

Analysis of The Need for Gamification of “Gamasura” for Understanding Local Culture In The Teaching of Pancasila Education on Cultural Diversity for Fifth Grade Elementary School Students

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Abstract: The issue of low understanding of local culture among elementary school students is a crucial concern for maintaining national identity. The purpose of this study is to analyze the need for GAMASURA gamification for the understanding of local culture among fifth-grade elementary school students. This research was conducted at SDN Sambikerep II/480 Surabaya. The participants in this study were 20 fifth-grade elementary school students. The method used was a questionnaire on the need for GAMASURA gamification. The results of this study show that all fifth-grade students at SDN Sambikerep II/480 Surabaya have digital devices for learning and use digital applications for learning. As many as 75% of students stated that they were interested in learning about the diversity of Indonesian culture. In addition, as many as 55% of students were interested in learning while playing with game elements, as many as 45% of students considered that the use of game elements in learning was very interesting, and as many as 60% of students thought that quiz games were the most popular type of game in learning. Therefore, learning using GAMASURA gamification is needed.

Keywords: Gamification, Local Wisdom, Cultural Understanding, Elementary School

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INTRODUCTION

Understanding local culture is considered important to maintain national identity because it allows students to cultivate a positive attitude towards learning, especially in learning Pancasila Education. Pancasila education is a fundamental instrument in shaping the character and identity of the Indonesian nation. Pancasila education not only aims to instill Pancasila values, but also to build democratic, active, participatory, critical, and responsible citizens (Rahmadia, 2024). Pancasila education serves as a foundation in forming attitudes and behaviors in accordance with the noble principles contained in Pancasila, as well as introducing and teaching citizens about their rights and obligations in the life of the nation and state. The main goal of Pancasila Education is to internalize the ideology of Pancasila as a view of the nation's life and build a deep understanding of the country's constitution as the basis for the life of the nation and state (Zalsabilah Idris et al., 2024).

Through a contextual approach, Pancasila Education learning is ideally able to build an inclusive space for students to explore their own culture as an essential element of national identity. In line with constructivist theory by Piaget and Vygotsky (1978) emphasizing that learning is the process of students actively constructing their knowledge through interaction with the environment and learning experiences. In this theory, the understanding of local culture in Pancasila Learning is built through real experiences and social interactions rooted in local culture.

Moreover, there is the support of the study by Dharma et al., (2025) which supports the integration of local culture in Pancasila Education with a high cultural effectiveness score with an effect size (ES) of 0.849. The impact on academic achievement is also high with (ES) of 0.872. Referring to the results of the study, the integration of local culture in Pancasila Education is increasingly recognized as an effective approach for students to explore their own culture, thereby contributing to the development of national identity.

However, in practice, the teaching of Pancasila Education in elementary schools still faces serious challenges. Conventional learning processes tend to be less interesting and uncontextual to students' daily lives, so their understanding of local culture is low. In addition, the lack of use of learning media makes it less attentive to learning (Puspita & Setyaningtyas, 2022). On the other hand, contextual learning with local wisdom of local

culture is effective in transferring knowledge to students (Puspita et al., 2021). This indicates the need for learning innovations that are able to combine cultural values with approaches that are in accordance with the characteristics of the digital generation.

Based on a preliminary study through a questionnaire with closed questions conducted by researchers at SDN Sambikerep II/480 located in Surabaya, it was found that several problems and phenomena that arose during the learning of Pancasila Education revealed that students only know local wisdom in general, without having a strong sense of curiosity, especially about the local culture of Surabaya. Students' understanding of the local culture of Surabaya is still limited to the Remo Dance which is taught through extracurricular activities, as well as Rawon as a typical Surabaya food.

On the other hand, the local wisdom of Surabaya culture is much broader, including traditions such as Earth Alms, Ocol Gulling, and Larung Ari-ari which are full of local wisdom values. The fact that most students only know the culture at a glance without understanding the meaning, purpose, and value inherent in it shows that there is a gap between the cultural potential of the region and the level of cultural literacy of the younger generation. This preliminary study also revealed the impact on learning outcome data and students' low understanding of local culture in their area (Kurniawati & Gunansyah, 2025). Research findings by Trapada et al., (2025), this condition also corroborates, with results showing that most students tend to still have a low level of understanding of local culture in the city of Surabaya. This condition is paradoxical considering that students should not only enjoy culture, but also participate as preservers of noble values in it (Tupriya et al., 2025). Grade VI students of SDN Sambikerep II/480 often propose to integrate game elements during Pancasila Education learning, especially local wisdom.

Sambikerep II/480 State School has several significant advantages in learning resources, support systems, and learning environments. Its advantages include the use of the Indonesian national curriculum that is familiar to students, the availability of teachers who understand the cultural and educational context of students, and support that ensures the sustainability and quality of education. However, schools also have drawbacks. Limited physical resources and facilities are a challenge, such as the lack of availability of structured teaching materials such as textbooks without the support of special learning media designed to introduce local culture more deeply (Chusniyah et al., 2025). In

addition, access to learning resources that are always up-to-date and relevant is an issue, especially in the context of rapid technological and information developments.

Learning resources, support systems, and learning environments in schools have advantages and disadvantages that affect the effectiveness of learning. On the plus side, support systems such as e-learning have been implemented to improve learning accessibility, but still face challenges in student engagement due to the lack of interactive elements (Isma et al, 2023). The existing learning environment is also often less flexible in adapting learning methods to the needs of students, especially in accommodating different learning styles. However, the drawback is that the learning resources used are still conventional and taught monotonous so that students easily get bored quickly. According to Suparmini et al. (2023) This method is often less interactive and not engaging enough for students in the digital age, so motivation to learn decreases.

One of the pedagogical approaches that is considered effective in increasing student learning motivation in the digital era is gamification. The term gamification appeared in the early 2000s (Marczewski, 2013), and has been the focus of increased attention since the early 2010s (Deterding et al., 2011; Werbach & Hunter, 2012). Gamification is the application of game elements and principles into non-gaming contexts, such as education, with the aim of increasing motivation, engagement, and retention of learning (Deterding et al., 2011; Werbach & Hunter, 2012). Described by Groh, (2012) as a "state of the art", the most up-to-date and widely used definition of gamification is the one mentioned earlier: "The use of game design elements in a non-game context" (Deterding et al., 2011). To avoid restricting gamification objectives unnecessarily, this definition expressly eliminates the possibility of goals. Instead, this definition relies on four semantic components (1) the game, (2) the elements, (3) the design, and (4) the non-game context. In addition, gamification aims to change people's behavior through increasing their motivation to act (Richter et al., 2015), technology-based learning media such as gamification is very relevant in achieving this goal because one of the characteristics of students is as a playful living being, which is the main basis for choosing gamification learning (Wicaksono et al., 2024). The game-based approach makes learning more contextual and in accordance with the characteristics of the students (Swandari & Paksi, 2025).

Studies have shown that gamification is capable of creating a more immersive and active participation-oriented learning experience (Hamari, J., Koivisto & Sarsa, 2014; Subhash & Cudney, 2018). The integration of gamification in education, especially Pancasila Education, is still a relatively new field. Previous research has highlighted more gamification in the fields of science, technology, and language (Surendeleg et al., 2014). Few studies have emphasized the development of gamification for understanding local cultures as part of diversity education (Pratama & Yusri, 2021). In fact, local culture has an important role in strengthening national identity and shaping students' character. Therefore, it is important to analyze the needs of gamification based on local culture, so that the learning media developed is truly in accordance with the social context, Pancasila values, and characteristics of elementary school students.

Within this framework, the concept of GAMASURA (Gamification Surabaya) is proposed as an innovation of gamification-based learning media that integrates elements of local culture with Pancasila values. The analysis of the need for gamification of GAMASURA is a crucial first step to identify student preferences, the relevance of local cultural materials, as well as effective game elements to increase engagement in learning. The results of this analysis are expected to be the conceptual basis for the development of gamification-based learning media that is contextual, interesting, and oriented towards strengthening the values of diversity in Pancasila Education.

METHODS

This study utilised a quantitative descriptive approach with a survey method. This approach was chosen to describe the initial requirements for developing GAMASURA gamification in Pancasila education, particularly in the subject of Indonesian Cultural Diversity in primary schools. Data collection was conducted in October 2025 using a closed questionnaire designed to identify students' needs for gamification-based learning media, including digital device preferences, learning interests, and desired game elements. The questionnaire was distributed to 20 fifth-grade students at SDN Sambikerep II/480 Surabaya through Microsoft Form.

The data obtained was analysed using descriptive statistics in the form of percentages to describe the trends in student responses to the use of gamification-based learning media. This needs analysis aims to determine the relevant features and elements of

GAMASURA gamification that are appropriate to the characteristics and needs of students in Pancasila Education learning. As supporting data, the researcher also conducted limited observations by observing the learning process in the classroom to obtain a contextual picture of the learning conditions and the use of the media used. The results of the observation were used to reinforce the interpretation of the survey data, not as the main source of data.

RESULTS

Table 1. GAMASURA Gamification Needs Analysis Questionnaire Results

Questions	Alternative Answers
What devices do you use to study often?	Computers Tablets Smartphone
How much time do you spend playing games every day?	There are learning videos There are interactive quizzes Learning while playing Interactive learning resources There is an award or appreciation during learning There is an element of play in the material
How often do you use digital learning media at school?	Every day Several times a week Several times a month Never
How interesting is the use of games in the learning process for you?	Very interesting Interesting Ordinary Unattractive
Have you ever used a learning game or app?	Yes No
What type of learning media do you like the most?	Books Video Image Games Others
What type of game do you like the most in the learning process?	Puzzle games Quiz Games Simulation games Strategy games
What topics do you want to learn through games?	Local Culture of Indonesia Indonesia's Cultural Diversity
Are you willing to try gamification-based learning media?	Yes No

Based on the results of the survey on the analysis of gamification needs of GAMASURA, the following data are known:

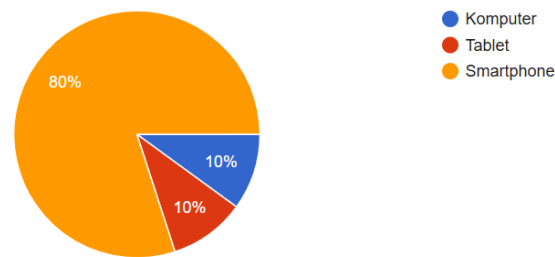


Figure 1. Student response to question number 1

Data analysis shows that smartphones dominate the devices that are often used for learning with a percentage of 80%, far surpassing tablets (10%) and computers (10%). These findings indicate a significant shift in the preferences of learning devices, with portable and multifunctional smartphones becoming the top choice. Ease of access, extensive internet connectivity, and the availability of various learning applications on smartphones are likely to be the main driving factors of this trend. Although computers are still relevant for tasks that require computing power and larger screen displays, as well as tablets that offer screen sizes in between, smartphones have emerged as the most popular and accessible learning devices.

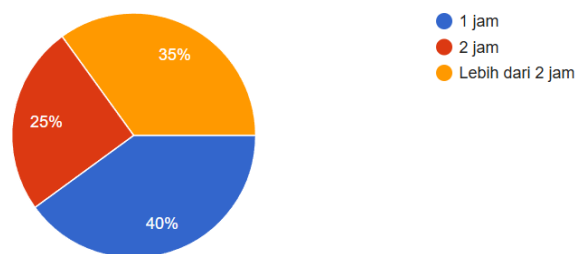


Figure 2. Student response to question number 2

Data analysis showed that the majority of respondents spent 1 hour (40%) playing games every day, followed by those who played for more than 2 hours (35%), and the rest played for 2 hours (25%). These findings indicate that gaming is a significant activity in the daily lives of respondents, with more than two-thirds of them spending at least 1 hour a day playing games. Although there were some who played 2 hours, the proportion was smaller than the other two groups. The relatively thin difference between the percentage who played 1 hour and more than 2 hours indicates a tendency to play games for a fairly long duration.

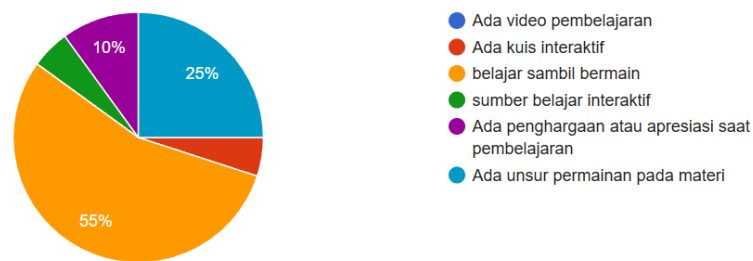


Figure 3. Student response to question number 3

Data analysis shows that the factors that make respondents interested in learning are diverse, with an emphasis on interactivity and gamification. Learning while playing is the biggest attraction (55%), followed by the learning videos presented (25%), and the element of appreciation or appreciation during learning (10%). The combination of these three factors indicates that respondents tend to prefer learning that is active, fun, and involves elements of play. Meanwhile, interactive quizzes (5%) and interactive learning resources (5%) got a lower percentage. Nonetheless, the low percentages in the interactive quizzes and interactive learning resources categories indicate that students not only want digital content, but also expect learning experiences that are recreative, immersive, and based on real games.

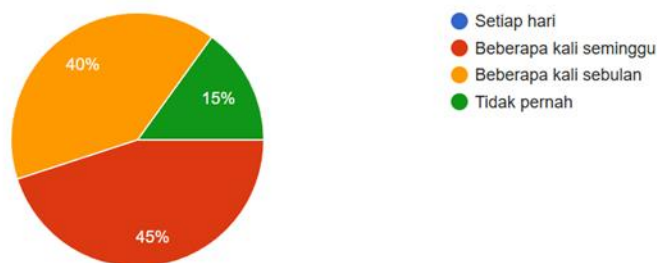


Figure 4. Student response to question number 4

Data analysis shows that the frequency of use of digital learning media in schools, it can be seen that the majority of respondents, i.e. (44%), use this medium several times a week, indicating that digital technology has become an integral part of their learning process. Meanwhile, (40%) of respondents stated that they use digital learning media several times a month every day, which indicates active involvement in the use of technology to support learning.

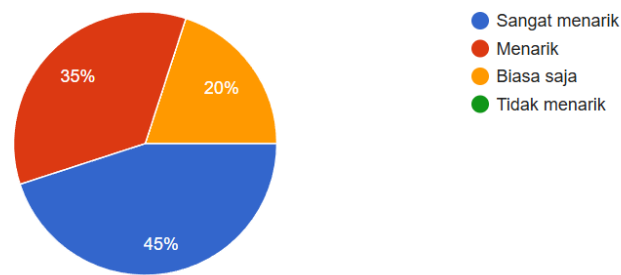


Figure 5. Student response to question number 5

Data analysis showed that the use of games in the learning process was positively received by the majority of respondents. Almost half of respondents (45%) found it very attractive, and most of the rest (35%) found it attractive. The combination of these two categories shows that 80% of respondents have a positive view of the application of games in learning. Only a small percentage gave a casual response (20%) and very few were not interested (0%). These findings strongly support the idea that gamification in education has great potential to increase student motivation and engagement. The high enthusiasm for the use of games in learning indicates that this method can be an effective strategy to deliver subject matter in a more interactive and fun way.

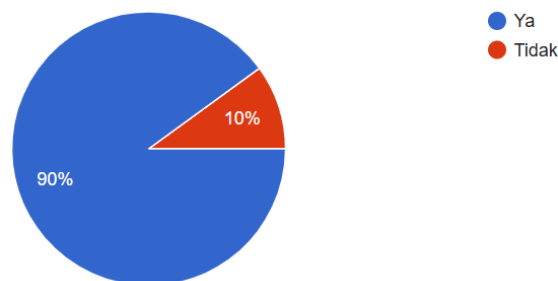


Figure 6. Student response to question number 6

Data analysis showed that almost all (90%) stated that they had used games or learning apps, while a small percentage of respondents answered that they had never used games or apps in learning (10%). These findings indicate that the use of games and apps in the context of learning is becoming a universal experience among the respondent group studied. This indicates the widespread acceptance and adoption of digital-based and interactive learning methods. The implications of these findings are significant, demonstrating the great potential of games and apps as effective means of improving learning experiences and outcomes.

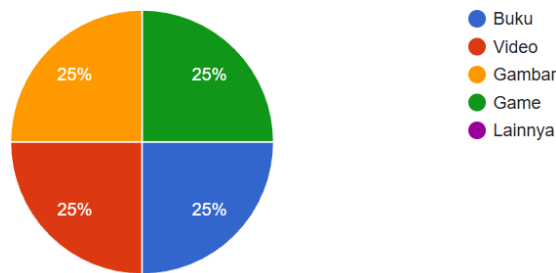


Figure 7. Student response to question number 7

Data analysis shows that all types of book, video, image, and game learning media have the same level of favorability, each by (25%). This equal percentage distribution indicates that there is no one type of media that is predominantly preferred by respondents. The findings also reflect that students' learning preferences are diverse and balanced, so that the use of a variety of learning media in an integrated manner has the potential to be more effective than relying on one type of media alone. Meanwhile, the other category was recorded at (0%), indicating that respondents consistently chose the four main types of media as the preferred learning source.

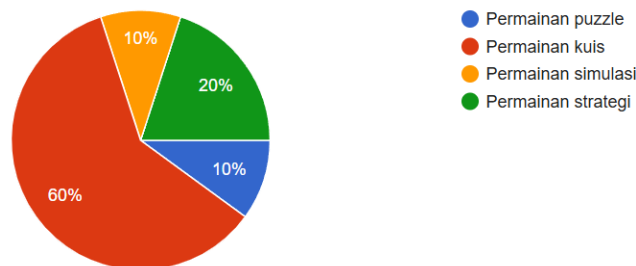


Figure 8. Student response to question number 8

Data analysis shows that quizzes are the most preferred type of game in the learning process, with a percentage of respondents reaching (60%). This figure is much higher than other types of games. Puzzle games and simulation games both get (10%), indicating a fairly balanced interest between these two types. Meanwhile, strategy games got (20%), indicating that some respondents also liked learning that required planning and decision-making. These findings confirm that quiz games are the dominant choice in learning, but game variations such as puzzles, strategies, and simulations are still needed to meet diverse learning preferences and create a more comprehensive learning experience.

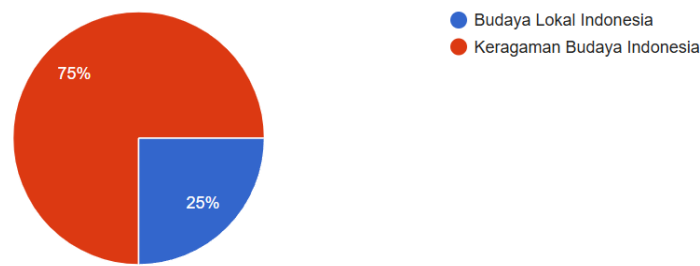


Figure 9. Student response to question number 9

Data analysis shows that as many as (75%) of respondents prefer Indonesian Cultural Diversity material, while only (25%) choose Indonesian Local Culture. This condition indicates that students tend to be more interested in cultural material that is general and broad, while attention to local culture is relatively low. These findings reinforce the urgency of research on the low understanding of local culture because it shows that local culture is still not the main focus in the learning process in elementary schools.

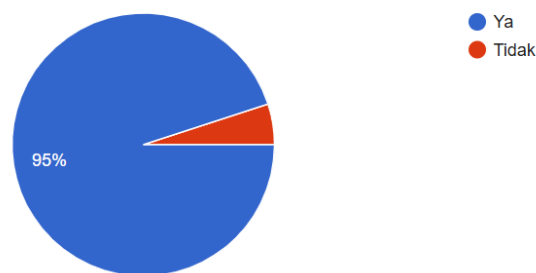


Figure 10. Student response to question number 10

Data analysis shows that the majority of respondents, namely (95%), stated that they are willing to try gamification-based learning media. This very dominant percentage indicates a very high level of acceptance and enthusiasm for the use of innovative learning methods in the student environment. Meanwhile, only (5%) of respondents stated that they were not willing, indicating that the rejection of gamification in learning is very low. These findings indicate that gamification has great potential to be applied as an effective and engaging learning strategy, as almost all respondents showed a positive attitude and readiness to use it in the learning process.

DISCUSSION

Based on the survey results, the device most often used by respondents for the learning process is smartphones, this finding is in line with research conducted by [Bataineh et al., \(2025\)](#) which states that the integration of smartphones into the educational process

reflects the philosophy of distance education, which emphasizes that students have the right to access educational resources without being constrained by a particular time, place, cost, or teaching method. It also encourages a more innovative and inclusive learning environment by supporting the concept of individualized learning, democratization of education, and active involvement of students in the learning process. In addition, [Clorion et al., \(2025\)](#) also revealed that the use of smartphones significantly increases motivation in the learning process, as students are more likely to use mobile devices to learn. This reduces additional costs, such as buying books, and saves considerable time, as information can be downloaded and obtained; so as to increase individual motivation to learn by reducing limitations in the learning process of Pancasila Education. Meanwhile, the survey results showed that tablets and computers were chosen in the same percentage, at (10%) each, indicating that the two devices have an equal role as learning support mediums. These findings are in line with research [Sung et al., \(2016\)](#) which states that tablets are effectively used to support multimedia-based learning and self-exploration, even if they are not the primary devices that are used intensively. Thus, even though the frequency of use is lower than smartphones, tablets and computers still have a strategic role as structural and in-depth learning support devices, including in the context of Pancasila Education learning.

The results of the data analysis showed that the time respondents spent playing games every day varied. These findings reflect the increasing involvement of students in digital games, which is in line with research by [Panjaburee et al., \(2025\)](#) which states that longer gaming time can have a positive impact on significantly increasing students' motivation to learn, with learning engagement acting as a mediator between play and motivational outcomes provided it is used in a balanced manner. In addition, research by [Sappaile et al., \(2024\)](#) shows that educational games if designed and organized well can increase motivation and learning achievement, because the elements of interactivity and game feedback help student involvement in the learning process. However, what is emphasized is the management of the duration and context of its use so that it does not become a distractor. These results emphasize the need for supervision and management of playtime in order to maximize the benefits of gaming activities in an educational context.

The results of the data analysis showed that the factors that attracted respondents to learn varied, with the majority choosing the concept of learning while playing as the main

attraction, followed by those who liked learning videos. These findings are in line with research by Yulianti et al. (2022) which reveals that learning while playing as a learning tool, not only provides a meaningful learning environment (Kiili, 2005), but also engaging and motivating students. This is because students from regeneration onwards tend to learn in a collaborative group environment, enjoy the use of technology, and prefer experiential and entertaining classroom activities (Tan et al., 2022). Interactive learning resources and game elements also captured respondents' attention, suggesting that interactivity in learning is highly valued. Research by Popp & Schuhbauer, (2023) emphasized that integrating game elements in teaching materials can increase students' motivation to learn. Appreciation or appreciation during learning was also noticed by respondents, suggesting that recognition can be an important factor in motivating students to learn. These findings emphasize the importance of integrating a variety of engaging elements in the learning process to improve student effectiveness and engagement.

The results of the data analysis showed that the use of digital learning media in schools was significant, with (45%) of respondents reporting using it several times a week and another (40%) using it several times a month. These findings are in line with research by Panjaburee et al., (2025) which emphasizes that the appropriate and balanced use of digital media can increase student involvement and motivation in the learning process. While (15%) of respondents have never used it. These findings indicate that the majority of students have been exposed to the use of digital media in the learning process, which can provide a more interactive learning experience. This is in line with the findings Hew & Brush, (2007) which states that the integration of digital technology in learning contributes to increased student engagement and motivation to learn when the technology is designed pedagogically and used proportionately in learning activities. These results indicate that digital learning media has become an integral part of educational practices in schools, supporting the effectiveness of more interactive and engaging learning for students.

The results of the data analysis showed that the use of games in the learning process was very interesting for students, with (45%) of respondents stating that they felt very interested and another (35%) feeling interested. These findings are in line with research by Panjaburee et al., (2025) which proves that digital game-based learning significantly increases students' learning motivation, with learning involvement acting as a mediator

between games and motivational outcomes. Although only (20%) of respondents rated the use of games as mediocre, the majority indicated that games can serve as an effective tool to enhance the learning process.

Based on the results of data analysis, it can be concluded that all respondents (90%) have used games or learning applications, while (10%) have never used them, which indicates high student acceptance of digital learning media. These findings are in line with the research of [Hamari, J., Koivisto & Sarsa, \(2014\)](#) which states that gamification and digital learning applications are effective in increasing student engagement and learning motivation. This indicates that the integration of technology in the learning process has been widely accepted and utilized by students.

The results of the data analysis showed that respondents' preferences for various types of learning media were evenly distributed, where books, videos, pictures, and games were chosen by (25%) of respondents each. These findings indicate that there is no one type of learning media that is more dominant than the other, so students have diverse needs and learning styles. Further research, as suggested by [Idowu, \(2024\)](#) which emphasizes the importance of personalizing learning based on media preferences, necessary to optimize learning effectiveness.

As a result of the data analysis, the majority of respondents (60%) liked quiz games in the learning process, followed by strategy games at (20%), while puzzle games and simulations were (10%) each. These findings indicate that students prefer games that are interactive and challenging, although variations in game types are still needed to accommodate students' different learning styles.

The results of the data analysis showed that (75%) of respondents were interested in learning about Indonesian Cultural Diversity through games, while (25%) of respondents chose Indonesian Local Culture. These findings indicate that students tend to be more interested in broad and diverse cultural topics, but interest in local culture remains albeit lower. This condition strengthens the urgency of developing local culture-based gamification media as an effort to increase cultural understanding and students' interest in local wisdom in learning Pancasila Education.

Based on the results of data analysis, as many as (95%) of respondents stated that they were willing to try gamification-based learning media. Only 5% said No. These

findings are in line with recent research by [Grab, \(2025\)](#) published in the *Shanlax International Journal of Educational* shows that the gamification component shows a significant increase in students' intrinsic and extrinsic motivation. In addition, another study by [Rahmi et al., \(2025\)](#) reveals that students may not be interested in understanding the material further, but are more interested in using gamification apps because of the many interesting features and feeling challenged to complete tasks in the gamification method, thus encouraging them to be more active and enthusiastic in the learning process. The findings confirm the potential of gamification in improving students' learning experiences and supporting their readiness to try this innovative learning medium.

CONCLUSION

Based on the analysis of the data that has been presented, it can be concluded that gamification of GAMASURA has a huge potential to be implemented in learning Pancasila Education. The majority of respondents showed a high enthusiasm and acceptance for the use of games in learning, with a strong preference for game types such as quizzes, puzzles, and strategy. A high interest is also shown in cultural topics that are broad and diverse, but interest in local culture remains despite the lower interest in learning through games. The fact that almost all respondents have used games or learning applications before further strengthens the argument that gamification can be an effective and relevant method in today's educational context. Although a small percentage are still unconvinced, the dominant support for gamification indicates that this method can significantly increase the motivation, engagement, and effectiveness of Pancasila Education learning, provided it is well designed and in accordance with the needs and preferences of students.

Based on the above conclusion, several suggestions can be proposed to maximize the application of gamification of GAMASURA in Pancasila Education learning. First, gamification game developer GAMASURA needs to prioritize the development of quizzes and strategy games because these types have proven to be the most in demand by respondents. Second, containing the topic of Indonesian Cultural Diversity presented with local wisdom to increase cultural understanding that shows high interest, can be used as the main focus in game content. Third, although the majority of respondents are enthusiastic, it is important to keep an eye on and further research the factors that cause a

small percentage of respondents to still be hesitant, so that they can be anticipated with a more inclusive and convincing game design. Fourth, further research needs to be conducted to measure the effectiveness of gamification quantitatively in improving learning outcomes in learning Pancasila Education, not just interests and perceptions. Finally, training for teachers on how to effectively integrate games into the curriculum and learning process is also critical to ensuring optimal and sustainable gamification implementation.

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