



## THE EFFECTIVENESS OF CROSSWORDS: LEARN ENGLISH WORDS APPLICATION ON VOCABULARY MASTERY FOR SEVENTH GRADE STUDENTS

Muhammad Nurcholis<sup>1</sup>, Irra Wahidiyati<sup>2</sup>

<sup>1</sup>State Islamic University Prof. K.H. Saifuddin Zuhri, Purwokerto, Central Java, Indonesia

<sup>2</sup>State Islamic University Prof. K.H. Saifuddin Zuhri, Purwokerto, Central Java, Indonesia

Correspondent Email: [224110404113@mhs.uinsaizu.ac.id](mailto:224110404113@mhs.uinsaizu.ac.id) Author's Email: [irrazkayra@uinsaizu.ac.id](mailto:irrazkayra@uinsaizu.ac.id)

**ABSTRACT.** This study evaluates the effectiveness of the *Crosswords: Learn English Words application* in improving the vocabulary proficiency of 7th-grade students at SMP N 1 Kedungbanteng. The study was motivated by students' difficulties in acquiring vocabulary and the need for interactive digital learning media. The method used was a quasi-experimental pretest/posttest non-equivalent control-group design. The sample consisted of two groups, each comprising 32 students: class VII B (experimental) and VII F (control), selected through cluster random sampling. Data were analyzed using the Mann-Whitney test based on N-gain scores. The results showed a statistically significant difference (Asymp (Sig) = 0.013), thus accepting the hypothesis. The average score of the experimental class increased sharply from 72.1 to 88.4 with an average N-gain of 65%. In contrast, the control group increased only from 74.1 to 80.3, with an average N-gain of 32%. Based on the N-gain classification, the use of this application in the experimental class was categorized as "Quite Effective" for improving students' mastery of English vocabulary. The significant difference in learning outcomes between the experimental and control classes confirms that integrating game-based digital media is an effective and relevant solution for supporting vocabulary learning at the junior high school level.

**Keywords:** *Vocabulary Mastery, Crosswords, Learn English Words Application, Junior High School*

**ABSTRAK.** Penelitian ini mengevaluasi efektivitas aplikasi Crosswords: Learn English Words dalam meningkatkan kemahiran kosakata siswa kelas VII di SMP N 1 Kedungbanteng. Penelitian ini dilatarbelakangi oleh kesulitan siswa dalam menguasai kosakata serta kebutuhan akan media pembelajaran digital yang interaktif. Metode yang digunakan adalah desain quasi-eksperimental pretest/posttest dengan kelompok kontrol yang tidak setara. Sampel terdiri dari dua kelompok, masing-masing berjumlah 32 siswa: kelas VII B (eksperimen) dan VII F (kontrol), yang dipilih melalui pengambilan sampel acak berkluster. Data dianalisis menggunakan uji Mann-Whitney berdasarkan skor N-gain. Hasil menunjukkan perbedaan yang signifikan secara statistik (Asymp (Sig) = 0,013), sehingga hipotesis diterima. Skor rata-rata kelas eksperimen meningkat tajam dari 72,1 menjadi 88,4 dengan N-gain rata-rata 65%. Sebaliknya, kelompok kontrol hanya meningkat dari 74,1 menjadi 80,3, dengan N-gain rata-rata 32%. Berdasarkan klasifikasi N-gain, penggunaan aplikasi ini di kelas eksperimen dikategorikan sebagai "Cukup Efektif" dalam meningkatkan penguasaan kosakata bahasa Inggris siswa. Perbedaan yang signifikan dalam hasil belajar antara kelas eksperimen dan kelompok kontrol menegaskan bahwa integrasi media digital berbasis permainan merupakan solusi yang efektif dan relevan untuk mendukung pembelajaran kosakata di tingkat sekolah menengah pertama.

**Kata Kunci:** Penguasaan Kosakata; Aplikasi Teka-teki Silang untuk Belajar Kata-kata Bahasa Inggris, Sekolah Menengah Pertama

Article History

Submission: 24-04-2026    Revised: 27-04-2026    Accepted: 29-04-2026    Published: 29-04-2026

### INTRODUCTION

Mastering English vocabulary remains a real challenge for junior high school students in Indonesia. In their daily lives at school, students often struggle to understand English texts, express ideas verbally, and write simple sentences. A limited vocabulary causes students to lack confidence in communicating and to be passive in learning activities. This condition also affects low student engagement in the learning process, leading English learning to be often perceived as a difficult and boring activity (Tenagah, 2023). This problem is exacerbated by

vocabulary learning practices that are still dominated by conventional methods, such as memorization and textbook-based exercises, which do not provide meaningful learning experiences for students. This approach often fails to maintain long-term vocabulary retention and does not stimulate student motivation to learn (Alhazmi, 2024). In addition, limited classroom time and the lack of interactive digital media further exacerbate vocabulary mastery at the junior high school level, especially in rural public schools (Purnama, 2023).

Based on these issues, a relevant research question arises: the need for alternative learning strategies that effectively, attractively, and in line with the characteristics of the digital generation improve students' vocabulary acquisition. The integration of game-based digital media is a potential solution aligned with the Merdeka Belajar (Freedom of Learning) policy, which encourages the use of technology and student-centered learning (Murtopo et al., 2023). However, not all forms of digital media have been proven effective in improving vocabulary mastery, so empirical studies are needed to test the effectiveness of specific media in specific learning contexts. Previous studies have shown that digital word games, especially crossword puzzles, contribute positively to students' vocabulary mastery and learning engagement. Puspitasari et al. (2022) found that the use of game-based learning applications significantly improved vocabulary retention and student participation in learning compared to textbook-based learning. Similar findings were reported by Umbola et al. (2022), who showed that the Wordscapes application improved students' vocabulary mastery and enthusiasm for learning. Additionally, Rizqi & Usman (2021) proved that crossword puzzles are effective for improving junior high school students' vocabulary, while Utami et al. (2022) confirmed that crossword puzzles help students remember vocabulary more easily and have a positive impact on learning outcomes.

From a cognitive perspective, the use of crossword puzzles encourages deeper language processing because students must actively associate clues with the form and meaning of words. Madaniyah et al. (2024) state that puzzle-based activities improve short- and long-term memory through intensive cognitive engagement. This aligns with the findings of Huizenga et al. (2019), who confirm that digital educational games increase motivation and language learning outcomes. The theoretical framework of this study is based on the interactive digital media-based learning approach and cognitive processing theory in language learning. Interactive digital learning media enable students to be actively involved, receive immediate feedback, and build contextual meaning associations (Reiser & Dempsey, 2012). Mayer (2014) emphasizes that integrating visual elements, text, and interactivity in digital media can increase

learning effectiveness through more optimal information processing. In the context of vocabulary learning, digital crossword puzzles encourage students to actively engage in recognizing word forms, understanding meanings, and relating them to contexts of use.

Based on empirical studies and theoretical frameworks, the use of the Crosswords: Learn English Words application is considered relevant for further research as a vocabulary-learning medium for seventh-grade students. Although there have been many studies on digital word games, those specifically testing the effectiveness of the Crosswords: Learn English Words application among seventh-grade junior high school students are still limited. Therefore, this research is important for filling the research gap and providing empirical contributions to the development of digital-based vocabulary-learning media.

## **METHOD**

This study employed a quantitative approach using a quasi-experimental design in the form of a "pretest and posttest control group design" conducted on seventh-grade students at SMP Negeri 1 Kedungbanteng, Banyumas, with a sample of two classes selected through a "cluster random sampling" technique by lottery. The sampling procedure is carried out by writing all class VII from A-G on rolled paper, then the English teacher of SMP N 1 Kedungbanteng draws them. From the results of the draw, two classes were produced, namely; 7th Grade Class B as the experimental group and 7th Grade Class F as the control group, each consisting of 32 students. According to Creswell (2019), quantitative research is a method that aims to test theories by measuring relationships between variables. Creswell (2019) also stated that quantitative research is conducted with numbers, and the data are in the form of values, numbers, or frequencies. Furthermore, researchers also use quasi-experimental designs because they are not pure experiments. There are still external variables that influence the dependent variable. The independent variable was the use of the digital learning medium "Crossword: Learn English Words Application," and the dependent variable was students' vocabulary mastery. Data collection was conducted through a 40-item multiple-choice written test administered as a pretest and posttest. The pretest was administered to both groups before the treatment, while the posttest was administered after both groups received the treatment over four sessions. In the first session, students learned vocabulary related to self-introduction, family members, and colors. The second session covered vocabulary related to months, days, and occupations. In the third session, learning was conducted in groups using crossword

puzzles related to animals, fruits, and food. In the fourth session, students learned vocabulary related to body parts and proceeded with text analysis. Meanwhile, the control group received instruction using the same materials as the experimental group; however, the experimental group received instruction using the “Crosswords: Learn English Words” app, while the control group received instruction without using the app (conventional method). The data were analyzed using the Mann-Whitney test because they were not normally distributed, as well as N-gain analysis to determine the level of effectiveness in improving students' vocabulary mastery. The research hypothesis in this study focuses on the effect of the Crossword: Learn English Words application on students' vocabulary mastery. Two types of hypotheses are formulated:

1. H<sub>0</sub> (null hypothesis) :There is no significant effect of the use of *Crossword: Learn English Words* on vocabulary mastery in seventh grade students at SMP N 1 Kedungbanteng.
2. H<sub>a</sub> (alternative hypothesis): There is significant effect of the use of *Crossword: Learn English Words* on vocabulary mastery in seventh grade students at SMP N 1 Kedungbanteng.

### ***Validity Instrument Pretest and Posttest***

The instrument used in this study was a multiple-choice test consisting of a pretest and a posttest. To ensure the instrument's quality, a validity test was conducted before it was used in the study. Validity is an important aspect of quantitative research because it indicates the extent to which the instrument is capable of measuring what it is intended to measure (Ayunita, 2018). Before statistical analysis, the instrument was first reviewed by two experts: a lecturer from UIN SAIZU Purwokerto and an English teacher at SMP N 1 Kedungbanteng. Based on their recommendations, several revisions were made, particularly regarding the wording and clarity of the questions. After revision, the instrument was pilot-tested with 32 eighth-grade students who had studied the relevant vocabulary material.

Validity testing was conducted using the Pearson product-moment correlation coefficient. The calculated r value was then compared to the table r value at a significance level of 0.05 with 32 respondents, which was 0.349. An item was deemed valid if the calculated r was greater than the table r (calculated r > 0.349), and deemed invalid if the calculated r was less than the table r. Then, a validity test was also conducted on the posttest using the same procedure. The results showed that 41 of 60 items were valid and 19 were invalid. The invalid items were excluded, leaving only the valid items for the posttest. Overall, the majority of the questions met the

validity criteria. This indicates that the instrument used is sufficiently effective for measuring students' vocabulary mastery. By eliminating the invalid questions, it is hoped that the research results will be more accurate and reliable.

**Reliability Instrument**

Test reliability measures the consistency of measurement results when repeated under the same conditions. The goal is to ensure that the instrument is reliable and produces valid data (Ayunita, 2018). If the Cronbach's Alpha value is  $< 0.60$ , the item is considered unreliable. If the Cronbach's Alpha value is  $> 0.60$ , the item is considered reliable.

<b>Reliability Statistics</b>	
Cronbach's Alpha	N of Items
.935	40

**Table 1.** Reliability Instrument Pretest

Based on the reliability instrument pretest statistics table above, the Cronbach's Alpha value is 0.935. It is known that Cronbach's Alpha is  $> 0.60$ , so the test's 40 questions are reliable. For the reliability instrument posttest:

<b>Reliability Statistics</b>	
Cronbach's Alpha	N of Items
.923	40

**Table 2.** Reliability Instrument Posttest

Based on the reliability posttest statistics table, it is known that the Cronbach's Alpha value is 0.923. It is known that the Cronbach's Alpha value is  $> 0.60$ , so it can be concluded that the 40 questions on the test are reliable.

**RESULTS**

This study analyzed students' vocabulary mastery based on pretest and posttest scores in both experimental and control classes. The results indicate a difference in learning outcomes between the two groups. In the experimental class, which consisted of 32 students, the pretest mean was 72.56, with a high of 100 and a low of 20. After treatment with the Crosswords:

Learn English Words application, the mean posttest score increased to 88.46, with the lowest score rising to 53. The mean N-Gain score was 0.65, indicating a moderate to great improvement in students' vocabulary mastery.

In contrast, the control class, also consisting of 32 students, obtained a mean pretest score of 74.31, with the highest score of 100 and the lowest score of 35. After conventional learning without application, the mean posttest score increased to 80.34, with a low of 38. The mean N-Gain score was 0.32, which falls into the low to moderate category. A comparison between the two classes shows that the experimental class achieved better results than the control class. The experimental class's average posttest score (88.4) was higher than the control class's (80.3). This indicates that using the Crosswords: Learn English Words app had a positive impact on students' vocabulary mastery. The learning process in the experimental class spanned four sessions. In the first session, students learned vocabulary related to self-introduction, family members, and colors. The second session covered vocabulary related to months, days, and occupations. In the third session, learning was conducted in groups using crossword puzzles related to animals, fruits, and food. In the fourth session, students learned vocabulary related to body parts and proceeded with text analysis. Throughout the learning process, students appeared more active and engaged due to the use of interactive media. Students not only understood the meanings of words but also practiced spelling and using the vocabulary. In contrast, learning in the control class tended to be less interactive because it did not utilize the Crosswords: Learn English Words App. Overall, the research results indicate that the *Crosswords: Learn English Words* app is effective in improving students' vocabulary mastery compared to conventional teaching methods.

### Normality Test

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pretest_Experimen	,178	32	,011	,920	32	,021
Posttest_experimen	,179	32	,011	,846	32	<,001
Pretest_Control	,148	32	,071	,966	32	,389
Posttest_Control	,135	32	,145	,941	32	,079

a. Lilliefors Significance Correction

**Table 3.** Normality Test

The normality test was conducted using the Shapiro–Wilk test because the sample size was less than 100. The test results showed that the significance value (Sig.) in the pretest and posttest data of the experimental class and the posttest data of the control class were below 0.05. There is only one data point that is normally distributed: the pretest control, with a p-value (Sig) of  $0.389 > 0.05$ . Since the data were not normally distributed, the hypothesis testing was continued using nonparametric statistical tests.

### ***Mann-Whitney Test***

	Hasil belajar pretest
Mann-Whitney U	507,500
Wilcoxon W	1035,500
Z	-,061
Asymp. Sig. (2-tailed)	,952

a. Grouping Variable: Kelas

**Table 4.** Mann-Whitney Pretest

	Hasil belajar Crossword app
Mann-Whitney U	328,500
Wilcoxon W	856,500
Z	-2,476
Asymp. Sig. (2-tailed)	,013

a. Grouping Variable: Kelas

**Table 5.** Mann-Whitney Posttest

The Mann–Whitney test was used to assess differences in learning outcomes between the experimental and control classes. The results of the Mann–Whitney test on the pretest data showed an Asymp. Sig. (two-tailed) value of 0.952, which is greater than 0.05. The Mann–Whitney test results on the posttest data showed an Asymp. Sig. (2-tailed) value of 0.013, which is less than 0.05. This indicates a significant difference in learning outcomes between the experimental and control classes after the treatment. Next is the N-gain analysis, which is conducted to determine the level of learning effectiveness. Based on the calculation results, the average score for the experimental class was 0.65. If we convert this to a percentage, it is 65%, which falls into the fairly effective category.

Meanwhile, the average N-gain value for the control class was 0.32. If we convert this to a percentage, it is 32%, which falls into the ineffective category. This difference shows that using the Crosswords: Learn English Words application is more effective at improving students' vocabulary mastery than conventional learning.

## DISCUSSION

The results of this study indicate that using the Crosswords: Learn English Words application significantly improves vocabulary mastery among seventh-grade students at SMP N 1 Kedungbanteng. This finding is evident from the differences in learning outcomes between the experimental and control classes, as reflected in posttest average scores, Mann–Whitney test results, and N-gain score analysis. The experimental class, which received treatment through the crossword application, showed a greater increase in vocabulary skills than the control class, which used conventional learning methods. Quantitatively, the average posttest score for the experimental class was 88.46, higher than that of the control class, which was only 80.34. This difference was confirmed by the Mann–Whitney test results, which showed an Asymp. Sig. (2-tailed) value of 0.013 ( $< 0.05$ ), thus accepting the alternative hypothesis ( $H_a$ ), rejecting the null hypothesis ( $H_0$ ). This indicates a significant effect of using the Crosswords: Learn English Words application on students' vocabulary mastery. These findings confirm that integrating digital game-based learning media can yield more optimal learning outcomes than methods without interactive media support.

Further analysis using the N-gain score shows that the experimental class achieved a score of 65%, placing it in the "quite effective" category, while the control class achieved a score of 32%, placing it in the "ineffective" category (Hake, 2002). This difference in effectiveness indicates that vocabulary learning supported by digital crossword media not only significantly improves learning outcomes but also enhances the quality of the learning process itself. In other words, the improvement in the experimental class was not merely the result of repeating the material but was due to the different learning approaches used. From the perspective of vocabulary learning theory, these findings align with Nation's (2013) view that vocabulary mastery requires repetition, meaning-focused learning, and the recycling of words across contexts. The Crosswords: Learn English Words app supports these three aspects through crossword puzzle activities that require students to recall, guess, and verify vocabulary using specific clues. This process allows students to engage in retrieval practice, which has been proven effective in strengthening long-term memory (Pooja, 2020). The results of this study also support the learning media theory proposed by Heinich (2002), which states that learning media serve as channels for conveying messages that can increase students' attention, understanding, and engagement. Interactive and visual media, such as crossword applications, can create a more meaningful learning experience because students are not only passively receiving information but are actively involved in the learning process. In this study, this active

involvement was reflected in increased student participation during the learning process and higher learning outcomes in the experimental class.

Compared with previous studies, these findings reinforce those of Madaniyah et al. (2024), which found that language-based educational games, including crossword puzzles, are effective in improving vocabulary mastery because they combine elements of learning and play. Similarly, Wahidiyati et al. (2023) emphasize that active recall-based learning activities can significantly improve vocabulary retention. This study supports these findings while expanding on them with empirical evidence among junior high school students in Indonesia. Conversely, the low increase in vocabulary in the control class shows the limitations of conventional learning, which tends to be teacher-centered and lacks interaction. This finding aligns with the view of Hiebert & Kamil (2005), who state that monotonous vocabulary instruction that does not actively involve students often results in limited improvement. Ikhsan et al. (2023) also emphasize that the absence of engaging learning media can reduce student motivation, ultimately leading to lower learning outcomes. Thus, the results of this study implicitly rule out the assumption that vocabulary learning without interactive media is sufficient, especially in the context of English language learning at the junior high school level. The main contribution of this study lies in strengthening the argument that digital game-based learning media, particularly crossword applications, not only serve as learning aids but also as pedagogical strategies that increase motivation, engagement, and the effectiveness of vocabulary learning. This research provides a new understanding that vocabulary learning can be packaged more communicatively and enjoyably without reducing the depth of the material. Thus, the *Crosswords: Learn English Words* application can be positioned as an innovative alternative for vocabulary learning, aligned with the characteristics of students in the digital age. Overall, this discussion confirms that the research results not only support previous theories and findings but also provide empirical evidence for the urgency of using interactive learning media in vocabulary instruction. The integration of crossword applications in English language learning has been proven to create a more effective, meaningful learning process that is oriented towards the continuous improvement of students' abilities.

## CONCLUSION

This study provides empirical evidence that implementing the *Crosswords: Learn English Words* application significantly enhances students' vocabulary mastery. The statistical findings

indicate a meaningful improvement in learners' posttest performance, suggesting that game-based digital media can serve as an effective pedagogical tool in vocabulary instruction. The results underscore the pedagogical relevance of integrating interactive and technology-enhanced learning environments into English language teaching. The use of digital crossword applications not only facilitates vocabulary retention but also fosters learner engagement, motivation, and autonomy. These findings support the growing body of literature advocating the incorporation of educational technology to optimize language-learning outcomes.

From a broader perspective, this study highlights the role of digital learning tools in addressing the evolving demands of 21st-century education, particularly in promoting communicative competence and learner-centered approaches. The integration of such applications aligns with the needs of digitally oriented learners and contributes to more dynamic and effective instructional practices. However, this study is not without limitations. The relatively small sample size and short duration of the intervention may limit the generalizability of the findings. Therefore, future research is recommended to involve larger and more diverse samples, employ longitudinal designs, and investigate the effectiveness of similar or combined digital learning tools across different language skills, including speaking, reading, and writing, to provide a more comprehensive understanding of their pedagogical impact.

## REFERENCES

- Alhazmi, K. (2024). The Effect of Multimedia on Vocabulary Learning and Retention. *WorldJournal of English Language*, 14(6), 390–399. <https://doi.org/10.5430/wjel.v14n6p390>
- Ayunita, D. (2018). Modul Uji Validitas dan Reliabilitas. *Statistika Terapan*, October, 1. [https://www.researchgate.net/publication/328600462\\_Modul\\_Uji\\_Validitas\\_dan\\_Reliabilitas](https://www.researchgate.net/publication/328600462_Modul_Uji_Validitas_dan_Reliabilitas)
- Creswell, J. (2019). *Research Design Qualitative, Quantita ... hn W. Creswell J. David Creswell.pdf*.
- Hake, R. R. (2002). Relationship of individual student normalized learning gains in mechanics with gender, high-school physics, and pretest scores on Mathematics and Spatial Visualization. *Physics Education Research Conference*, 8(August 2002), 1–14. [https://scholar.google.com/citations?view\\_op=view\\_citation&hl=en&user=10EI2q8AAAJ&citation\\_for\\_view=10EI2q8AAAJ:IjCSPb-OG4C](https://scholar.google.com/citations?view_op=view_citation&hl=en&user=10EI2q8AAAJ&citation_for_view=10EI2q8AAAJ:IjCSPb-OG4C)
- Hiebert & Kamil. (2005). *Teaching and Learning Vocabulary: Bringing Research to Practice*. 42.
- Huizenga, J., Admiraal, W., Dam, G. ten, & Voogt, J. (2019). Mobile game-based learning in secondary education: Students' immersion, game activities, team performance and learning outcomes. *Computers in Human Behavior*, 99(April), 137–143. <https://doi.org/10.1016/j.chb.2019.05.020>
- Ikhsan, M. N., Zebua, Y. M., Tarigan, F. N., Pembinaan, U., Indonesia, M., & Serikat, A.

- (2023). *Jurnal dunia pendidikan*. 3, 119–124.
- Pooja, K. (2020). *How to use retrieval practice to improve learning*. 11. RetrievalPractice.org. <https://remix.berklee.edu/faculty-works/13/>
- Madaniyah, N. A., Anita, A., & Oktaviana, F. (2024). the Utilizing of Digital Crossword Puzzle Game To Enhance Students' Vocabulary Mastery. *Lingua*, 20(2), 275–287. <https://doi.org/10.34005/lingua.v20i2.4255>
- Mayer, R. E. (2014). *The Cambridge Handbook of Multimedia Learning* (2nd ed).
- Murtopo, A., Rahmaisyah, R., & Jusmaini, J. (2023). Peran Teknologi Pendidikan dalam Perspektif Merdeka Belajar di Era Digital 4.0. *Al-Afkar : Manajemen Pendidikan Islam*, 11(02), 96–110. <https://doi.org/10.32520/al-afkar.v11i02.626>
- Nation, I. S. . (2013). *Learning vocabulary in another language (2nd ed.)*. Cambridge University Press (2 nd).
- Purnama, Y. (2023). *Machine Translation in Enhancing English Vocabulary Mastery Machine Translation in Enhancing English Vocabulary*. April, 1429–1435. <https://doi.org/10.17605/OSF.IO/3Z47T>
- Puspitasari, H., Maharani, R. F., Setyawan, W. H., & Primasari, Y. (2022). Android-Based Mobile Application for Vocabulary Learning. *Jurnal Pendidikan Dan Pengajaran*, 55(3), 469–479. <https://doi.org/10.23887/jpp.v55i3.40661>
- R, H. (2002). *Instructional Media and Technologies for learning* (7th ed.).
- Reiser, R. A., & Dempsey, J. V. (2012). *Trends and Issues in Instructional Design and Technology* (3rd ed). Pearson.
- Rizqi, F., & Usman, S. (2021). Effectiveness of Using Crossword Puzzle Game To Increase Students' Vocabulary. *E-Journal of ELTS (English Language Teaching Society)*, 9(1), 92–100. <https://doi.org/10.22487/elts.v9i1.1842>
- Tenagah, J. (2023). <http://journal.upgris.ac.id/index.php/ijes> ANALISIS KESULITAN PENGUASAAN KOSAKATA PADA MATA PELAJARAN BAHASA INGGRIS KELAS IV SD ISLAM SALAFIYAH MARGOMULYO. 3(November), 130–138.
- Umbola, H., Maru, G., & Hampp, P. (2022). Improving Students' Vocabulary By Using Word Game Application. *SoCul:International Journal of Research in Social Cultural Issues*, 2(5), 668–675.
- Utami, E., Marita, Y., & Martina, W. (2022). An Analysis of Crossword Puzzle to English Vocabulary Mastery. *Edu-Ling: Journal of English Education and Linguistics*, 5(2), 162. <https://doi.org/10.32663/edu-ling.v5i2.2981>
- Wahidiyati, I., Ma'rufah, D. W., & Winanti. (2023). Teaching English for Intensive Program: A Need Analysis. *Metathesis: Journal of English Language, Literature, and Teaching*, 7(1), 60–73. <https://doi.org/10.31002/metathesis.v7i1.324>