

Students' Perception On The Use Of The Bingo Game As a Gamification

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ABSTRACT

Conventional teaching techniques frequently result in a dull and uninteresting learning environment. The bingo game has proven to be one of the most useful and adaptable gamified teaching strategies available to educators. It may transform traditional learning exercises into dynamic experiences. This research explored students' perceptions on the use of the bingo game as a gamification at Madyathika Polytechnic. This research used a descriptive quantitative approach. The research involved 40 participants consist of the first semester students of the Madyathika Polytechnic. The data were collected through pre-test and post-test, questionnaires, observation and interviews. They were analyzed using the quantitative methods approach. The result of the research indicated that the paired samples t-test revealed a significant difference between pre-test and post-test scores ($p < 0.001$), indicating that the bingo game effectively improved participants' scores, with a mean post-test score of 48.5 compared to a mean pre-test score of 30.8. In addition, a significant majority of respondents (75%) found the bingo game helpful for understanding the material. Additionally, 85% reported a vibrant classroom atmosphere, and 75% noted clear instructions. The game fostered active participation, supported recall (70%), and reinforced learned concepts (65%). Overall, it is recognized as a successful educational tool promoting quick thinking through gamification.

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INTRODUCTION

A paradigm shift toward more interactive, technologically advanced learning settings has occurred in the educational scene in recent years. Innovative teaching strategies that encourage active students' engagement are gradually replacing or supplementing traditional teaching methods that mostly rely on lectures and rote memorization. In the context of education, student involvement has become one of the key factors affecting how well the teaching and learning process works. Active participation not only shows students' engagement but also promotes deeper understanding, critical thinking, and the development of teamwork. Nonetheless, a lot of teachers still have trouble getting students to participate on a regular basis, especially in English language learning classrooms where students sometimes deal with anxiety, insecurity, or low intrinsic motivation. These challenges typically result in low

participation, passive classroom behavior, and a reliance on teacher-centered techniques, all of which hinder students' capacity to learn and communicate.

One of the strategy to increase student engagement is the integration of gamification into classroom instruction. Gamification is the process of applying game mechanics, concepts, and elements to non-gaming contexts, like business, education, health, or social interactions, in an effort to increase motivation, involvement, and engagement. Deterding et al. (2011) in Merina et al (2025) define gamification as using game design elements, such as rewards, levels, and challenges, in contexts unrelated to games. Futhermore, Nicholson (2020) in Merina et al. (2025) states that gamification in education aims to increase student participation and engagement by making learning more interesting. Gamification is more than just playing games; it's about incorporating game elements to increase students' motivation, satisfaction, and sense of purpose in their education.

One alternative gamification approach to increase student engagement is the bingo game. Sannathimmappa MB, Nambiar V, Aravindakshan R. (2024) states Bingo game serves to boost cognitive function, enhance communication skills, and foster a critical mindset. Thus, rather than relying on passive memorizing, the utilization of a bingo puzzle game might prove advantageous as a self-learning instrument, fostering active learning and cultivating practical application, and critical thinking skills.

Furthermore, there are some studies conducted previously regarding this topic. The first study was conducted by Merina, D.R (2025) with the article entitled 'Enhancing Students' Learning Engagement Through Slido-Based Gamification in High School English Classes. This study investigated the impact of using the Slido platform as a gamification tool on student engagement in English language learning.

The second study was conducted by Wulantari, N.P (2023) with the article entitled 'The Role Of Gamification in English Language Teaching: A literature Review'. The literature review eamines the impact of of gamification in English language teaching (ELT) on motivation, engagement, and learning outcomes.

The third study was conducted by Amalia, T (2023) with the artcle entitled 'Improving Students' Motivation in Learning English through Gamification'. This study aims to improve students' motivation in learning English through gamification in online learning settings.

From all prior studies, it can be seen that they share the same focus, i.e., the implemetation of Gamification. Therefore, this study explore the students' perception on the use of bingo games as a gamification. It seeks to identify bingo game effectively motivate students and the perceptions of students regarding its implementation.

The implication of this research is to contribute the development of a more engaging, student-centered learning model that is consistent with the institution's objective of producing competent and motivated graduates ready for professional challenges.

METHOD

This research adopts a descriptive quantitative approach to investigate learner's perception on the use of bingo games as a gamification. The research involved 40 participants consist of the first semester students of the Madyathika Polytechnic. Purposive sampling strategy is used to select the participants that have implemented bingo game. T-tests (pre test and post test), questionnaires, interviews, and observations were used to gather data. T-tests is used to evaluate the impact of gamification on academic performance, students' score will be compared before and after the implementation of the bingo game as a gamification. The questionnaires used Likert scales and had ten closed-ended questions. Choices used are scale 5= strongly agree, scale 4= agree, scale 3= neutral, scale 2= disagree, scale 1= strongly disagree. The question of the questionnaire were administered to figure out students' perception towards the use of bingo game as gamification.

Meanwhile, 10 students were interviewed in order to obtain an in-depth explanation and description of the gamification of the bingo game. The form of the questions asked was an open-ended question that is still guided around students' perceptions about bingo game as a gamification. Data from observations were used to confirm findings from the interviews. The data were collected between Oktober until November. It involved 40 students. The respondents are the first semester students of Madyathika Polytechnic.

Denzin (1978) in (Damico & Tetnowski, 2014), offered an additional explanation of the triangulation method. In general, he defined triangulation as "the combination of methodologies in the study of the same phenomenon" (1978; p. 291). He identified four types of triangulation: across data sources (e.g., participants), across data collection methods (e.g., observations, interviews, document analyses), across and among different data collectors (e.g., investigators), and across different theoretical perspectives (e.g., constructivist vs. behaviorist). Methodological triangulation was employed by the author. The author used the various techniques mentioned above, including questionnaires and interviews.

FINDING AND DISCUSSIONS

The analysis of the pre-test and post-test scores was conducted using a Paired Samples t-test, which is appropriate for comparing the means of two related groups, such as the same group of students measured at two different times. The corresponding p-value is extremely small ($p < 0.001$). There is a statistically significant difference between the Pre-Test scores and the Post-Test scores.

Since the mean Post-Test score (48.5) is significantly higher than the mean Pre-Test score (30.8), it indicates that the bingo game as a gamification had a significant positive effect on the participants' scores.

The data from students' close-ended questionnaire was statistically calculated and analyzed descriptively. The interview data were all transcribed and analyzed for adding students' perception on the use of bingo game as gamification. The information gathered from the questionnaire and interview was utilized to describe how students felt about using bingo game as gamification and the advantages they experienced after doing so.

The questions for the questionnaire are:

No	Questions
1	Playing the bingo game helps me better understand the material being taught.
2	I can easily understand the instructions for playing the bingo game.
3	The bingo game makes learning more engaging.
4	Playing bingo encourages me to participate more actively in class.
5	Playing bingo helps me work along with friends
6	Playing the bingo game helps me remember what I've learned.
7	Playing bingo helps me reinforce the concepts I've learned.
8	Bingo usage promotes a happier and more positive learning environment.
9	Playing bingo helps me increase my ability to think quickly when analyzing material.
10	In general, I view bingo as an effective gamification technique for learning.

Table 1: The questions of the questionnaire

The choice for the answers is using Likert Scale from strongly agree, agree, neutral, disagree, and strongly disagree. The result of the questionnaires is below:

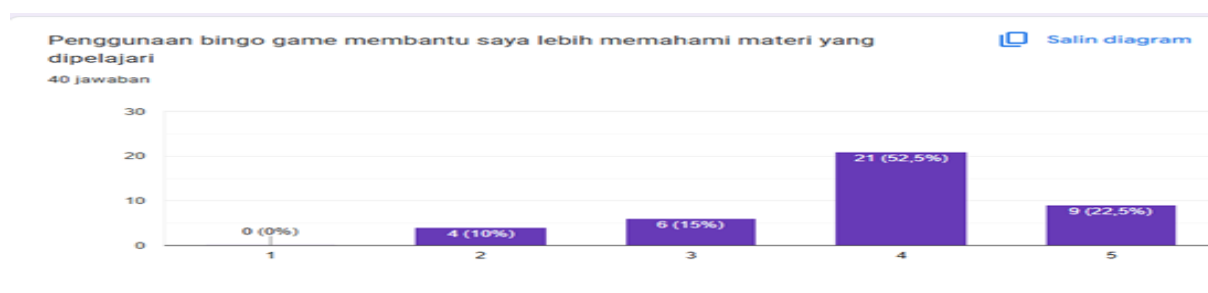


Figure 1. Analysis of how the bingo game is used can enhance understanding of material.

As shown in figure 1, A strong majority of the respondents found the bingo game to be helpful in understanding the material. 75% of respondents (30 out of 40) either Agreed (52.5%) or Strongly Agreed (22.5%) with the statement. No one Strongly Disagreed (0%), and only a small percentage Disagreed (10%). The highest frequency (21 responses, or 52.5%) is in the "Agree" category, indicating a generally positive perception of the game's effectiveness as a learning tool. In conclusion, the data strongly suggests that the bingo game is a successful and well-liked way to assist pupils in comprehending the subject they have been studying.

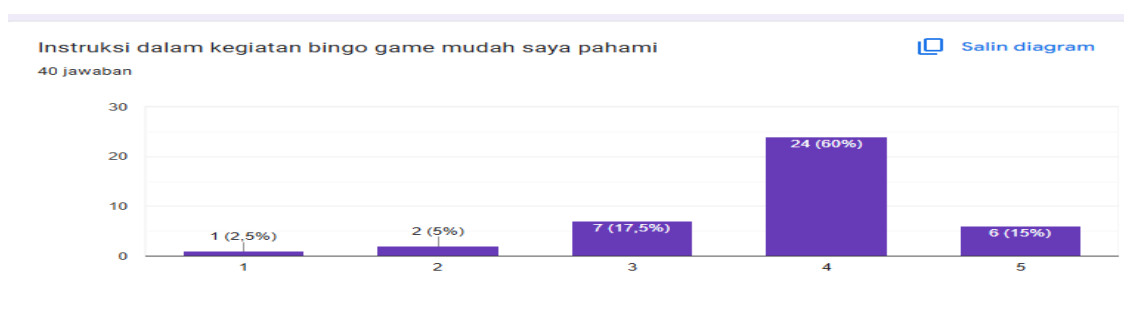


Figure 2. Analysis of instructions of the bingo game

As shown in figure 2, the data shows that the overwhelming majority of students agree or strongly agree that the instructions for the bingo game activity were easy to understand. 60% (24 students) chose 4 (Agree). 15% (6 students) chose 5 (Strongly Agree). A combined 75% of the respondents (30 out of 40) were on the positive side of the scale (4 or 5). Very few students found the instructions difficult. Only 2.5% (1 student) chose 1 (Strongly Disagree). Only 5% (2 students) chose 2 (Disagree). It can be stated that the data strongly suggests that the students considered the directions for the bingo game activity to be clear and straightforward to follow.



Figure 3. Analysis of the effectiveness of the bingo game in making studying more pleasurable

As shown in figure 3, A massive 85% of respondents (34 out of 40) rated their agreement at the highest two levels (4 or 5). 50% of respondents gave the highest possible score (5). 35% of respondents gave the second-highest score (4). Very few respondents chose the lower scores. Only 15% of respondents (6 out of 40) chose scores 1, 2, or 3. Only one person (2.5%) chose the lowest score (1). The majority of the data points to the effectiveness of the bingo game in making studying

more pleasurable for the respondents.



Figure 4. Analysis of students' participation in the use of the bingo game

As shown in figure 4, A significant majority of students agree or strongly agree with the statement. 37.5% (15 respondents) chose 4 (Agree). 37.5% (15 respondents) chose 5 (Strongly Agree). 75% of the respondents (30 out of 40) feel that the Bingo game encourages them to participate more actively in class. 15% (6 respondents) chose 3 (Neutral/Undecided). Only a small minority (10%) indicated some level of disagreement (Response 2). 0% chose 1 (Strongly Disagree). The data strongly suggests that students perceive the use of the Bingo game as an effective tool for increasing their active participation in the classroom.

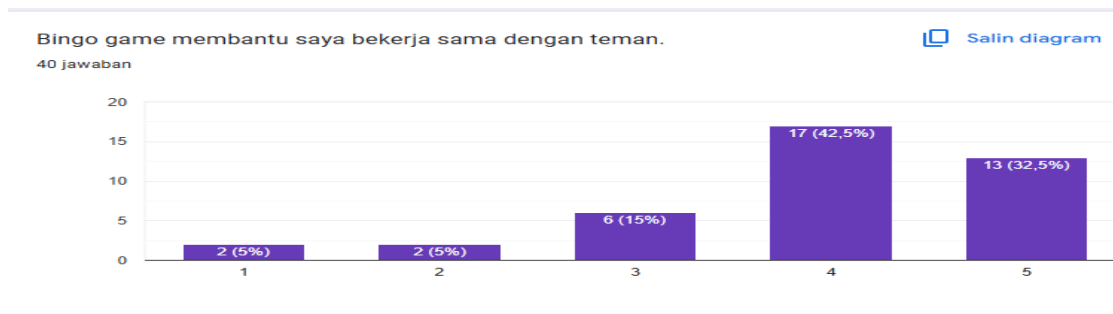


Figure 5. Analysis of the bingo game helps students cooperate with friends.

As shown in figure 5, The majority of students agree or strongly agree that the bingo game helps them cooperate with friends. 75% of the respondents selected "Agree" (4) or "Strongly Agree" (5). The most frequent response was "Agree" (4), chosen by 17 students, representing 42.5% of the total. Very few students disagreed with the statement, with only 10% selecting "Strongly Disagree" (1) or "Disagree" (2). The findings strongly suggests that students see the usage of the Bingo game as a useful method for improving their active involvement in the classroom.

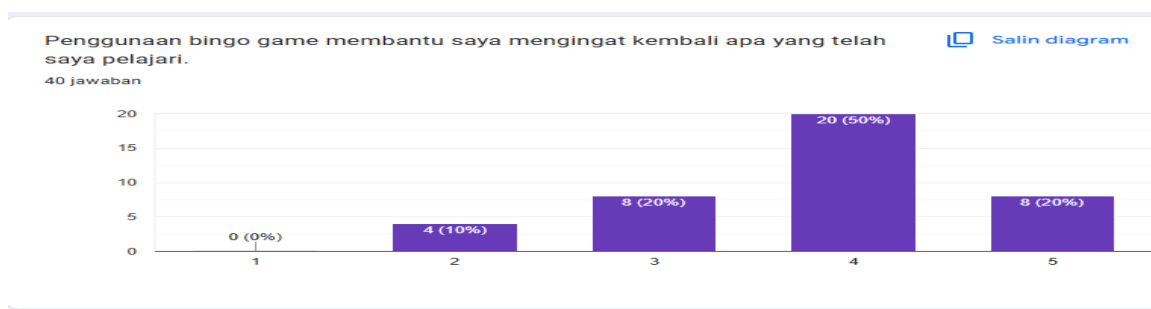


Figure 6. Analysis of the usefulness of the bingo game in memorizing the lesson

As shown in figure 6, half of the respondents (50%) Agree (Point 4) that the bingo game helps them recall what they have learned. A combined 70% of students gave a positive rating (Agree at 50% and Strongly Agree at 20%). Only 10% of students Disagree (Point 2), and 0% Strongly Disagree (Point 1). 20% of students remained Neutral (Point 3). We may conclude that the vast majority of students believe that the bingo game is a useful tool for reviewing and remembering what they have learnt.



Figure 7. Analysis of the bingo game in creating the learning concepts

As shown in figure 7, the overall sentiment is positive regarding the statement that the Bingo game helps strengthen learned concepts. A combined total of 26 respondents (65%) either Agree (47.5%) or Strongly Agree (17.5%) with the statement. The most frequent response was Agree (47.5%). 27.5% of respondents remained Neutral. Only a small minority of 3 respondents (7.5%) chose Disagree. No one chose Strongly Disagree. In summary, the evidence clearly indicates that students view the Bingo game as a useful tool for solidifying their conceptual grasp.



Figure 8. Analysis of the bingo game creates a positive classroom atmosphere.

As shown in figure 8, the vast majority of respondents agree that the use of bingo creates a livelier and more positive classroom atmosphere. A total of 34 respondents (85%) selected either Agree (4) or Strongly Agree (5). The most frequent response was Strongly Agree (5), which accounts for over half of all responses (57.5%). Very few students had a neutral or negative perception. Only 6 students (15%) rated the statement 3 or lower. In conclusion, the data clearly indicates that students believe bingo is a very successful way to create a more vibrant, positive, and engaging learning atmosphere in the classroom.



Figure 9. Analysis of the usage of the bingo game as highly beneficial in boosting students' ability in understanding the lesson

As shown in figure 9, A significant majority of students (77.5%) either Agree (Score 4: 42.5%) or Strongly Agree (Score 5: 35%) with the statement. This indicates a very positive perception that the Bingo game helps them think and respond quickly to the material. Only a small fraction of students held a neutral (17.5) or disagreeing (5%) opinion. No students strongly disagreed with the statement. The findings strongly suggests that the students regard the usage of the Bingo game as highly beneficial in boosting their ability to swiftly digest information and respond during the session.

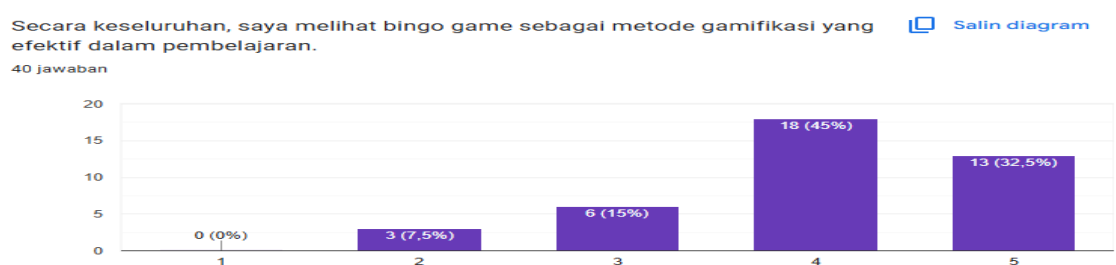


Figure 10. Analysis of the bingo game approach shows it is a very successful gamification tool.

As shown in figure 10, the vast majority of respondents agree that the bingo game is an effective gamification method in learning. 77.5% of students hold a positive view (ratings 4 and 5).

The highest single response category is 4 (Agree), which accounts for 45% (18 out of 40 respondents). Only 7.5% of students (3 out of 40) expressed disagreement (rating 2), and no student strongly disagreed (rating 1). It is clear from the data that students view the bingo game approach as a very successful gamification tool for their learning process.

The interview result indicates that the students find the game-based activity engaging and fun, which helps eliminate boredom and promotes a more pleasant educational atmosphere. The game improves their learning drive and competitive spirit, inspiring students to participate more actively. Students feel more certain and involved in class as a result of the activity, which promotes active participation.

The overall finding is that students view the use of the bingo game as a gamification technique for learning in a very good light. Across all examined dimensions, including comprehension, enjoyment, involvement, confidence, cooperation, review, concept reinforcement, interaction, and classroom atmosphere, the data consistently demonstrates a strong concentration of responses in categories 4 (agree) and 5 (very agree). In addition, the pre-test and post-test scores differed statistically significantly ($p < 0.001$), according to the paired samples t-test analysis. The bingo game as a type of gamification had a favorable impact on participants' results, as evidenced by the mean post-test score (48.5) being significantly higher than the mean pre-test score (30.8). The total number of respondents for each question is 40. The statistics overwhelmingly supports the efficacy of the Bingo game as a learning method. The high agreement percentages across all examined parameters imply that the students see the game as a valuable and effective tool that not only boosts knowledge and recollection but also significantly adds to a more pleasurable, confident, and collaborative classroom environment.

The challenges of using bingo games as a gamification

The usage of bingo games as a gamification techniques faces various challenges that may restrict their effectiveness in educational or practical situations. While bingo may promote and engage users, it generally focuses on superficial tasks, emphasizes completion for rewards rather than authentic engagement, and can result in loss of novelty over time. If the tasks do not align with learning objectives, they may distract rather than aid progress. Different task challenges can also cause participants to become dissatisfied and may result in inequities. The competitive aspect of bingo can also engender pressure and anxiety, further reducing engagement. To overcome these challenges, careful design and regular updates to bingo boards are necessary to maintain motivation and relevance.

While bingo can be a fun, simple, and motivating gamification tool, it requires careful design to avoid shallow engagement, inequity, misalignment with goals, and premature loss of motivation.

Effective implementation should include clear objectives, balanced tasks, meaningful rewards, and regular updates to keep the experience fresh.

CONCLUSION

Overall, students' perception of using bingo games as a form of gamification are very positive. The participatory and game-like character of bingo stimulates better engagement, making learning feel more pleasurable and less daunting. Even students who are generally less self-assured or driven remark that the exercise helps them stay focused, emphasizes important concepts, and encourages active engagement. Collaboration, fast thinking, and a sense of accomplishment when objectives are met are encouraged by the competitive yet relaxed atmosphere. Ultimately, the use of bingo as a gamified learning tool boosts both motivation and comprehension, proving its effectiveness as an instructional method that supports a dynamic and student-centered learning experience.

The findings can immediately guide teachers and curriculum creators on how to best integrate the bingo game into their courses to maximize its benefits and avoid its limitations. It helps them grasp the student-centered perspective. The research gives a basis for teachers to use alternative, interactive teaching approaches, especially if the results demonstrate a favorable association between the game's use and student satisfaction/engagement.

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