



The Effect of Gamma AI-Based Learning Media on Indonesian Language Learning Outcomes of Eighth-Grade Students at UPT SMP Negeri 3 Pitu Riase

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Received	Revised	Accepted	Published
[10-06-2026]	[14-07-2026]	[13-08-2026]	[28-08-2026]

Abstract: This study investigated the effect of Gamma AI-based learning media on the Indonesian language learning outcomes of eighth-grade students at UPT SMP Negeri 3 Pitu Riase, Sidenreng Rappang Regency. The research used a quantitative quasi-experimental approach involving 55 students: 26 students in class VIII.A as the control group and 29 students in class VIII.B as the experimental group. Although the study was described as a posttest-only control group design, the reported dataset contained both pretest and posttest scores for the two groups. Learning outcomes were measured using a 20-item multiple-choice test, supported by observation and documentation. Descriptive statistics and a Wilcoxon Signed Rank Test were used because not all score distributions met the normality assumption. The control-group mean increased from 35.38 to 66.35, while the experimental-group mean increased from 56.55 to 84.14. All students in both groups showed positive score changes, and the Wilcoxon analysis indicated significant pretest-posttest differences. The experimental group also achieved a substantially higher posttest mean than the control group. These findings support the use of Gamma AI as an innovative learning medium for Indonesian language instruction in the investigated school context.

Keywords: *Gamma AI, artificial intelligence, learning media, learning outcomes, Indonesian language, junior high school.*

Abstrak: Penelitian ini mengkaji pengaruh media pembelajaran berbasis Gamma AI terhadap hasil belajar Bahasa Indonesia siswa kelas VIII UPT SMP Negeri 3 Pitu Riase, Kabupaten Sidenreng Rappang. Penelitian menggunakan pendekatan kuantitatif dengan metode kuasi eksperimen yang melibatkan 55 siswa, terdiri atas 26 siswa kelas VIII.A sebagai kelompok kontrol dan 29 siswa kelas VIII.B sebagai kelompok eksperimen. Meskipun penelitian ini dideskripsikan menggunakan desain *posttest-only control group*, data yang dilaporkan mencakup nilai *pretest* dan *posttest* pada kedua kelompok. Hasil belajar diukur menggunakan tes pilihan ganda sebanyak 20 butir soal yang didukung dengan teknik observasi dan dokumentasi. Analisis data dilakukan menggunakan statistik deskriptif dan uji *Wilcoxon Signed Rank Test* karena tidak seluruh distribusi skor memenuhi asumsi normalitas. Nilai rata-rata kelompok kontrol meningkat dari 35,38 menjadi 66,35, sedangkan nilai rata-rata kelompok eksperimen meningkat dari 56,55 menjadi 84,14. Seluruh siswa pada kedua kelompok menunjukkan peningkatan skor, dan hasil analisis Wilcoxon menunjukkan adanya perbedaan yang signifikan antara nilai *pretest* dan *posttest*. Kelompok eksperimen juga memperoleh nilai rata-rata *posttest* yang lebih tinggi dibandingkan kelompok kontrol. Temuan ini mendukung penggunaan Gamma AI sebagai media pembelajaran inovatif dalam pembelajaran Bahasa Indonesia pada konteks sekolah yang diteliti.

Kata Kunci: *Gamma AI, kecerdasan buatan, media pembelajaran, hasil belajar, Bahasa Indonesia, sekolah menengah pertama.*

CITATION:

Taufik Hidayat Ilyas, Usman M, Syamsunir, & Abd Kahar. (2026). The Effect of Gamma AI-Based Learning Media on Indonesian Language Learning Outcomes of Eighth-Grade Students at UPT SMP Negeri 3 Pitu Riase. *Edumaspul: Jurnal Pendidikan*, 10(2), 806–811. <https://doi.org/10.33487/edumaspul.v10i2.442>

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Introduction

Educational innovation increasingly depends on the purposeful integration of digital technology into classroom practice. Learning media are not merely presentation accessories; they function as channels that can direct attention, organize information, and facilitate interaction between teachers, students, and learning content. Handayani et al. (2022) emphasized the role of instructional media in supporting effective teaching and learning, while Yandi et al. (2023) noted that learning outcomes are shaped by multiple internal and external factors. In this context, technology-based media can provide teachers with additional ways to structure learning experiences and can help students engage with material through more varied forms of representation.

The rapid development of artificial intelligence has expanded the range of tools available for educational use. AI-supported platforms can assist teachers in producing visual materials, organizing information, and preparing presentations more efficiently. Gamma AI is one such platform. It enables users to generate structured presentation content with text, visual elements, and layout support, making it potentially useful for classroom instruction. Khaeruddin (2024) discussed the use of Gamma technology in learning within the Merdeka Curriculum era, and Herawati et al. (2025) reported its relevance for strengthening teachers' competence in preparing AI-assisted instructional materials.

For Indonesian language learning, the quality of material presentation is especially important because students are expected to comprehend texts, identify information, communicate ideas, and develop language skills through meaningful exposure to examples. Conventional explanation and assignment-based instruction may become monotonous when it is not supported by sufficiently varied media. At UPT SMP Negeri 3 Pitu Riase, the preliminary observations reported in the study indicated that some students experienced difficulty understanding Indonesian language material and that classroom learning still relied on limited media. These conditions provided a practical rationale for examining a

more visually structured and technology-supported medium.

Gamma AI may address part of this instructional need because it can organize material into concise, visually coherent presentation sequences. A more systematic presentation can help students follow the progression of a lesson, focus on essential information, and connect textual explanations with visual cues. In addition, an AI-supported platform can assist teachers in preparing material more efficiently. Kholif (2025) reported positive evidence for interactive Gamma AI media in elementary-level Pancasila learning, while Ali et al. (2025) found that Gamma AI use in pantun-text instruction was associated with improved student learning outcomes. These findings suggest that the platform may also have value in Indonesian language classrooms.

Learning outcomes refer to the changes demonstrated by students after participating in learning activities. They are commonly reflected in knowledge, skills, and attitudes, although this study focused primarily on cognitive achievement measured through test scores. Dhaki (2020) described learning outcomes as an important indicator of instructional success, while Rahman (2021) emphasized the role of learning motivation in supporting achievement. Because attractive and well-organized media can influence attention and motivation, the use of Gamma AI may indirectly support better learning performance by creating a more engaging instructional environment.

Previous research provides encouraging but still context-specific evidence. Ali et al. (2025) reported a significant influence of Gamma AI in Indonesian language learning, and Riski (2025) described improved learning skills through the use of Gamma App in procedure-text writing instruction. However, the effectiveness of digital media depends on the characteristics of learners, subject matter, teacher implementation, and school conditions. Evidence from one educational setting therefore cannot automatically be generalized to another. The

present study contributes evidence from eighth-grade students at UPT SMP Negeri 3 Pitu Riase in Sidenreng Rappang Regency.

Based on this background, the study addressed two central objectives: to determine whether the use of Gamma AI-based learning media influenced Indonesian language learning outcomes and to describe students' learning outcomes before and after the implementation of the media. The study compared a control class receiving conventional instruction with an experimental class receiving instruction supported by Gamma AI. The findings are expected to provide practical information for teachers and schools considering AI-supported media as an alternative for Indonesian language instruction.

Method

The study employed a quantitative quasi-experimental approach. The research document describes the design as a posttest-only control group design, represented by an experimental group receiving Gamma AI treatment and a control group receiving conventional instruction. However, the reported results include both pretest and posttest scores for the two groups. Accordingly, the article presents the available pretest-posttest data while retaining the original quasi-experimental grouping reported in the study.

The research was conducted at UPT SMP Negeri 3 Pitu Riase, Sidenreng Rappang Regency, South Sulawesi, from June to August 2026. The population comprised all 55 eighth-grade students: 26 students in class VIII.A and 29 students in class VIII.B. The study used the entire population as the research sample. Class VIII.A served as the control group, while class VIII.B served as the experimental group. The independent variable was the use of Gamma AI as learning media, and the dependent variable was Indonesian language learning outcomes.

The experimental group received Indonesian language instruction using Gamma AI-based learning media, whereas the control group received the conventional instructional approach normally used by the teacher. The principal achievement instrument consisted of 20 multiple-choice questions. Each correct response received

one point, and scores were converted to a 0-100 scale. Observation was also used to document affective aspects such as honesty, discipline, responsibility, responsiveness, and proactivity, while documentation was used to support the classroom and research records.

The collected achievement data were analyzed using descriptive statistics, including the mean, median, standard deviation, minimum score, and maximum score. A Kolmogorov-Smirnov normality test was used to examine the score distributions. The reported significance values were .200 for one score distribution and .044, .033, and .027 for the other three distributions. Because three distributions had significance values below .05, the study concluded that the data were not entirely normally distributed.

Following the normality results, the study used the nonparametric Wilcoxon Signed Rank Test to examine pretest-posttest differences within the experimental and control groups. Statistical decisions were interpreted at the .05 significance level. The analysis reported positive ranks, mean ranks, sums of ranks, and ties for each group. The study interpreted the Wilcoxon results as evidence that learning outcomes differed significantly before and after instruction.

RESULTS AND DISCUSSION

Descriptive changes in learning outcomes

The control group consisted of 26 students. Its pretest scores ranged from 15 to 60, while the posttest scores ranged from 50 to 85. The reported mean increased from 35.38 on the pretest to 66.35 on the posttest. The median increased from 32.50 to 70.00, and the standard deviation decreased from 11.655 to 9.956. The reduction in score dispersion indicates that post-instruction performance in the control group became more homogeneous than the initial performance.

The experimental group consisted of 29 students. Its pretest scores ranged from 30 to 80, while posttest scores ranged from 70 to 100. The reported mean increased from 56.55 to 84.14, and the median increased from 60.00 to 85.00. The reported standard

deviation decreased from 14.766 on the pretest to 8.770 on the posttest. Thus, student performance in the experimental class was not only higher after instruction but also more consistently concentrated around a higher level of achievement.

A comparison of posttest performance shows a clear advantage for the experimental group in the reported descriptive statistics. The experimental-group posttest mean was 84.14, compared with 66.35 in the control group. The highest posttest score in the experimental group was 100, whereas the highest score in the control group was 85. The lowest experimental-group posttest score was 70, compared with 50 in the control group. These results indicate that students learning with Gamma AI completed the instructional period with stronger overall achievement than students in the conventional class.

Normality and Wilcoxon results

The normality analysis showed that the four score distributions did not all satisfy the normality assumption. One Kolmogorov-Smirnov significance value was .200, while the other three were .044, .033, and .027. Because three values were below .05, the study proceeded with a nonparametric analysis. This decision was consistent with the study's stated analytical procedure and led to the use of the Wilcoxon Signed Rank Test.

In the experimental group, the Wilcoxon ranks output showed 0 negative ranks, 29 positive ranks, and 0 ties. The mean rank was 15.00 and the sum of ranks was 435.00. This means that every student in the experimental class obtained a higher posttest score than pretest score. In the control group, there were also 0 negative ranks and 0 ties, with 26 positive ranks, a mean rank of 13.50, and a sum of ranks of 351.00. Thus, both groups improved after instruction, although the experimental group ended with a substantially higher level of achievement.

The study reported that the Wilcoxon test indicated a significant difference between pretest and posttest performance and therefore accepted the research hypothesis while rejecting the null hypothesis. On the basis of the original analysis, Gamma AI was interpreted as having a positive effect on Indonesian language learning outcomes.

Because the inferential procedure reported in the study tests paired pretest-posttest changes within groups rather than a direct between-group posttest difference, the strongest evidence in the available data is the combination of significant within-group improvement and the higher descriptive posttest performance of the experimental group.

Interpretation of the findings

The positive results can be interpreted in relation to the way Gamma AI structures and visualizes instructional content. Indonesian language learning frequently requires students to follow sequences of information, identify important textual elements, and connect explanations with concrete examples. A visually organized presentation can reduce the cognitive burden of unstructured information and may help students focus on the essential features of the lesson. In the study, the experimental class reached a higher posttest mean and a higher minimum score, suggesting that the use of Gamma AI was associated with stronger learning performance across the class.

The findings are consistent with Ali et al. (2025), who reported a significant influence of Gamma AI media in pantun-text learning. They are also in line with Riski (2025), who found that the use of Gamma App supported students' learning skills in procedure-text writing. Kholif (2025) similarly reported the effectiveness of interactive Gamma AI media in supporting material comprehension. Taken together, these studies indicate that Gamma AI can be useful when the platform is integrated into a clear instructional sequence rather than used only as a technological novelty.

Gamma AI may also contribute to learning through attention and motivation. The study discussion reported that the medium created a more attractive, interactive, and understandable learning process and helped students remain focused on the material. This interpretation is compatible with Rahman (2021) and Yogi Fernando et al. (2024), who emphasized the importance of motivation in

improving student learning outcomes. A learning medium that increases attention can create better conditions for students to process explanations, remember key information, and participate more actively in classroom activities.

From a practical perspective, Gamma AI offers teachers a tool for preparing structured, visually rich learning materials in a relatively efficient manner. Herawati et al. (2025) demonstrated its relevance in teacher training, while Khaeruddin (2024) discussed its potential in technology-supported curriculum implementation. For Indonesian language teachers, the platform can be used to present text examples, organize language concepts, highlight key information, and guide students through lesson stages. Its value, however, still depends on teacher preparation, suitable content, device availability, and adequate internet access.

Several limitations should be considered. First, the study involved only 55 students from one school, so the findings should be generalized cautiously. Second, although the research design was labeled posttest-only, the reported analysis used both pretest and posttest scores, indicating an inconsistency between the stated design and the implemented analysis. Third, the reported Wilcoxon test evaluates paired changes within each group and does not, by itself, provide a direct inferential comparison of the experimental and control groups. Future research should use a clearly specified pretest-posttest control-group design and an appropriate between-group analysis of posttest scores or gain scores.

CONCLUSION

The study indicates that Gamma AI-based learning media can support Indonesian language learning outcomes among eighth-grade students at UPT SMP Negeri 3 Pitu Riase. The control-group mean increased from 35.38 to 66.35, while the experimental-group mean increased from 56.55 to 84.14. The experimental class also achieved a higher posttest minimum, maximum, median, and mean than the control class. Wilcoxon ranks showed that all students in both groups improved from pretest to posttest, and the study reported statistically significant pretest-posttest differences.

Within the investigated context, Gamma AI can

therefore be considered a promising alternative for presenting Indonesian language material in a more structured, visual, and engaging form. Teachers are encouraged to integrate the platform with clear learning objectives, guided activities, discussion, and feedback rather than relying on automated presentation alone. Future studies should involve larger samples, multiple schools, longer treatment periods, and a consistent control-group design with direct between-group statistical testing to strengthen causal interpretation.

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