treatment in the form of using the Wordwall games as a speaking teaching medium. During the learning process, the researcher teaches past tense of verb and how to pronounce using audio provide in the Wordwall. This treatment is done during two meetings. After the treatment process is completed, the researcher provides a post-test with the same format as the pre-test to determine the improvement of students' grammar mastery and pronunciation accuracy after taught using Wordwall games. The results of both tests were then collected for further analysis.

Data Analysis

After obtaining scores for each student. The researcher used Microsoft Excel as the main tool for analysing the quantitative data, which obtained from the students' pre-test and post-test scores. The analysis carried out in several steps as follows. First, the researcher Scoring the students' grammar, Scoring the students' pronunciation, Scoring the students' grammar and pronunciation. After that normality test was conducted using the Shapiro-Wilk test because the sample size was fewer than 50 students. The normality test was applied to the difference score between students' pre-test and post-test score. After the data was discovered not normally distributed, hypotheses testing was continued using a non-parametric statistical test namely Wilcoxon signed rank-test using Microsoft Excel add ins such as Real statistics. After the null hypothesis was rejected using the Wilcoxon Signed Rank Test, the researcher proceeded to calculate the effect size to determine the magnitude of the treatment effect. The effect size interpretation according to Cohen (1988) are if ES ≥ 0.10 = small effect, if ≥ 0.30 = medium effect, and if ≥ 0.50 = large effect.

FINDINGS AND DISCUSSION

The following is the data of research respondents consisting of 26 students of class VIII-H at Junior High School in Pontianak. Respondent data is presented in the form of student initials to maintain the confidentiality of the identity of the research participants. The following table shows the results of the pre-test and post-test of students' grammar, pronunciation, and speaking skills.

Table 4 Students' Grammar and Pronunciation Pre-Test and Post-Test Percentage Scores

No	Students Name	Grammar		Pronunciation	
		Pre-Test	Post-Test	Pre-Test	Post-Test
1	AAZ	20	80	20	80
2	ACA	20	20	20	20
3	CM	20	20	20	20
4	DA	20	20	20	20
5	DAn	40	80	40	80
6	DDI	40	40	40	60
7	FA	20	40	20	60
8	FW	20	20	20	20
9	HF	20	20	20	40
10	HRP	20	20	20	20
11	HTY	20	20	20	20
12	IN	20	20	20	20
13	KAS	20	20	20	20
14	MAR	20	20	20	20
15	MARi	20	40	20	20
16	MF	20	20	20	20

17	MKN	40	60	20	80
18	MNZ	20	20	20	20
19	MR	20	20	20	20
20	MRA	20	20	20	20
21	NS	20	20	20	20
22	Q	20	20	20	60
23	QNAA	40	40	40	60
24	RPR	20	20	20	20
25	SIZ	20	20	20	40
26	ZA	20	20	20	40

Table 5 Students' Speaking Percentage Score

No	Students Name	Pre-Test	Post-Test	Difference
1	ACA	20	20	0
2	CM	20	20	0
3	DA	20	20	0
4	FW	20	20	0
5	HRP	20	20	0
6	HTY	20	20	0
7	IN	20	20	0
8	KAS	20	20	0
9	MAR	20	20	0
10	MF	20	20	0
11	MNZ	20	20	0
12	MR	20	20	0
13	MRA	20	20	0
14	NS	20	20	0
15	RPR	20	20	0
16	DDI	40	50	10
17	HF	20	30	10
18	MARi	20	30	10
19	QNAA	40	50	10
20	SIZ	20	30	10
21	ZA	20	30	10
22	Q	20	40	20
23	FA	20	50	30
24	DAn	40	80	40
25	MKZ	30	70	40
26	AAZ	20	80	60

Normality Test

The normality test was conducted using the Shapiro-Wilk test because the sample size was fewer than 50 students. The normality test was applied to the difference score between students' pre-test and post-test score. The researcher calculated the Shapiro-Wilk test using Microsoft Excel add-ins such as Real Statistics, which allow direct calculation of the Shapiro-Wilk test. The result of Shapiro-Wilk calculation is presented in Table 6.

Table 6 Shapiro-Wilk Test Result

Shapiro-Wilk Test	
W-statistic	0.680179
p-value	0.00000339
Alpha (α)	0.05
normal	no

Mean

The mean score represents the average of students in each speaking aspect. The comparison between pre-test and post-test mean scores is presented in Table 7.

Table 7. The Mean Score

Component	Test	Mean	Gain
Grammar	Pre-test	23.08	6.15
	Post-test	29.23	
Pronunciation	Pre-test	22.31	13.08

	Post-test	35.38	
Speaking	Pre-test	22.69	9.62
	Post-test	32.31	

Standard deviation

Standard deviation describes the variability or dispersion of students' scores from the mean score. The results of the standard deviation calculation are presented in Table 8.

Table 8. Standard Deviation Result

Component	Test	Standard Deviation
Grammar	Pre-test	7.36
	Post-test	18.09
Pronunciation	Pre-test	6.52
	Post-test	22.13
Speaking	Pre-test	6.67
	Post-test	19.25

The higher standard deviation in the post-test indicates that students' scores became more varied after the treatment. This means that although the overall score improved, students demonstrated different levels of progress. Some students experienced substantial improvement, while others showed moderate development.

Frequency Distribution

The improvement of speaking skills was further analysed by examining the frequency distribution of grammar and pronunciation components produced by students during the pre-test and post-test. Since numerical scores were not assigned to each sub-component of grammar and pronunciation, the analysis focused on the frequency of correct language production across all students. The percentage was calculated based on the total opportunities for correct production to represent overall classroom performance. The frequency distribution of grammar and pronunciation components is presented in Table 9.

Table 9. Frequency Distribution

Aspect	Component	Frequency		Percentage		Increase
		Pre-Test	Post-Test	Pre-Test	Post-Test	
Grammar	Regular Verb	2	5	0.96%	2.40%	1.44%
	Irregular Verb	7	28	3.37%	13.46%	10.09%
Pronunciation	-ed Ending	5	7	1.20%	1.68%	0.48%
	Final Consonant	21	80	5.05%	19.23%	14.18%
	Th sounds	16	28	3.85%	6.73%	2.88%

Overall, the findings indicate that students improved in both grammar and pronunciation, with the greatest development found in irregular verb usage and final consonant pronunciation.

Does the Use of Wordwall Games Have a Significant Effect on Teaching Spoken Recount Text?

Hypotheses Testing

Hypothesis testing was conducted to determine whether the implementation of Wordwall games has an effect or not. The hypotheses of this research were formulated as follow. Null hypothesis (H0): The use of Wordwall games does not have a significant effect on the students' grammar mastery and pronunciation accuracy. Alternative Hypothesis (Ha): The use of Wordwall games has a significant effect on the students' grammar mastery and pronunciation accuracy. Since the normality test indicated that the data were not normally distributed, the hypothesis was tested using the Wilcoxon Signed Rank Test. The results

showed that the obtained absolute Z value was 2.93, which higher than the critical value 1.96 at the 0.05 level of significance. Therefore, the null hypothesis was rejected, indicating the use of Wordwall games has a significant effect on the students' grammar mastery and pronunciation accuracy.

What is The Effect Size of The Use of Wordwall Games on Teaching Spoken Recount Text?

Effect Size

After the null hypothesis was rejected using the Wilcoxon Signed Rank Test, the researcher calculated the effect size to determine the magnitude of the treatment effect. Effect size is required to find out how strong the effect of the treatment. From the Wilcoxon Signed Rank Test result, the researcher got Z score= -2.93 and the number of pair data used after excluded zero difference (N)= 11. The effect size is 0.88. Based on the interpretation proposed by Jacob Cohen, the obtained value (ES=0.88) indicates a large effect size.

The findings are consistent with previous studies showing that Wordwall and gamified learning can support English language development. The improvement in students' grammar mastery, particularly in the use of regular and irregular verbs, supports Maslahat et al. (2024), who found that Wordwall improved students' past tense accuracy. Similarly, Umairoh & Agustina (2023) reported that Wordwall increased students' participation in speaking activities. The present study extends these findings by showing that Wordwall can support the application of grammatical knowledge in spoken recount text, rather than only improving grammatical knowledge or participation.

The improvement in pronunciation accuracy also supports Makharashvili (2025), who found positive effects of Wordwall on pronunciation performance. In the present study, final consonants showed the greatest improvement (14.18%), suggesting that repeated oral practice through Wordwall activities may help students produce more intelligible speech. This finding is also in line with Febrianti & Taufiq (2025), who reported that gamification can increase students' motivation and speaking participation, thereby providing greater opportunities for oral practice.

Despite these similarities, the findings should be interpreted cautiously because this research employed a pre-experimental design without a control group. Factors such as familiarity with recount text, repeated testing, and natural learning progression may have contributed to the improvement. Nevertheless, the large effect size indicates that the change was educationally meaningful and suggests that Wordwall likely played an important role in supporting students' grammar and pronunciation development. Overall, the findings strengthen previous evidence that Wordwall can be an effective supplementary medium for engaging students in repeated and meaningful speaking practice.

CONCLUSIONS

This research concludes that the use of Wordwall games was associated with improved students' speaking performance in spoken recount text, particularly in grammar mastery and pronunciation accuracy. The improvement suggests that Wordwall can provide useful opportunities for students to practice grammatical forms and pronunciation through interactive speaking activities. However, the findings should be interpreted within the limitations of the pre-experimental design, small and specific sample, and absence of a control group. Therefore, the results cannot be generalized broadly or attributed exclusively to Wordwall. Future research should involve larger samples, students from different educational levels, and experimental designs with control groups to provide stronger evidence of the effectiveness of Wordwall in developing speaking skills.

REFERENCES

Alicia, D. (2022). Linguistics and extra linguistics used in grammar for teaching English. *Interdisciplinary Social Studies*, *1*(4), 361–365. https://doi.org/10.55324/iss.v1i4.76

Apuke, O. D. (2017). Quantitative research methods: A synopsis approach. Arabian Journal *of*

Business and Management Review, 6(10), 40–47 https://doi.org/10.12816/0040336

Brown, H. D. (2004). Language a*ssessment: Principles and classroom practices. Pearson Education* https://doi.org/10.1017/cbo9781139524834.005

Chandra, S. I. L., Dollah, S., Sakkir, G., & Rosalia, H. (2024). An analysis of students' problems in writing recount text. *ARRUS Journal of Social Sciences and Humanities*, *4*(3), 365–372. https://doi.org/10.35877/soshum2609

Cohen, J. (1988). Statist*ical Power Analysis for the Behavioral Sciences (2nd ed.). Lawrence Erlbau*m Associates https://doi.org/10.1017/s0140525x00053395

Creswell, J. W., Creswell, J. D. (2018). Research design: Qualitative, quantitative, and mixed methods approaches. Sage, 5 https://doi.org/10.1177/1558689817751775

Febrianti, D. T., & Taufiq, W. (2025). The Wordwall-based gamification in teaching English vocabulary. Jurnal Metaedukasi, 7(1), *31–40* https://doi.org/10.21070/ups.8863

Hughes, A. (2003). Testing fo*r Language Teachers (2nd ed.). Cambridge Uni*versity Press https://doi.org/10.5040/9781350933958.ch-014

Kenworthy, J. (1988). Teaching En*glish pronunciation. Longman* https://doi.org/10.2307/328261

Khairunisa, Y. (2021). Utilization of the Maze Chase Wordwall online gamification feature as a digital learning medium for statistics and probability subject. *MEDIASI Jurnal Kajian Dan Terapan Media, Bahasa, Komunikasi*, *2*(1), 41–47. https://doi.org/10.46961/mediasi.v2i1.254

Koo, T. K., & Li, M. Y. (2016). A guideline of selecting and reporting intraclass correlation coefficients for reliability research. *Journal of Chiropractic Medicine*, *15*(2), 155–163. https://doi.org/10.1016/J.JCM.2016.02.012

Makharashvili, M. (2025). The effectiveness of Wordwall in improving pronunciation, stress placement, and intonation for B2-level English psychology students: An experimental case study at a Georgian university. *European Scientific Journal, ESJ*, *21*(11), 35. https://doi.org/10.19044/esj.2025.v21n11p35

Maslahat, S., Alawiyah, A., & Sugara, R. D. H. (2024). The effectiveness of Wordwall game-based learning media on student learning outcomes of simple past tenses. *JEdu: Journal of English Education*, *4*(2), 104–113. https://doi.org/10.30998/jedu.v4i2.11198

Shrout, P. E., & Fleiss, J. L. (1979). Intraclass correlations: Uses in assessing rater reliability. *Psychological Bulletin*, *86*(2), 420–428. https://doi.org/10.1037/0033-2909.86.2.420

Sugiyono. (2019). Metode penel*itian pendidikan. Alfabeta* https://doi.org/10.36667/jppi.v7i2.363

Sukmadinata, N. S. (2017). Metode Penelit*ian Pendidikan. PT Remaja Rosdakarya* https://doi.org/10.17977/jptpp.v2i8.9882

Umairoh, N. A., & Agustina, R. K. (2023). The effectiveness of Wordwall game in teaching speaking for class eighth. *Jurnal Ilmiah Wahana Pendidikan*, *2023*(15), 738–744. https://doi.org/10.5281/zenodo.8264675

Wang, W., Rezaei, Y. M., & Izadpanah, S. (2024). Speaking accuracy and fluency among EFL learners: The role of creative thinking, emotional intelligence, and academic enthusiasm. H*eliyon, 10(*18). https://doi.org/10.1016/j.heliyon.2024.e37620