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PGSD students' perspectives on gamification learning in Indonesian Language courses

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ABSTRACT

Gamification has the potential to engage students and enhance their learning experience, particularly in language education. This study aimed to analyze the perceptions of elementary school PGSD students towards the use of gamification in Indonesian language learning. This study used a mixed methods approach, combining quantitative data from a Likert-scale questionnaire and qualitative insights from in-depth interviews. A total of 71 students participated in the survey, with 12 selected for interview. Quantitative analysis revealed that students generally found gamification motivating, with high ratings in areas such as increased focus, memory retention, and simplification of complex material. Thematic analysis of qualitative data showed that students perceived gamification as a fun and interactive learning method, which facilitated better understanding and engagement. This study concluded that gamification is an effective teaching strategy, enhancing student motivation and learning outcomes in Indonesian language education. The results showed that the majority of elementary school PGSD students had very positive perceptions towards the use of gamification in Indonesian language learning. This study provides valuable insights into the integration of gamification in higher education, particularly in courses that use interactive approaches.

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INTRODUCTION

Universities as one of the educational institutions have widely used hybrid and e-learning systems as a result of the absorption of new technological developments in digital education. (Stevens et al., 2021). The implementation of e-learning is adjusted to existing technological developments. The application of technology in the world of education has experienced quite rapid growth in terms of teaching. Technology has made it easier to

provide information to students, accelerated learning, and provided fun opportunities to practice what they have learned. (Dhewi & Hadiwidjaja, 2018; Haleem et al., 2022). The use of digital technology in student-centered learning is claimed to improve learning. (Haleem et al., 2022; Raja & Nagasubramani, 2018). This allows students to explore new courses and deepen their understanding of difficult concepts, especially in STEAM.

The Higher Education Curriculum is a mandate of the institution that must always be updated in accordance with the development of needs and science and technology as outlined in learning outcomes. Various studies have attempted to describe how new technologies can help the education process at the higher education level. (Carstens et al., 2021; Dermentzi et al., 2016; Haleem et al., 2022). Every university is required to comply with these provisions. (Dikti Research, 2019). The formulation of CPL (Graduate Learning Outcomes) initiated by the Ministry of Education and Culture is recommended to include the skills needed in the industrial era 4.0 regarding data literacy, technological literacy, and human literacy, as well as the ability to see signs of the industrial revolution 5.0. (Chen et al., 2020).

Industry 5.0 has changed many paradigms and brought resolutions because it can reduce the emphasis on technology and assume that the potential for progress is based on collaboration between humans and machines (Adel, 2022). That is why technology-based education is needed to keep up with the speed of today's world. Universities continue to strive to innovate and improve the quality and facilities they have to meet curriculum standards. Not only general universities are innovating, religious-based universities are also doing the same thing to be able to produce graduates who are ready to face the Industrial Revolution 5.0. A technology-based curriculum can achieve maximum results if the facilities provided by the university are utilized properly by educators and students (Ghavifekr & Rosdy, 2015; Miranda et al., 2021). That is why good cooperation is needed by all parties to be able to realize this.

Gamification is a learning strategy that uses game elements in the learning process. (Brom et al., 2019). Recent research shows that gamification can increase student learning motivation and improve learning outcomes. (Smiderle et al., 2020; Welbers et al., 2019). Gamification can also help reduce boredom and increase student concentration during the learning process. (Öztürk & Korkmaz, 2020; Yıldırım & Şen, 2021). One of the tools used in gamification learning is an online quiz application. This quiz application can function as a formative learning tool that allows students to monitor their achievement scores and helps them develop cognitive processes related to independent learning. (McLaughlin & Yan, 2017). This learning method is considered quite effective and efficient because it requires students to identify the desired choices or responses (Handoko et al., 2021), until they find answers to their questions using an online quiz application. However, in observations made by researchers in classes dominated by Islamic boarding school students, gamification learning was less effective.

Online quiz applications such as Quizizz have become very popular post-pandemic because they help teachers create fun online learning. This quiz application has the potential to facilitate distance and independent learning. (Rüth et al., 2021). Quizizz is a game-based educational application that can be played by many people who work on questions with an interactive and fun display. (Zhao, 2019). The use of the Quizizz application has so far been widely found in mathematics learning. (Asfar & Asfar, 2020; Saleh & Sulaiman, 2019; Suliani et al., 2021; Wulandari & Hartono, 2021), there has been no specific research that discusses the perceptions of PGSD students towards gamification learning in Indonesian language lectures at universities. The results of the

observation show that PGSD students at Nahdlatul Ulama University, Sidoarjo use the Quizizz application for their Indonesian language learning.

Therefore, the researcher is interested in using this research topic. Data will be collected through structured interviews with purposively selected participants from PGSD students of Nahdlatul Ulama University, Sidoarjo. This study is expected to provide valuable insights for lecturers and curriculum developers in designing innovative and effective learning strategies. In addition, the results of this study are also expected to contribute to the understanding and development of gamification as a learning approach that can facilitate students' understanding and involvement in learning Indonesian. Thus, this study will provide an important contribution to our understanding of the application of gamification in the context of education and provide useful information for stakeholders in the field of education.

METHOD

This study uses a mixed-methods approach with an explanatory sequential design, collecting quantitative and qualitative data sequentially in two stages, with the intention of using qualitative data in Stage 2 for in-depth understanding and providing further details on the quantitative results of Stage 1 (Creswell & Creswell, 2018). The researcher used two collection instruments, namely a questionnaire and a semi-structured interview. This questionnaire was digitized using Google Forms and distributed via WhatsApp messages, applying a convenience-based random sampling methodology that resulted in 71 PGSD students at Nahdlatul Ulama University, Sidoarjo through a Likert scale questionnaire in Indonesian language classes. The qualitative component will include interviews with 12 PGSD students using saturated interview techniques. Then the data is processed and analyzed using thematic analysis to analyze qualitative data to identify patterns and themes in the results of the interviews conducted (Al-Dosakee & Ozdamli, 2021; Labra et al., 2020).

The research questions guiding this study focused on understanding how PGSD students perceive gamification in teaching Indonesian language. RQ1 examines students' perceptions of the gamification learning process in Indonesian language courses, while RQ2 explores their views on the teaching materials in gamification learning in the course. Thematic analysis is essential in qualitative research, providing a focus for various research activities (Al-Dosakee & Ozdamli, 2021; Heriyanto, 2018) . It allows for the systematic identification of key patterns, meanings, and concepts in qualitative data, offering deeper insights into participants' perspectives and experiences. Thematic methods will enhance qualitative analysis, facilitating structured exploration of themes emerging from interview data. This study contributes to the literature on gamification in education, offering insights for educators and curriculum developers seeking innovative language teaching practices.

RESULTS AND DISCUSSION

The results of the student questionnaire data can be seen in Table 1. From a total of 160 PGSD students, researchers obtained research data from 71 respondents. Female student respondents were the largest, namely 51 people or 71.8%, while the male student population was only 20 people or 28.2%. In addition, in the class variable, it can be seen that PGSD-C has the largest number of students, namely 20 people or 28.2% of the total student population. Class PGSD-D has 18 people or 25.4%. Class PGSD-A has

14 people or 19.7%, while class PGSD-B has 13 people or 18.3% of the total. Class PGSD-E has the fewest students, namely 6 people or 8.5% of the total.

Table 1. Characteristics of student questionnaire data

Variables	Amount	N (%)
Gender		
Man	20	28.2%
Woman	51	71.8% of
Class		
PGSD-A	14	19.7%
PGSD-B	13	18.3%
PGSD-C	20	28.2%
PGSD-D	18	25.4% of total
PGSD-E	6	8.5%

The aim of this research is to examine students' perceptions of learning teaching materials in gamified learning in Indonesian language lectures. Respondents were asked to fill out a questionnaire to indicate their response to each statement given in the questionnaire. Where; SA = Strongly Agree; A = Agree; N = Neutral; D = Disagree; SD = Strongly Disagree. Findings are shown in Table 2.

Table 2. Results of student perceptions of gamification learning

Statement	Minute	Max	Means	Int
Gamification motivates students to learn more	3.00	5.00	4.04	Good
Gamification provides feedback to students	3.00	5.00	4.26	Very good
Gamification makes it easier for students to simplify complex material	3.00	5.00	4.47	Very good
Gamification improves student understanding	3.00	5.00	4.15	Good
Gamification helps student retention	3.00	5.00	4.08	Good
Gamification corrects misconceptions in student learning	3.00	5.00	3.91	Good
Gamification of student motivation to win quizzes	3.00	5.00	4.32	Very good
Gamification facilitates student focus in each session	3.00	5.00	4.39	Very good
Gamification helps students enjoy quiz activities	3.00	5.00	4.15	Good
Gamification makes it easier for students to answer each question	3.00	5.00	4.16	Good
Gamification helps students respond to each question quickly	3.00	5.00	4.19	Good
Gamification makes it easier for students to answer each question correctly.	3.00	5.00	4.23	Very good
Gamification is a medium that students have been waiting for in learning	2.00	5.00	4.10	Good
Students feel happy when playing gamification	3.00	5.00	4.20	Good
Students enjoy the competitive atmosphere while playing gamification games.	3.00	5.00	at 4.30	Very good
Students feel motivated to win quizzes with gamification	3.00	5.00	4.28	Very good
Gamification helps students as a learning medium	3.00	5.00	4.29	Very good
Gamification facilitates students as an effective learning medium	3.00	5.00	4.25	Very good
Gamification can be used by students in higher education	3.00	5.00	4.25	Very good
Students can take lessons from media with gamification	3.00	5.00	4.29	Very good
Gamification helps students pay attention to the learning process	3.00	5.00	4.29	Very good

The results of a survey on student perceptions of gamification-based learning in Indonesian Language courses show that gamification has a significant positive impact on various aspects of learning. First, gamification has proven effective in increasing student learning motivation. This is reflected in the high average value (Mean) on statements related to motivation, such as motivation to learn better (Mean = 4.04) and motivation to win quizzes (Mean = 4.32). In addition, students showed a very good response to the competition offered by gamification, with an average value of 4.30, indicating that the competitive atmosphere presented by gamification succeeded in attracting student interest and active participation.

Furthermore, gamification is also considered very good in providing constructive feedback to students (Mean = 4.26) and facilitating understanding of complex material (Mean = 4.47). This assessment shows that gamification not only makes the learning process more interesting but is also effective in clarifying and simplifying difficult material. As a learning medium, gamification is considered very effective with several statements obtaining an average value above 4.20, such as effectiveness as a learning medium (Mean = 4.29) and the ability of gamification to be used in the context of higher education (Mean = 4.25). In addition, gamification also helps students respond quickly and answer questions correctly, as well as improve memory and attention to the learning process. With an average value between 4.15 and 4.29, it is clear that students feel significant benefits from the use of gamification in various aspects of learning. This shows that gamification is not only interesting and fun for students but also makes a significant contribution to increasing the effectiveness of learning and understanding of the material. Overall, the survey showed that gamification was highly rated by students as a learning method that not only increases motivation and engagement but also improves the quality of learning and academic understanding. These findings provide strong evidence that the application of gamification in learning can be an effective strategy for improving student learning outcomes in higher education.

The researcher has conducted interviews with 12 informants consisting of PGSD students to support the results of the questionnaire conducted. Data coding in this study was carried out to facilitate the analysis process and identification of responses from each research subject. The code is used as a label to systematically identify subject responses in the data analysis process. Coding in the Code column is arranged in the format "MH Axx", where "MH" is likely an abbreviation for student, and "Axx" is the response sequence code or participation of the research subject. The code given to each subject is used to refer to their responses in the thematic analysis process, such as the Gioia analysis method. The use of this code ensures that the analysis process is carried out systematically and minimizes the risk of losing track of individual responses during data processing.

Results of Student Perception Analysis on Learning Process Aspects

1. Learning Experience Using Gamification

The majority of students stated that the learning experience using gamification was much more interesting and interactive compared to traditional methods. As many as 67.6% of students agreed that gamification helped them focus on the lesson, with an average score of 4.04 which is included in the “Very Good” category. Students felt that gamification made learning Indonesian more interesting, interactive, and fun. This positive response is consistent with the findings conducted by Mila and Mahbub (2022) who report positive reactions to gamification in the classroom, emphasize the potential benefits of incorporating gamification elements in educational settings.

The interviewed students expressed various positive views regarding the learning experience with gamification. Student with code MH A01 stated, "Learning Indonesian with gamification is very different from traditional methods, much more exciting and interesting". In line with that, MH A03 said, "I like this method because it is very fun". This view was reinforced by MH A04 who added, "Learning becomes more fun and not boring, always awaited because there are interesting activities". This shows that gamification can create a more dynamic learning atmosphere, thus making students more motivated to learn. Statements from participants such as MH A01, MH A03, and MH A04 highlighted the increase in engagement and enjoyment through gamified language learning activities. This is in line with research by Nitiasih et al., (2022) which found that gamification in online learning environments effectively engages and motivates students, thereby enhancing their learning experience.

Other respondents, such as MH A07, emphasized that gamification can reduce boredom in learning. He stated, "I am more enthusiastic because it is not monotonous like the usual way of learning". This experience shows that gamification not only adds fun to learning but is also able to change the classroom atmosphere to be livelier and more interactive so that students are more involved in the learning process. This finding is supported by Sajinčič et al., who emphasized the positive impact of gamification on students' motivation and active participation in the educational environment. The positive perception of PGSD students towards learning Indonesian with gamification not only increased their engagement and motivation but also contributed to creating a more interactive and enjoyable learning environment. By aligning with previous research on the effectiveness of gamification in education, this study provides valuable insights into the potential of the gamification approach to enhance the language learning experience for students.

2. Suitability of Learning Stages with Student Abilities

The results of the study found that most students felt that the learning stages in gamification were arranged according to their abilities. Based on the questionnaire, as many as 62% of students felt that gamification made it easier to simplify complex material, with an average score of 4.15 which was included in the "Good" category. This positive perception is in line with the results of research by Puspitasari and Arifin (2023) and Biryukov et al., (2021) which highlighted increased motivation and learning outcomes through gamification in educational environments. In addition, the results of the interviews conducted supported these findings, where many students felt that the stages and levels in gamification helped them adjust to the material.

A student with the code MH A02 said, " There is a level system in gamification and it helps me measure my progress. I can see the progress from one level to the next". This is also supported by MH A08 who stated, "This level system makes me less burdened because the material is delivered gradually, from easy to more complex". This statement shows that the level-based gamification structure not only provides a sense of achievement for students but also allows them to learn the material at their own pace and ability. Research conducted by Ismath et al., (2023), also found that by using focus group discussions to explore students' perceptions of gamification, it shows that a structured gamification approach can improve learning cohesion and individual progress.

Another respondent, MH A09, highlighted that each level offered challenges that matched his abilities, "Each level offered challenges that matched my abilities, so I felt I could learn well without feeling overwhelmed." This view reflects how gamification can adapt the learning process to the individual needs of students, allowing them to progress

gradually without feeling overwhelmed by overly difficult material. The level of challenge aspect created in gamification is the course objectives and customized challenges as a key element in effective gamification design (Wang et al., 2024). By adapting the learning process to the abilities of students, gamification can create a supportive and engaging environment that encourages gradual development without undue pressure (Almuntsr et al., 2024).

3. Grouping and Organizing New Information

Gamification is also considered very helpful for students in grouping and organizing new information. In the questionnaire, 53.5% of students agreed that gamification helped improve their memory, with an average score of 3.91 which is included in the "Good" category. This positive perception is in accordance with the results of Devendren & Nasri's research. (2022) which highlights the positive impact of gamification on student effectiveness, motivation, and engagement. In addition, based on the interview results, it was shown that students felt that the level-based and challenge-based gamification structure helped them understand and remember information better.

A student with the code MH A01 explained, "The material is presented in the form of very clear levels or game stages. This helps me understand the order and priority of information that must be learned first." Another respondent, MH A02, added, "In the mission and challenge section, new information is given in the form of missions or challenges, this makes each piece of information more focused and easier to digest one by one." The visual and interactive elements included in gamification, as expressed by MH A03 and MH A06, also help in understanding and remembering information, "Many visual and interactive elements such as images, graphs, and games help me understand and remember information more easily." MH A01 and MH A02 emphasized the clarity and structure provided by the level-based and challenge-based gamification approach, which allowed them to understand the order and importance of information effectively. These findings are supported by Ahmed's research, which conducted a content analysis on the use of gamification in education, which emphasized the role of gamification in improving learning outcomes through structured and engaging content delivery.

This view suggests that gamification not only facilitates the learning process through the presentation of structured information, but also helps students remember and apply information in various learning contexts. Students feel that by using gamification, they can focus more on important parts of the material and organize information more effectively. The integration of visual aids, graphics, and interactive games in gamification learning activities is considered to facilitate understanding and remembering information. (Aldalur & Perez, 2023).

4. Increased Understanding After Using Gamification

Students generally felt that their understanding of the material increased after using the gamification method. The results of the questionnaire showed that 57.7% of students agreed that gamification improved their understanding, with an average score of 4.08 which is included in the "Good" category. This increase is in line with the results of research conducted by Swacha and Szydłowska (2023) which stated that gamification can improve students' understanding of the learning material provided. These results were reinforced by interviews conducted with students, they revealed how gamification helped them understand the material better when participating in gamification learning.

A student with code MH A01 said, "I feel my understanding has increased after using this gamification method. Gamification helps me understand the material in a more

fun way". Meanwhile, MH A02 added, "Fun learning makes me more interested and excited to learn. This makes it easier for me to absorb information and remember it". MH A06 also noted that the direct feedback provided in gamification was very helpful, " There is feedback that makes me quickly find out mistakes and fix them, so I understand the material better". The student highlighted how gamification makes learning more interesting, facilitates understanding, and provides direct feedback to help understanding. These observations are consistent with research exploring students' perceptions of gamification and its impact on learning outcomes (Bhat et al., 2023).

Gamification not only makes learning more interesting and interactive, but is also effective in increasing students' understanding of the material being taught. Students feel that gamification allows them to learn better, in a way that suits their learning style and allows them to understand the material more deeply. Additionally, students note that gamification allows them to learn in a way that suits their learning style, allowing them to understand and retain information more effectively. Gamification provides personalized experiences (Mohammed & Ozdamli, 2021).

5. Integration of New Concepts with Existing Knowledge

The questionnaire results showed that most students reported that they were able to integrate new concepts learned through gamification with their existing knowledge. In the questionnaire, this result was reflected in the "Good" category, with an average score of 4.08 in improving understanding. This positive result is consistent with previous studies that emphasize the effectiveness of gamification in improving knowledge acquisition and retention (Adeoye, 2023; Safar et al., 2022). The interview results also supported this finding, where students stated that they used various methods to connect new concepts with existing knowledge.

Students with codes MH A02 and MH A03 stated that they used mind maps or peer discussions to connect new concepts to existing knowledge. MH A04 added, "Peer discussions help strengthen my understanding. I like to compare my answers and understanding with my friends". MH A10 emphasized that "Connecting new material to prior knowledge helps me see how the concepts relate to each other, making it easier to understand". Students described using a variety of methods such as mind maps as well as peer discussions, and comparing answers to connect new information to prior understanding. These strategies are in line with the findings of Safar et al., (2022), who highlighted the role of interactive gamification in increasing student engagement and knowledge retention through hands-on learning experiences.

This view suggests that gamification is not only effective in teaching new material but also encourages students to integrate new concepts with existing knowledge, strengthening their overall understanding. With gamification, students can more easily connect new information with what they have previously learned, making the learning process more coherent and meaningful. In addition, by connecting new information with familiar concepts, students can see the relationships between ideas more clearly, making the learning process more coherent and meaningful. This finding is in line with research by Nakiyemba. (2024), which emphasizes the role of gamification in encouraging active exploration and mastery of new concepts or skills through game-like features.

6. Changes in Understanding or Approach to the Material

Research on the perceptions of PGSD students towards learning Indonesian using gamification shows that most students experienced changes in their understanding and approach to the material after participating in gamification learning activities. The results

of the questionnaire showed that 49.3% of students felt that gamification encouraged them to be more focused and reflective in each learning session. This finding is in line with previous research that highlighted the positive impact of gamification on student engagement and motivation (Smiderle et al., 2020). This view is supported by the results of the interview, where students stated that gamification encouraged them to change their learning approach.

Students with codes MH A01 and MH A03 stated that they needed to change their learning approach after using gamification. MH A01 said, “After using gamification, I had to change my approach to the material because it turned out that my previous understanding was different”. MH A12 added that “Gamification changed the way I understand and approach the material, especially in terms of applying concepts”. MH A09 also stated that “I study more often by reading textbooks and taking notes because previously I tended to be passive, but with gamification, I became more active and involved in the learning process”. This is in line with research by Suwandani and Sunyono (2024) which emphasizes the role of gamification in increasing student engagement and optimizing learning outcomes.

The experiences shared by students underscore the transformative impact of gamification on their learning behavior. MH A09’s transition from passive to active learning and MH A01’s realization of the need to adapt their approach highlight the reflective and proactive nature of gamified learning. These statements suggest that gamification not only introduces new learning methods but also encourages students to adopt a more reflective and proactive approach to learning (Bhat et al., 2023). Gamification allows students to revisit their previous understandings and revise them if necessary, enabling them to learn more effectively and deeply.

Results of Student Perception Analysis of Teaching Material Aspects

1. Level of Difficulty of Teaching Materials

Students generally feel that the level of difficulty of the learning material presented through gamification is appropriate to their abilities. Based on the questionnaire, the majority of students agreed that gamification made it easier for them to understand complex material, with an average score of 4.15. This finding is in line with previous studies that have highlighted the positive impact of gamification on student engagement and motivation (Suwandani & Sunyono, 2024). The results of student interviews further support this, with many students emphasizing the structured development of material from easy to more complex levels.

The experiences shared by students, such as MH A01, MH A08, and MH A11, underscore the effectiveness of gamification in providing a structured learning environment that allows students to progress gradually through increasing levels of difficulty. A student with the code MH A01 stated, "The materials are arranged in stages, starting from easy to more complex. This helps me adjust and understand the basic concepts before moving on to more difficult materials”. MH A08 added, "The level of difficulty increases with the levels, but remains manageable because the materials are delivered in stages”. MH A11 highlighted that "Each challenge or mission has a different level of difficulty, so I can follow the learning well without feeling overwhelmed”. This structured learning approach is in line with research findings that have shown the benefits of gamification in increasing student motivation and engagement, which ultimately leads to improved learning outcomes (Fajri et al., 2021).

Feedback from students highlights the adaptive nature of gamification, where each challenge or mission presents varying levels of difficulty. This adaptive approach allows

students to engage in the learning process without feeling overwhelmed, thereby increasing their sense of accomplishment and mastery. The personalized learning experiences facilitated by gamification align with research that has emphasized the role of gamification in catering to diverse learning styles and speeds, ensuring optimal learning outcomes. (Wangi et al., 2022). Alignment of these findings with existing literature highlights the transformative potential of gamification in improving students' understanding, motivation, and overall learning experience.

2. Organizing and Understanding New Concepts

Gamification was also considered very helpful in organizing and understanding new concepts. From the questionnaire, 67.6% of students stated that gamification helped them focus more on the material, with an average score of 4.04. This finding is in line with previous studies that have highlighted the positive impact of gamification on student engagement and motivation (Hursen & Bas, 2019). Interviews supported this finding, where students stated that the material was structured in a hierarchical level, which helped them understand concepts gradually and systematically.

The experiences shared by students, such as MH A01, MH A03, MH A06, MH A09, and MH A10, highlighted the structured gamification approach in presenting learning materials. Students with codes MH A01 and MH A03 emphasized that "The material is arranged in tiered levels, helping to understand concepts gradually and systematically". MH A06 and MH A09 added that "The level system helps to understand more difficult materials gradually, making learning more structured". Meanwhile, MH A10 stated that "Visuals and interactive elements are very helpful in organizing new information and connecting it to existing concepts". This is in line with research findings that have shown the benefits of gamification in increasing student engagement, motivation, and effective learning outcomes (Wangi et al., 2022).

Gamification provides a clear framework for learning, enabling students to effectively understand and organize new information, and facilitating the process of integrating new knowledge with existing knowledge. Students felt that gamification made it easier for them to understand new material and relate it to concepts they already knew. The incorporation of visual and interactive elements was also found to be beneficial in organizing new information and relating it to existing concepts. This holistic approach to learning facilitated by gamification is in line with research that has highlighted the effectiveness of gamification in providing engaging and structured learning experiences for students (Chauhan et al., 2021).

3. Effectiveness of Teaching Materials in Improving Understanding

The majority of students stated that gamification was very effective in improving their understanding of the material being taught. Studies such as Hürsen and Bas (2019) have shown that the incorporation of gamification elements has a positive impact on students' motivation levels, which is in line with students' perceptions in the current study. The questionnaire results showed that 57.7% of students felt that gamification improved their understanding, with an average score of 4.08. Interviews also showed that students found this method interesting and effective, especially in identifying and remembering word types.

Student with code MH A01 explained that "This method is quite interesting for me. When learning about the types of words in Indonesian, the gamification material uses word games where I have to identify verbs, nouns, and adjectives in different sentences". MH A06 added that "Immediate feedback is very helpful in understanding the material in

depth, I know my mistakes and can immediately correct them". Meanwhile, MH A09 noted that "The challenges in gamification help to understand more complex concepts better, because there is an element of play that makes learning more interesting". This structured learning approach is in line with previous studies that have highlighted the positive impact of gamification on student engagement, motivation, and learning outcomes (Głowacki et al., 2018; Villalba et al., 2020).

This statement shows that gamification not only makes learning more interesting but also helps students understand the material better through an interactive and fun approach. Students feel that gamification provides them with an effective tool to understand and remember the material taught. The incorporation of game elements is known to help in understanding complex concepts and maintaining student interest. This finding is in line with studies that emphasize the effectiveness of gamification in encouraging active learning, knowledge retention, and student engagement (Biryukov et al., 2021; Suwandani & Sunyono, 2024).

4. Integration of Teaching Materials with Existing Knowledge

Students stated that they could easily integrate the learning materials learned through gamification with their existing knowledge. Based on the questionnaire results, 64.8% of students felt that gamification provided useful feedback, which helped them integrate new concepts with their existing knowledge. Studies such as Głowacki et al., (2018) and Mohammed & Özdamlı (2021) have highlighted the motivational effects of gamification in education, emphasizing how the implementation of gamification can increase student engagement and participation. These findings are in line with feedback provided by students in the current study, where they mentioned that gamification provided useful feedback and helped them connect new concepts with prior knowledge.

Students with codes MH A02 and MH A03 explained that they "Connect new concepts with existing knowledge through mind maps or group discussions". MH A10 stated that "Connecting new material with prior knowledge helps in applying concepts more effectively". MH A12 added that "Discussion with friends helps strengthen my understanding and deepen previously learned concepts". Research conducted by Suwandani & Sunyono (2024) and Atef (2022) found that incorporating gamification into the educational environment can increase student enthusiasm, improve problem-solving skills, and improve the application of concepts taught. The results of student interviews stated that new material with prior knowledge for effective application of concepts, consistent with the benefits of gamification outlined in previous studies.

This statement shows that gamification is not only effective in teaching new material, but also helps students to connect and integrate new knowledge with existing knowledge, thereby strengthening their overall understanding. With gamification, students can more easily connect new information with existing knowledge, thereby increasing learning effectiveness.

5. Relevance of Teaching Materials to the Learning Context

Students also assessed the relevance of the teaching materials provided through gamification. From the questionnaires given, the majority of students considered that the materials presented through gamification were very relevant to their needs in understanding Indonesian. Interviews showed that many students felt that the materials presented through gamification not only helped them understand new concepts but were also relevant to the context of their daily lives. The research findings from this study are supported by existing literature on gamification in education. Studies such as Kang &

Kusuma (2020) and Asanza et al., (2024) have highlighted the motivational and enrichment aspects of gamification in educational settings. These studies emphasize how gamification can serve as a didactic motivator and revolutionize teaching practices, in line with student feedback in recent studies that found that material presented through gamification was relevant and meaningful to their learning needs.

Students with code MH A04 said that the examples given in the game were very applicable and helped them relate theory to practice. MH A07 added that "The material provided is very relevant to what I need in my daily life, so I feel that learning is more meaningful". MH A05 also supported this by stating, "I feel that what I learn through gamification can be directly applied in my daily life, so the material feels more real". The effectiveness of the gamification model in improving learning outcomes and increasing student engagement. Findings in several studies have shown that gamification can help create a more engaging and effective learning environment, which is in line with students' perceptions in recent research on the relevance and application of gamified learning materials in their daily lives (Khaleel et al., 2015; Yaccob et al., 2022). The quote shows that the teaching materials presented through gamification are not only interesting but also have strong relevance to the students' learning objectives. Gamification allows students to see firsthand the connection between the theories learned in class and their practical application in everyday life, which strengthens the understanding and application of the concepts taught.

Gioia Thematic Analysis Results

Qualitative data were obtained from interviews with students who participated in the gamification method in learning Indonesian. This study analyzed the perceptions of PGSD students towards the gamification learning method in learning Indonesian. The data obtained from the interview results were processed using the gioia thematic analysis method which can be seen in Figure 5.1. The gioia thematic analysis was used to understand interview data from 12 students related to learning Indonesian with the gamification method through three main stages, namely: Order 1 Concept, Order 2 Theme, and Aggregate Dimension. First, student responses were categorized into Order 1 Concepts which were direct statements from students. Then, after collecting statements from participants, the next step was to group the concepts from Order 1 into higher or general themes (Order 2 Themes). At this stage, the researcher interpreted the deeper meaning of the students' responses.

The final step in Gioia's analysis is to combine the 2nd Order Themes into aggregate dimensions (Aggregate Dimensions). These aggregate dimensions are a representation of the results of grouping empirical data (interview results) into more general themes or categories, which describe the nature of the data being analyzed, this then produces three main aggregate dimensions, namely: enjoyable learning, student collaboration, and learning stages.

a. Aggregate Dimension: Enjoyable Learning

The Fun Learning Dimension explains how the use of gamification in learning can increase students' motivation and interest in learning. Based on the findings of several Order 1 Concepts such as (MH A01) and (MH A02), the gamification learning method is considered more fun and different from traditional learning methods which are considered monotonous by students. With this approach, students feel more motivated to participate in the learning process, which in turn encourages improved learning outcomes. One student stated that they felt more interested in following the lesson because the

gamification method presented a more dynamic and fun way of learning (MH A05). Gamification is also considered an effective way to arouse students' curiosity about the material being studied.

In addition to increasing motivation, gamification also facilitates the understanding of complex materials, especially in terms of vocabulary. This concept is reflected in students' statements that with gamification, they find it easier to remember and understand the vocabulary taught (MH A09). This shows that the gamification method is not only fun but also greatly supports the cognitive process in learning. Students not only enjoy the learning process, but also master the learning content more effectively than conventional learning methods that are more passive. The combination of interactive elements and games in gamification learning helps students retain the information they have learned better.

Visual elements in gamification play an important role in creating an enjoyable learning experience. According to some students, the attractive visuals and interactive elements presented through gamification provide sensory stimulation that facilitates understanding (MH A03). Not only does it help with understanding, the use of visual elements also gives the impression that the learning process becomes more interesting and enjoyable (MH A05, MH A09). This is especially important for students who tend to learn by sight or are visual learners, where information presented visually can be accessed and processed more easily.

Gamification encourages active learning, which is essential for deeper understanding and retention of knowledge (Handayani et al., 2021). This is in line with observations made by students in the current analysis, who reported that gamification helped vocabulary retention and comprehension, indicating that the interactive nature of the gamified learning environment effectively supports cognitive processes. Furthermore, the use of visual elements in gamification, as highlighted by students in the analysis, is in line with findings from Limantara et al., (2023), who noted that visual components in gamification systems increase student engagement and facilitate learning by providing sensory stimulation. This is especially relevant for visual learners, as they benefit from information being presented in an engaging and visually appealing format.

b. Aggregate Dimension: Student Collaboration

The collaboration dimension highlights the importance of cooperation and interaction between students in learning through discussion and reflection. Discussion, as one of the active learning methods, allows students to share understanding and correct errors that may occur in the learning process. Several Order 1 Concepts indicated that discussion helps deepen students' understanding of the material being studied (MH A03, MH A06, MH A08). In discussions, students can review concepts that have been taught and compare their understanding with each other. This makes them more critical in understanding the material and identifying errors or deficiencies in their own understanding. For example, a student stated that through discussion, they were able to correct conceptual errors that were previously misunderstood (MH A06).

In addition to discussions, immediate and direct feedback after the game is also an important element in student collaboration. As expressed by several participants, feedback helped them reflect on their learning and improve their understanding directly after the gamification activity was completed (MH A02, MH A11). This suggests that *direct feedback* facilitates a more effective reflection process and helps students refine their understanding. Students feel more motivated to improve when they receive specific and relevant feedback related to the mistakes they make during the learning process.

Feedback also allows them to learn from their mistakes more quickly and improve concepts they have not mastered.

In addition, collaboration through the use of mind mapping also has a positive impact on information management. Gamification allows students to systematically organize and organize information using concept maps (MH A02). This not only makes it easier to remember concepts, but also helps students connect new information with existing knowledge. Thus, collaboration in gamification through discussion, feedback, and mind mapping helps strengthen understanding and increase interaction between students, thus creating a more collaborative and supportive learning environment.

This approach is supported by several studies highlighting the benefits of discussion as an active learning method. Cheng et al., (2023) showed how collaborative learning environments, particularly those integrating computational thinking, significantly improved learning outcomes. This finding is in line with the current analysis, which showed that discussions among students deepened their understanding of the material, as they were able to share insights and correct misconceptions. The collaborative nature of discussions fosters critical thinking and allows students to engage more deeply with the content, reflecting the positive results observed in this study. Furthermore, the importance of timely feedback in enhancing student collaboration is well documented in the literature. found that feedback mechanisms in gamified learning environments had a significant impact on student motivation and engagement, especially when students received immediate feedback on their answers (Dirgantoro et al., 2022).

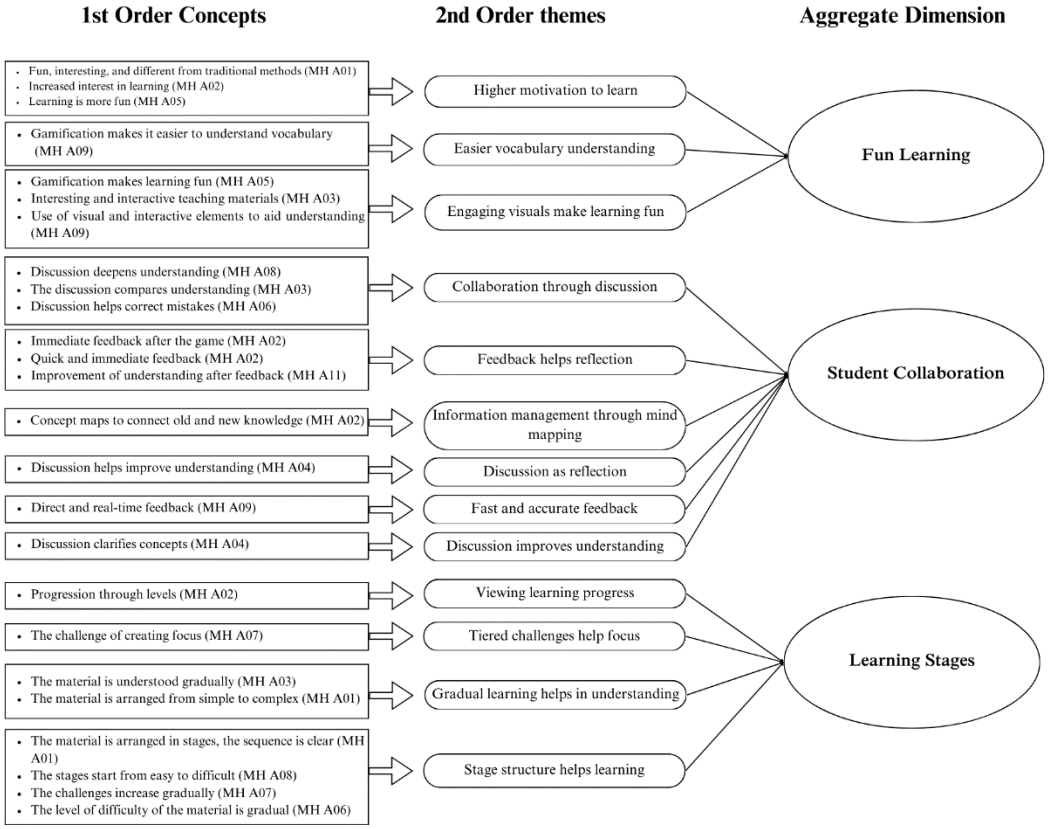

Figure 1. Thematic analysis results

c. Aggregate Dimension: Learning Stages

The Learning Stages dimension highlights the importance of structure in learning that is arranged in stages to facilitate student understanding. In the gamification method,

the learning stages are designed progressively, starting from a simple level to a more complex level, allowing students to learn at their own pace (MH A01, MH A03). Several students stated that they could see the development of their learning through these stages, where they felt more able to understand more difficult concepts after mastering the basic material first (MH A02). This shows that tiered learning not only helps students map their progress but also increases their confidence in mastering more challenging material.

In addition, challenges that are arranged gradually in gamification provide additional focus for students. Based on statements from several participants, challenges that increase gradually help them to stay focused during the learning process (MH A07). With increasingly difficult challenges, students feel challenged to continue to improve themselves and solve more complex problems. These challenges provide cognitive stimulation that makes them more involved in the learning process and more motivated to complete each stage. These challenges not only increase students' focus but also strengthen their ability to think critically and solve problems.

Structured learning in stages also helps clarify the structure of the material being studied. According to several participants, the material taught through gamification is arranged in stages, from easy to difficult, in a clear and logical order (MH A01, MH A06). This makes it easier for students to follow the learning flow without feeling burdened by material that is too difficult at the beginning. In addition, the graduated level of difficulty helps students understand each concept in depth before moving on to more complex material. Thus, this stage of learning allows students to develop a better understanding gradually, helping them in a more effective and efficient learning process.

The tiered learning structure not only makes it easier to track progress but also fosters a sense of accomplishment as students face increasingly difficult challenges. Their understanding develops gradually, starting with simpler concepts and progressing to more complex ones. Research by Yan et al., (2022) support this idea, showing that well-structured gamified learning environments can enhance students' learning goals and outcomes by providing a structured approach to education. The design of gamified learning experiences should take into account the nuances of competition and challenge to effectively engage learners (Santhanam et al., 2016). This is reflected in the current analysis, where students noted that increasingly difficult challenges kept them engaged and motivated throughout the learning process.

CONCLUSION

The results of the study showed that most students showed a very positive perception of the use of gamification in the learning process. Students felt that gamification helped them improve their concentration, motivation, and understanding of the lecture material. This is evidenced by the average value of student perceptions which is in the "Very Good" category for aspects such as increasing focus, learning motivation, and the effectiveness of feedback provided through gamification. Specifically, students considered that gamification was able to simplify complex material and help improve their memory and understanding of learning content. This shows that gamification not only makes learning more interesting and enjoyable, but is also effective in supporting the in-depth learning process. In addition, the results of the interview showed that students also said that gamification made their learning experience more interactive and motivating. Students stated that learning with the gamification method provided a more enjoyable and interactive experience compared to conventional methods. They felt an increase in their ability to organize and integrate new information with existing

knowledge. Group discussions and direct feedback received through gamification were also recognized as being able to help students correct mistakes and deepen their understanding. Overall, gamification is considered capable of creating a more engaging learning environment, increasing student engagement, and facilitating more effective and efficient learning.

To better understand and optimize the use of gamification in higher education, it is recommended that further research be conducted with a deeper focus on specific aspects of gamification. For example, research could explore the long-term impact of gamification on student achievement, as well as how gamification can be tailored to meet different learning styles. Further research could also explore how gamification can be effectively applied in online learning, which is increasingly common in post-pandemic educational contexts.

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