GAMIFICATION IN ELEMENTARY INDONESIAN LEARNING TO INCREASE THE ACTIVENESS OF UAD PGSD STUDENTS

Bianca Ayu Prastika[1], Hanum Hanifa Sukma[2*]

[1]Elementary School Study Program, Universitas Tiga Serangkai, Indonesia
[2]Elementary School Study Program , Universitas Ahmad Dahlan, Indonesia

Corresponding Author: hanum.sukma@pgsd.uad.ac.id

Abstract: The results of the preliminary study showed a decrease in the level of activeness of PGSD UAD students in participating in Indonesian language learning. In response to these problems, this study aims to examine the effect of using Gamification in elementary Indonesian language learning on student activeness. This study used a quasi-experiment research approach with a Pretest-posttest Non-equivalent Control Group design. The sample of this study was 80 PGSD UAD students who were divided into 2 groups, namely the experimental group of 40 students and the control group of 40 students. Data collection techniques in this study were obtained through a learning activity questionnaire. The data analysis technique used the Independent Sample T-Test with a significance level of <0.05. The results showed that Gamification in Indonesian language learning affected the activeness of PGSD UAD students, as evidenced by the results of the Independent T-test of 0.000.

Keywords: Gamification, Learning Activeness, Indonesian Learning Language.

INTRODUCTION

Universities today face a big challenge in creating graduates who are not only academically smart, but also adaptive to the changing times. The transformation of education in the digital era demands an update in the learning system, both in terms of materials, methods, and media used. Students as a digital native generation have different learning characteristics than previous generations (Princes et al., 2024). The current generation has more visual, interactive, experiential learning characteristics, and has a shorter attention span (Natsir et al., 2022). This condition forces higher education institutions, including teacher study programs, to design learning strategies that are more contextual, creative, and involve the active role of students to the fullest (Idoiaga Mondragon et al., 2024).

The Primary School Teacher Education (PGSD) Study Program holds a strategic responsibility in preparing prospective educators who will interact directly with early

learners. PGSD students are not only required to master academic theory and content, but are also required to have pedagogical skills, innovation in teaching, and empathy in building pleasant learning relationships (Hasanuddin et al., 2024). The lecture process they experience should be a reflection of the approach they will use when teaching in the future (Johannessen, 2024). Learning cannot only be oriented towards one-way knowledge transfer, but must foster students' thinking, creativity, and active participation in the classroom (Baričević & Luić, 2023).

One of the key courses that plays a role in shaping the foundation of these abilities is Elementary Indonesian. This course not only teaches language structure and writing skills, but also trains students to build meaningful communication, organize ideas coherently, and develop critical thinking skills (Febriani et al., 2023). Unfortunately, the reality in the field shows that learning Indonesian is still often done conventionally, with the dominance of lectures and monotonous textual exercises. Many students consider this course to be theoretical, boring, and less applicable, so that their activeness in participating in learning decreases (Zainudin et al., 2025).

Findings in the Ahmad Dahlan University PGSD Study Program show a decrease in the level of student activeness in participating in elementary Indonesian language learning. Based on observations during the first three meetings of the even semester 2023/2024, only about 20% of students were actively involved in class discussions or asking questions. Most students show passive behavior, lack of enthusiasm, and lack of initiative in participating in learning activities. Questionnaires distributed to 60 students showed that only 27% felt enthusiastic about this course, while 73% felt less motivated, uninvolved, and lacked understanding of the relevance of the material to teaching practice in elementary schools.

The impact of low learning activeness is not only felt during lectures, but also affects students' readiness to face the world of work as prospective teachers. Students who are not accustomed to being active, thinking critically, and solving problems since college will have difficulty when they have to face real classroom dynamics (Rugambuka & Mazzuki, 2023). Therefore, it is important to present a learning approach that is able to create an interesting, meaningful, and challenging learning experience.

This phenomenon reflects a wider problem in higher education, namely the gap between the learning methods used by lecturers and the learning needs of the current generation of students. Students are no longer suited to a one-way lecture model. They are more interested in approaches that are interactive, fun, and provide real challenges. (Kerimbayev et al., 2023). Research in Indonesia shows that students prefer learning using interactive media such as Kahoot and Quizizz because they are considered more interesting, fun, and effective than traditional lecture methods (Ginting & Ramadhan, 2024). This condition requires learning innovations that are able to answer these needs.

Gamification is one of the promising approaches to address the challenges of digital-age learning. It uses game elements such as points, badges, rankings, challenges and prizes to create a fun and competitive learning environment (Hellín et al., 2023). Students not only learn cognitively, but also emotionally and socially as they feel valued, challenged, and motivated to complete tasks (Coelho et al., 2025). Research by Baah et al. (2024) dan Zhang & Yu (2022) proved that gamification in education can significantly improve motivation, participation, and learning outcomes compared to traditional learning methods.

In the context of PGSD, the application of gamification in Indonesian language courses has two dimensions of benefits. First, as a strategy to reactivate students who are getting bored with conventional approaches. Second, as a direct experience for students to understand and experience innovative learning models, which they can later adapt and apply when teaching in elementary schools. This process also indirectly equips them with the skills to design game-based learning, which has proven to be effective at the elementary level in increasing student interest and participation (Asitah et al., 2025).

Seeing the importance of the urgency of the problem and the potential solutions offered by the gamification approach, this study was conducted to measure the effect of gamification in elementary Indonesian learning on the activeness of PGSD UAD students. Hopefully, the results of this study will not only provide theoretical contributions in the field of higher education, but also provide best practices in the transformation of pedagogy that is more humanist, relevant, and has a direct impact on the quality of future elementary school teachers.

METHOD

This study used a quasi-experiment approach with a Pretest-Posttest Non-Equivalent Control Group Design, which allows researchers to determine the difference in results between two groups (experimental and control) before and after treatment. This design was chosen because the real conditions in the field do not allow the distribution of samples randomly, but can still explain the cause-and-effect relationship of the variables studied.

The research subjects were 80 students of Ahmad Dahlan University (UAD) PGSD Study Program who were taking the Elementary Indonesian Language course in the even semester of the 2023/2024 academic year. The subjects were divided into two groups, namely experimental and control groups. The experimental group (40 students) received elementary Indonesian language learning using a gamification approach. The forms of gamification used include: point system, class leaderboard, app-based interactive quizzes (Kahoot, Quizizz), weekly learning missions, and giving digital badges for certain achievements. The control group (40 students) received elementary Indonesian learning with conventional methods, namely lectures, questions and answers, and group discussions without game elements.

The data collection instrument in this study was a learning activeness questionnaire prepared based on indicators of student activeness according to Bonwell & Eison (1991) theory, including: active questioning, answering, discussing, expressing opinions, and being involved in class activities.

Before the treatment was given, both groups were given a pretest to measure the initial level of activeness. After 6 learning meetings, both groups were again given a posttest using the same questionnaire. Data were analyzed using the Independent Sample T-Test test with the help of SPSS version 25, with a significance level of 5% ($\alpha = 0.05$) to determine the average difference in student activeness between the two groups after treatment.

RESULT AND DICSUSSION

Research data was obtained through distributing questionnaires or questionnaires distributed to 80 PGSD UAD students. After the data was collected, it was analyzed through descriptive analysis, which is presented in Table 1 below.

Table 1. Descriptive Data

Statistic	Learning Activeness			
	Experiment		Control	
	Pretest	Posttest	Pretest	Posttest
N	40	40	40	40
Minimum	52	78	50	70
Maximum	76	90	73	88
Mean	63.00	85.03	63.15	78.58
Std. Deviation	6.072	3.676	5.270	4.898

Based on Table 1 above, it is known that the learning activeness of experimental class students obtained an average pretest score of 63.00 and the control class obtained a pretest score of 63.15. The experimental class that received gamification treatment in the learning process obtained a pretest score that was superior to the control class with a score of 85.03, while the control class amounted to 78.58. After conducting statistical data analysis, the next prerequisite test is the data normality test to see whether the data is normally distributed or not. Data can be said to be normal if it meets the criteria of value> 0.05. The results of the normality test can be seen in the following table.

Table 2. Normality Test

Statistic	Learning Activeness					
	Experiment			Experiment		
	Statistic	df	Sig.	Pretest	Posttest	Sig.
Pretest	0.136	40	0.62	0.137	40	0.56
Posttest	0.137	40	0.156	0.117	70	0.177

Based on Table 2, the results of the normality test, all data on the pretest and posttest of both experimental and control groups show a significance value above 0.05, which means that the data is normally distributed. After normality testing, proceed with the homogeneity test of the pretest and posttest of both classes. The homogeneity test was conducted to see whether the data from the two sample groups came from the same population or not. The results of the pretest and posttest homogeneity test can be seen in Table 3.

Table 3. Homogeneity Test

Data	Statistic		
	df1	**df2**	**Sig.**
Pretest	1	78	0.465
Posttest	1	78	0.110

Based on the homogeneity test table, it is known that the significance value of the pretest data is 0.465 and the Sig. The value of the posttest is 0.110. From the data analysis of the homogeneity test of students' critical thinking skills it shows that the Sig. The value of both data is more than 0.05. So it can be said that the data variance between the experimental and control groups is homogeneous. After doing the homogeneity test, test the hypothesis using the Independent Sample T-Test. The results of hypothesis testing can be seen in the following table.

Table 4. Hypothesis Test

Variabel	**F**	**Sig. (2-tailed)**
Keaktifan Belajar	2.617	0.000

Based on the results of data analysis using the Independent Sample T-Test test, a significance value (p-value) of 0.000 ($p < 0.05$) was obtained, which shows that there is a significant difference between the learning activeness of experimental and control group students. These results provide empirical evidence that the gamification approach has a positive impact on the learning activeness of PGSD UAD students in learning elementary Indonesian. This difference is not only statistically significant, but also clearly reflected in the dynamics of the class during the learning process.

The learning process in the experimental class was designed with a systematic and structured integration of gamification elements. Students are divided into small groups, and each meeting is filled with challenging activities such as interactive quizzes, teaching material-based puzzles, and weekly missions that must be completed individually or in teams. A point system and leaderboard are updated in real-time to monitor each student's achievements, while digital badges are awarded for certain achievements, such as completing assignments early, showing good collaboration, or contributing creative ideas. In discussion sessions, lecturers act as facilitators and game masters who provide quick feedback, and adjust the flow of activities according to class responses. Students are given the freedom to choose a particular “mission path” (e.g. a mission to write a short story,

make a learning video, or comment on a friend's work), so they feel in control of their learning process.

In contrast, learning in the control class was carried out using conventional methods of lectures and guided discussions. Students received materials from lecturers through PowerPoint presentations and question and answer sessions. Assignments were done individually and collected through the learning platform without any reward or competition mechanism. Class interaction tends to be one-way, with the lecturer as the center of activity, and student participation is limited during question and answer sessions or when called upon directly. Although the material presented in both classes is the same, the delivery approaches differ significantly, thus affecting the class dynamics and the level of student participation.

In the implementation of gamification learning, students in the experimental group showed higher engagement. They showed enthusiasm in taking the game-based quiz, eager to collect points, and active in monitoring their position on the leaderboard. In fact, there were even some students who voluntarily proposed additional challenges or "learning missions" in the hope of earning certain digital badges. This phenomenon reflects that gamification elements not only facilitate learning interaction, but also successfully activate students' intrinsic motivations, such as curiosity, spirit of healthy competition, and personal satisfaction when achieving certain milestones in the learning process.

The gamified learning experience builds a more positive and supportive classroom atmosphere. Students show excitement, passion and pride in their achievements, both individually and as a team. The use of visual elements such as badges and progress charts help students feel a real sense of achievement during the learning process. This is especially important in the context of primary education, where teachers as facilitators must have positive emotions and mental readiness in dealing with students. The liveliness generated by the gamification approach is not just momentary, but also fosters self-confidence and motivation to keep learning and improving, important skills that will come in handy when students face real-world situations in education.

Student activeness can be understood through the framework of the Self-Determination Theory proposed by Ryan & Deci (Guay, 2022). This theory explains that intrinsic motivation can grow when three basic psychological needs are met, namely competence, connectedness, and autonomy. In this context, gamification provides challenges that are appropriate to students' ability levels, thus fostering a sense of competence. In addition, the social interaction through pair or group activities and healthy competition in the leaderboard allows students to feel socially connected with their peers. Meanwhile, the freedom to choose a learning strategy, determine the mission to be accomplished, or set the time to complete the task provides space for students to feel autonomy in their learning process. These three elements work synergistically to strengthen students' emotional engagement in learning.

Furthermore, these findings reinforce the urgency of a paradigm shift in teacher education. PGSD students must be prepared to become adaptive and innovative educators. If during lectures they are only accustomed to being passive participants, then when they become teachers, they will also have difficulty building an active and interesting learning atmosphere in the classroom. Gamification is one approach that bridges this need. By experiencing the benefits of active, fun, and participatory learning, students will find it easier to transmit similar approaches in their future teaching practices (Halimi et al., 2024).

In addition, these results support the findings of a study by Gündüz & Akkoyunlu (2020) which showed that students who learn with a gamification approach tend to have higher class participation, more consistent task completion, and deeper emotional engagement than students who follow conventional learning methods. Gamification does not only serve as a visual sweetener or entertainment, but also a pedagogical instrument that is able to design a comprehensive learning experience: touching cognitive, affective, and social aspects simultaneously.

In the context of elementary Indonesian learning, the gamification approach has proven to be effective because it encourages students to be more active in speaking, writing, and thinking critically about the material presented. Learning becomes more contextualized and meaningful as it is delivered through game scenarios that connect the content to real

life or fun learning experiences. Interaction between students also increases as many collaborative activities are designed in the form of group challenges or team quizzes.

However, some challenges were also found, such as the need for lecturers' readiness in designing gamification scenarios that are in line with learning outcomes, as well as additional time to develop fair and meaningful reward mechanisms. Therefore, gamification implementation requires continuous training and adaptation to be effectively applied in various learning contexts.

CONCLUSION

This research proves that the use of gamification in learning elementary Indonesian significantly increases the activeness of PGSD UAD students. The gamification approach is able to create a fun, competitive, and participatory learning environment, thus triggering students' active involvement in lecture activities.

This finding has important implications for the development of learning strategies in higher education, especially in the context of prospective teacher education. PGSD lecturers are advised to adopt innovative approaches such as gamification in the learning process, so that students not only understand course content theoretically, but also experience it practically and reflectively as prospective educators.

Recommendations for future research are to develop a more structured and contextualized gamification model, and explore its effect on other variables such as creativity, learning outcomes, and student teaching skills. This research also opens up opportunities to apply gamification in other courses at PGSD and at a broader level of education as part of the transformation of pedagogy in the digital era.

ACKNOWLEDGMENT

All parties who contributed to the research carried out are listed in this section.

REFERENCE

Asitah, N., Suyitno, I., & Nusantara, T. (2025). PGSD students ' perspectives on gamification learning in Indonesian Language courses. *JP2SD (Jurnal Pemikiran Dan Pengembangan Sekolah Dasar)*, *13*(1), 60–80.

Baah, C., Govender, I., & Subramaniam, P. R. (2024). Enhancing Learning Engagement: A Study on Gamification's Influence on Motivation and Cognitive Load. *Education Sciences*, *14*(10). https://doi.org/10.3390/educsci14101115

Baričević, M., & Luić, L. (2023). From Active Learning to Innovative Thinking: The Influence of Learning the Design Thinking Process among Students. *Education Sciences*, *13*(5). https://doi.org/10.3390/educsci13050455

Bonwell, C. C., & Eison, J. A. (1991). Active Learning: Creating Excitement in the Classroom. 1991 ASHE-ERIC Higher Education Reports. In *ASHE-ERIC Higher Education Report*.

Coelho, F., Rando, B., Aparício, D., Pontífice-Sousa, P., Gonçalves, D., & Abreu, A. M. (2025). The impact of educational gamification on cognition, emotions, and motivation: a randomized controlled trial. In *Journal of Computers in Education* (Issue 0123456789). Springer Berlin Heidelberg. https://doi.org/10.1007/s40692-025-00366-x

Febriani, I., Priyatni, E. T., & Suwignyo, H. (2023). Text-based Learning in Discourse Analysis Course in Growing Student Critical Thinking. *Journal of Innovative Studies on Character and Education*, *7*(1). https://iscjournal.com/index.php/isce/article/view/192/205

Ginting, D. A., & Ramadhan, S. (2024). The Impact of Interactive Learning Applications on EFL Students' Preferences and Academic Achievement. *TEM Journal*, *13*(2), 1362–1370. https://doi.org/10.18421/TEM132-50

Guay, F. (2022). Applying Self-Determination Theory to Education: Regulations Types, Psychological Needs, and Autonomy Supporting Behaviors. *Canadian Journal of School Psychology*, *37*(1), 75–92. https://doi.org/10.1177/08295735211055355

Gündüz, A. Y., & Akkoyunlu, B. (2020). Effectiveness of Gamification in Flipped Learning. *SAGE Open*, *10*(4). https://doi.org/10.1177/2158244020979837

Halimi, F., Tryzna, M., & Brunstein, A. (2024). Motivational orientation and perception of active learning instruction by pre-service language teachers. *Frontiers in Psychology*, *15*(December), 1–12. https://doi.org/10.3389/fpsyg.2024.1307733

Hasanuddin, M. I., Nurharyanto, D. W., Hasanuddin, M. I., & Abdullah, S. (2024). Peningkatan Kompetensi Pedagogik Mahasiswa PGSD melalui Peer Teaching pada Perencanaan Pembelajaran SD. *Journal of Education Research*, *5*(4), 4764–4771. https://doi.org/10.37985/jer.v5i4.1581

Hellín, C. J., Calles-Esteban, F., Valledor, A., Gómez, J., Otón-Tortosa, S., & Tayebi, A. (2023). Enhancing Student Motivation and Engagement through a Gamified Learning Environment. *Sustainability (Switzerland)*, *15*(19). https://doi.org/10.3390/su151914119

Idoiaga Mondragon, N., Beloki, N., Yarritu, I., Zarrazquin, I., & Artano, K. (2024). Active methodologies in Higher Education: reasons to use them (or not) from the voices of faculty teaching staff. *Higher Education*, *88*(3), 919–937. https://doi.org/10.1007/s10734-023-01149-y

Johannessen, W. H. (2024). Modelling teachers' reflective practice. *Reflective Practice*, *25*(6), 784–798. https://doi.org/10.1080/14623943.2024.2406934

Kerimbayev, N., Umirzakova, Z., Shadiev, R., & Jotsov, V. (2023). A student-centered approach using modern technologies in distance learning: a systematic review of the literature. *Smart Learning Environments*, *10*(1). https://doi.org/10.1186/s40561-023-00280-8

Natsir, S. Z. M., Rubini, B., Ardianto, D., & Madjid, N. (2022). Interactive Learning Multimedia: A Shortcut for Boosting Gen-Z's Digital literacy in Science Classroom. *Jurnal Penelitian Pendidikan IPA*, *8*(5), 2168–2175. https://doi.org/10.29303/jppipa.v8i5.1897

Princes, E., Soeryanto, N., & Romprasert, S. (2024). View of Exploring Gen-Z Learning Preferences: A Comparative Study of Traditional, Online, and Blended Learning Models. *Journal of Multidisciplinary Issues*, *4*(July 2023). https://jmis.site/index.php/JMIS/article/view/65/49

Rugambuka, I. B., & Mazzuki, B. D. (2023). University student-teachers' diversity and attitudes toward classroom participation. *Heliyon*, *9*(6), e16364. https://doi.org/10.1016/j.heliyon.2023.e16364

Zainudin, M., Miftahurroziq, A., Fajar Gufianto, M., & Nurjanah, E. (2025). Evaluasi Pembelajaran Mata Kuliah Bahasa Indonesia pada Mahasiswa: Analisis Kualitas Pembelajaran. *Jurnal Pendidikan Tambusai*, *9*(1), 1880–1886.

Zhang, Q., & Yu, Z. (2022). Meta-Analysis on Investigating and Comparing the Effects on Learning Achievement and Motivation for Gamification and Game-Based Learning. *Education Research International*, *2022*. https://doi.org/10.1155/2022/1519880