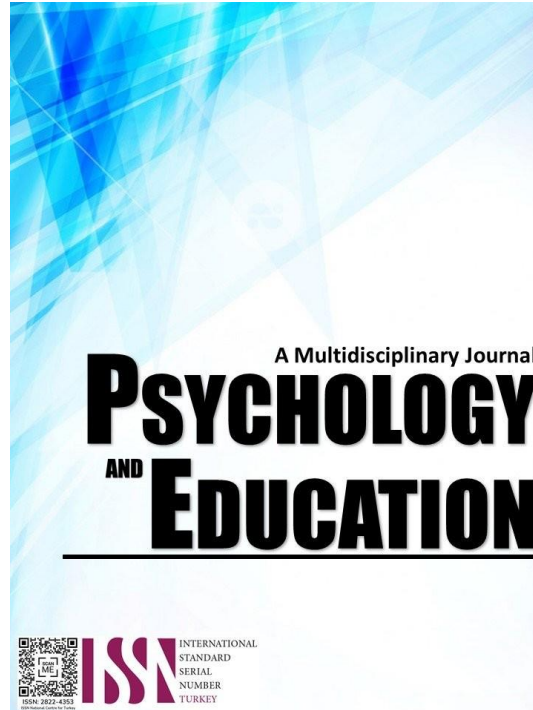


BENJAMIN LEGENDS: A GAMIFIED LEARNING EXPERIENCE IN MAPEH CLASSROOM



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Benjamin Legends: A Gamified Learning Experience in MAPEH Classroom

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Abstract

This study explored the gamified experiences of Grade 8 students in MAPEH classroom using game elements of the mobile game, Mobile Legend, Bang! Bang! (MLBB). This study used qualitative research design, and cluster sampling was utilized. 40 students were invited to participate in a semi-structured interview to describe their experiences in the gamified classroom. The interview results were gathered, analyzed, and coded into main themes such as: gamified elements, positive experiences in gamified classroom, negative experiences in gamified classroom and suggestions for improvement. This study proved that the use of gamification in the classroom provided fun and interesting experiences as compared to traditional classroom. The participants mainly have positive experiences in the gamified classroom. They described gamification as motivating, fun, engaging, and interesting. Additionally, the study showed that gamification was effective in increasing motivation and engagement level of the students in the classroom. The study recommended teachers to adopt the game elements of MLBB in other subject areas and grade levels.

Keywords: *gamification, gamified classroom, motivation, engagement*

Introduction

In today's generation, the learners are known as technology natives. They are able to explore technology with ease unlike other generations. This is the reason why learners were no longer motivated and interested with traditional teaching approaches like before (Putra & Priyatmojo, 2021). With this, teachers must adapt innovative teaching strategies to create meaningful content for students' learning (Mee et al., 2020). With the effort of teachers and researchers, many innovative teaching strategies and approaches were born today that make learning more interesting and fun (Kiryakova et al., 2014). One of these approaches is gamification that has become a widely popular trend in education.

Gamification is a strategy that combines game elements used in video or online games in a non-gaming environment. The distinctive feature of gamification includes the use of points, ranks, badges, leaderboards, and challenging tasks (Mee et al., 2020). Gamification is a combination of materials delivered by a teacher combined with game mechanics (Putra & Priyatmojo, 2021). In the classroom, the teacher provides learning tasks that lead to the accumulation of points and higher ranks once achieving the learning objectives.

To implement gamification in the classroom effectively, the teacher must be familiar with the new trends of video games or online games. One of the most popular games in Asia is Mobile Legends: Bang! Bang! (MLBB). This game is a Multiplayer Online Battle Arena (MOBA), which can be played by two teams with 5 members each (Kishimoto et al., 2021). Each player of the team will choose their heroes with their respective roles. The goal of the team is to defeat the base of opponent teams (Kishimoto, et al., 2021). Every win will increase their ranks. The researchers think that the game settings of MLBB can be gamified in the classroom.

Kiryakova et al. (2014) pointed out that the main problem of this generation of learners is the lack of engagement and motivation to participate in the learning process. Many studies in other countries believe that gamification increases motivation, interaction, and sense of competition among students in the classroom. Kiryakova et al. (2014) added that gamification is a powerful tool for improving student motivation and engagement by bringing about positive behavioral and attitude changes in the classroom.

MAPEH is one of the subject areas in the Philippines under the Philippines K-12 curriculum. It has four components namely, Music, Arts, Physical Education (PE), and Health. Since this is a subject area with a larger scope, teachers must gain the information and abilities needed to give students effective instruction (Dulay, 2022). With this, MAPEH teachers should use innovative teaching strategies to teach components of MAPEH effectively. Additionally, they should take into consideration applying gamification in MAPEH classes.

In the Philippines, there are still limited studies about the concept of gamification applied in the classroom and innovative teaching strategies in the subject area of MAPEH. This is the main reason why the researchers conducted this study. The researcher incorporated the game mechanics of MLBB into MAPEH classes which can be later used as a reference in preparing gamified materials and activities for students. Additionally, it can provide evidence on the effectiveness of gamification on students' motivation and engagement level.

Research Questions

This study aimed to investigate the learning experiences of students in a gamified classroom. Specifically, it sought to answer the following questions:

1. What gamified elements did the students like the most?
2. What are the positive experiences of students within gamified classroom?
3. What are the negative experiences of students within gamified classroom?

4. How can Benjamin Legends be improved to better meet the needs of the students?

Literature Review

The study of Lopez et al. (2022) examined the teacher's perception of gamification. The result showed that gamification in education motivates the students than traditional classroom activities. The researchers also highlighted that there is an increase in students' engagement in gamified-based activities (Lopez et al., 2022). However, the study mentioned that gamification can cause unhealthy competition in the classroom. They suggested that the teacher must monitor and control the gamification settings in the classroom to prevent the said problems.

Putra and Priyatmojo (2021) showed that many of the students concurred that gamification has a greater impact on teaching and learning process more than traditional methods. However, the study was applied in an English classroom only. The study also warned that some students might lose motivation and enthusiasm when getting low scores in gamified activities (Putra & Priyatmojo, 2021). With this, the teacher must make a strategy to bring healthy and fair competition to the activities. Additionally, Rincon-Flores, et al. (2022) concluded that gamification is an effective teaching strategy that increases participation and motivation. With this, teachers must consider applying gamification as an innovative teaching strategy because of its distinct features, especially in primary and secondary school. However, the researchers explained that gamification does not improve the performance level of students in the subject (Rincon-Flores et al., 2022). The findings of the study of Mee et al. (2020) showed that the use of gamification in the classroom can reduce anxiety of the students and can attract them to engage and participate in the activities. Additionally, the researcher suggested that the teacher must use gamified materials that are appropriate to the subject area (Mee, et al., 2020).

Rouissi et al. (2020) stated that boys focused on completing tasks and aiming for higher points than girls in a gamified setting. Additionally, group work is more fun and motivating than individual tasks. Moreover, the respondents of their study showed positive learning experiences in gamifying physical education classes. However, the study also highlighted that some of the students showed disappointment for failure to accomplish task or for not getting points or badges. Regarding this, the teacher must adjust the level of difficulty of the tasks based on the students' ability and capability.

In contrast, some studies pointed out the negative effects of gamification in the classroom. The study by Xiao (2022) concluded that a gamification strategy with a duration of 21 days and below has disadvantages for some students, especially introverts. The study recommended that the teacher should adopt eclectic teaching methods in gamifying the classroom. Caponetto et al. (2014) also highlighted that there was no significant effect in using gamification on students. It was confirmed by two studies who mentioned that using gamification has no difference with traditional methods in terms of performance and behavior (Bergmann et al., 2017; Faiella & Ricciardi, 2015). Furthermore, instead of focusing on the learning objectives, the students were busy collecting points and badges (Faiella & Ricciardi, 2015). The researchers suggested that teachers must meet student's learning needs in gamified learning environments and must add enjoyment to gamified activities (Faiella & Ricciardi, 2015).

Most recent studies applied the concept of Self-Determination Theory (SDT) in gamification. SDT is a highly influential theory of motivation by Ryan and Deci (2020) that has been applied in the field of health, sport, education, and work. According to SDT, a person needs a few basic psychological supports such as autonomy, competence, and relatedness for motivation to even exist (Ryan & Deci, 2020). Furthermore, Ryan and Deci described the three levels of motivation under SDT such as amotivation (lack of motivation), extrinsic motivation (motivation to earn rewards or avoid punishments), and intrinsic motivation (motivation for pleasure and satisfaction). Under the framework of SDT, there are four types of extrinsic motivation namely, external regulation (near amotivation), introjection, identified regulation, and internal regulation (near intrinsic motivation). According to Ryan and Deci, the degree of autonomy rises when the motivational source shifts from amotivation toward intrinsic motivation.

Gamification with the use of badges, points, ranks, and leaderboards may increase the motivation and engagement of students in the classroom since they are like playing games while learning. It can fulfill the basic psychological supports stated in SDT. Sailer et al. (2017) believe that elements such as leaderboard and ranking may increase students' competence by aiming for higher points and ranks compared to other students. Group competition might satisfy students' desire for a sense of relatedness to a team and badge choices can fulfill their need for autonomy (Sailer et al., 2017). Some studies believe that gamification has the potential to increase students' intrinsic motivation (Ede, 2022, Xu et al., 2021). However, Ryan and Deci (2020) warned the teacher not to control and force students into getting rewards as they can harm students' autonomy. With this, a lot of thought must go into how game elements are implemented (Ede, 2022).

However, there is an inconsistency in research findings whether gamification increases motivation or not at all. Different studies revealed that students' motivational levels were increased (Ratinho & Martins, 2023) when exposed to gamified learning experience (Sanchez et al., 2022, Segura-Robles et al., 2020; Zainuddin, 2018; Al-Malki & Meccawy, 2022; Rincon-Flores et al., 2022). The students were motivated to earn badges, to receive points, and to compete with their classmates (Zainuddin, 2018). Moreover, Ratinho and Martins (2023) recommended to future researchers to have a longer period of exposure of students to gamification so that they will not get bored.

In contrast, different studies showed no improvement on the motivation level of students in gamification (Groening & Bennewies,

2019; Mekler et al., 2017; Van Roy & Zaman, 2018). Groening and Bennewies (2019) revealed that there was no significant difference in the motivation level of students in both groups but there was an increase in engagement in the experimental group. Mekler et al. (2017) stated that gamification was not effective in increasing intrinsic motivation but can be effective in extrinsic motivation.

With the inconsistency of the research findings, there is still a need to prove the effectiveness of gamification in the classroom in terms of motivation and engagement. Moreover, there are limited studies about gamification in the Philippines as well as the gamification experiences in MAPEH subject. Hence, the researchers sought to investigate the learning experiences of Grade 8 students in applying gamification in MAPEH classes.

Methodology

Research Design

The study utilized qualitative research design patterned from previous study that employed qualitative learning experience of students in gamification (Doomun & Greunen, 2022). Qualitative research provides deeper understanding and exploration of real-world issues (Korstjens, 2017). Qualitative research collects the views, behaviors, and experiences of people (Tenny et al., 2022). In this study, the researcher's roles include both data collection and data analysis (Putra & Priyatmojo, 2021). The researchers analyzed the learning experiences of students in gamification through semi-structured interviews.

Participants

A total of 634 Grade 8 students of Benjamin B. Esguerra Integrated School were chosen as the population of the study. Additionally, 40 students were chosen as samples of the study. Clustered sampling was utilized to determine the sample of the study. 10 class sections of Grade 8 were served as clusters. The researchers randomly choose 4 participants per each section, and they were invited for a semi-structured interview at the end of the school year.

Instruments

A semi-structured interview was used to describe and to determine the qualitative gamified experiences of the students with the gamified classroom. Selected students were invited for the one-on-one interview for about 10 – 15 minutes, and it was audio-recorded. Four open-ended questions were created to allow the students to freely express their thoughts. The interview questions were adapted to the study Rouissi et al., (2020) in which they investigated the gamified experiences of students in PE classes.

Procedure

The researchers asked permission from the principal of BBEIS to conduct the study. After the approval, the researchers prepared the materials needed for the gamified classroom before the start of school year 2023 – 2024. The study was conducted at Benjamin B. Esguerra Integrated School within the school year 2023-2024, from July 2023 to May 2024. The participants of this study were Grade 8 students since the researchers were teaching in Grade 8. It was conducted during MAPEH classes only.

At the beginning of the school year, the researchers explained the purpose of the study to the students. However, the researchers did not describe it completely so that it cannot influence the result of the study. The researchers used the game settings of the game, Mobile Legends: Bang! Bang! naming the gamified classroom as “Benjamin Legends.” No online educational tools were used in this study. The gamification elements applied were leaderboards (rankings per quarter), points (printed diamond points), hero name (group name), group powers, and badges (Warrior to Mythic badges). The students were provided individual and group activities aligned with the most essential learning competencies of MAPEH 8 subject. The students collected diamond points during class recitations and participations, group activities, and individual activities. The ranks are based on the number of diamond points earned at the end of the quarter.

At the end of the school year, the researcher conducted a face-to-face interview with the selected 40 students of the study. The inclusion criteria of students were: (1) voluntary participation with signed informed consent and assent forms; (2) high percentage of attendance. Their parents were informed about the date and time of the interview for their children. The researchers analyzed the learning experiences of students in a gamified classroom through semi-structured interviews. The interview results were analyzed and coded into themes and sub-themes for further discussions. The participants were given simple tokens as appreciation

Ethical Considerations

The researchers pursued approval from the principal of BBEIS for conducting the study and conducting an interview. The researchers developed informed consent forms and distributed them to the parents/guardians of the qualified participants. The content of the informed consent form includes: (a) purpose of the study; (b) procedures; (c) duration; (d) voluntary participation; (e) risks; (f) benefits; (g) confidentiality; (h) sharing of research findings; and (i) contact information. The researchers gave them a duplicate copy of the form. Moreover, the researchers discussed the content of the assent form to the participants. The assent forms were distributed to the participants of this study. Voluntary participation was objectively upheld. The researchers gave them a duplicate copy of the form. At the beginning of the school year, the researchers explained the purpose of the study to the students. However, the researchers did not describe it completely so that it cannot influence the result of the study. To ensure the confidentiality of participants' information, the



researchers used identification numbers instead of their names in all documents, especially in the conduct of the face- to-face interview. The researchers carefully analyzed the data collected from the interview for consistency.

Results and Discussion

This section presents the results derived from the semi-structured interview. The results from the semi-structured interview were analyzed and coded into four themes: Gamified Elements, Positive Experiences in Gamified Classroom, Negative Experiences in Gamified Classroom, and Suggestions for Improvement. Four themes with sub-themes are presented in Matrix 1. It provides discussion of the themes and sub-themes from the analyzed data. The participants’ answers based on the interview questions were analyzed and discussed by the researchers.

Gamified Classroom Themes and Sub-themes

Table 1 shows themes and sub-themes coded during semi-structured interview. The themes were described based on the interview questions. Theses includes Gamified Elements, Positive Experiences in Gamified Classroom, Negative Experiences in Gamified Classroom, and Suggestions for Improvement.

Notable answers of the participants during the interview were coded into sub-themes. On the first theme, Gamified Elements, sub-themes were categorized into diamond points, ranking (leaderboard), group power, group selection, and use of badges (emblem). For the second theme, Positive Experiences in Gamified Classroom, sub-themes were motivation, competition, cooperation, enjoyment, fun, and confidence. For the third theme, Negative Experiences in Gamified Classroom, the sub-themes were pressure, lack of time, conflict, and loss of diamond points. For the fourth theme, Suggestions for Improvement, the sub-themes were weekly monitoring and longer preparation.

Table 1. Benjamin Legends Themes and Sub-Themes	
Themes	Sub-Themes
Gamified Elements	Diamond Points
	Ranking (Leaderboard)
	Group Power
	Group Selection
	Use of Badges (Emblems)
Positive Experiences in Gamified Classroom	Motivation
	Competition
	Cooperation
	Enjoyment
	Fun
	Confidence
Negative Experiences in Gamified Classroom	Pressure
	Lack of Time
	Conflict
Suggestions for Improvement	Loss of Diamond Points
	Weekly Monitoring
	Longer Preparation

Gamified Elements

The study showed that most of the participants enjoyed the use of gamified elements in the classroom. They like the gamified elements because of their own unique features. This study proved that the use of gamification in the classroom provided fun and interesting experiences as compared to traditional classroom. The most common answers of the participants were the utilization of diamond points followed by ranking (leaderboard), group power, group selection, and use of badges.

With respect to the utilization of diamond points, some of the participants highlighted that:

“The use diamond points for recitation and activities in MAPEH class are fun and enjoyable.” “Collecting diamond points gives us interesting experiences while studying.”

For ranking sub-theme, one participant stated that:

“I love the announcement of Local and Global Ranking because it boosts my confidence to study harder.”

Also, for Group Power sub-theme, two participants commented:

“I like group power the most because it helps our group to collaborate more and to win group activities.” “Group power is so unique... they allowed us to make a strategic decision in group activities.”

For Group Selection sub-theme, two participants stated that:

"We have the freedom to select group members of our choice."

"I know my group members... their skills and talents that can be useful in some MAPEH activities."

Furthermore, for Use of Badge sub-theme, one participant stated that:

"I feel like I am playing Mobile Legends while I am studying MAPEH subject because of the emblems."

In line with SDT by Ryan and Deci, the concept such as the basic psychological supports was evident in gamified elements used in the MAPEH classroom. Autonomy was present in the group power sub-theme, competence for the utilization of diamond points and ranking (leaderboard) sub-themes, and relatedness for group selection sub-theme. These are foundations that lead to increased motivation level of the students.

Positive Experiences in Gamified Classroom

The study showed that the participants have positive experiences in a gamified classroom. Motivation and competition were the most discussed sub-themes by the participants during the interview. The participants were motivated by factors such as rewards, interest, and enjoyment. The participants were very interested in the gamified classroom that they are just like playing online or video games. There was a great advantage on the use of MLBB game elements since MLBB was one of the most popular mobile games in the Philippines. Four comments were extracted from the interview that highlighted this scenario.

"Benjamin Legends encourages me to study harder... I am aiming for higher ranks every season." "I like earning diamond points... I am eager to recite and participate in group activities."

"I love the competition in MAPEH class, we want to win the activity in order to earn diamond points and to achieve higher rank in leaderboard."

"It is very unique experience... all of my classmates are participating in class recitation in order to get diamond points."

For other sub-theme such as cooperation, one participant explained that:

"I am so happy that my groupmates are cooperative during group activities... we wanted to become champion in every activity."

For enjoyment and fun sub-themes, two participants said that:

"MAPEH classes become enjoyable compared to other subjects because of Benjamin Legends."

"Benjamin Legends is so fun and interesting... I am waiting for MAPEH classes every day to get diamond points."

Furthermore, for confidence sub-theme, one participant commented that:

"Because of Benjamin Legends, I am now confident to recite so that I can earn more diamond points."

Negative Experiences in Gamified Classroom

In this study, there were still negative experiences in gamified classroom despite all positive experiences shared by the participants during the interview. The sub-themes are loss of diamond points, pressure, and conflict. The loss of diamond points was the major negative experience of some of the participants in this study. The participants were responsible for their diamond points earned. They collected and compiled them for ranking every season (quarterly). However, some of the students lost or misplaced their diamond points that resulted in disappointment. Some of the participants commented on this situation:

"I felt sad when all my diamond points were lost... My ranking was affected." "I misplaced my diamond points... it is so hard to recover."

Two categories were described by the participants for the sub-theme, pressure, such as academic pressure and activity pressure. With academic pressure, one participant commented on this issue:

"I am at the higher ranking in the previous season... now I am so pressured to retain my rank on the next season."

On the other hand, one participant highlighted the issue regarding activity pressure:

"We have only 1 to 2 days preparations for some group activities... I think it is not enough to give our best."

Furthermore, for the conflict sub-theme, two participants stated that:

"Some of the members were absent during the group activity... We have lack of members to win the activity." "Sometimes, other groups were teasing each other every time they won the group activity."

Suggestions for Improvement

The students commented that the diamond points must be monitored weekly to prevent the loss of them for ranking. Most of the participants suggested that:

“Every Friday, the leader will collect the compiled diamond points of their members for monitoring.”

Moreover, all the participants agreed on longer preparation of group activities. This will help them execute the skills effectively, and they can earn diamond points from it. For this issue, one participant stated that:

“I think that the teacher must give us longer preparation for group activities... We want to present well-executed activities in MAPEH class.”

These were only suggestions stressed during the interview. All participants agreed that their gamified experience was positive. Some participants highlighted that:

“Benjamin Legends was so fun and interesting... I hope there will be Benjamin Legends on Grade 9 and 10.” “I have no other suggestions... we are thankful for this activity because it is so fun.”

Conclusions

The study concluded that the use of gamified elements in the classroom was fun and interesting among the students as compared to traditional classroom. This conclusion was similar to the study of Putra and Priyatmojo (2021). The students enjoyed collecting diamond points the most since it was the requirement to achieve higher ranks. The game features used in the classroom from the mobile game, MLBB was effective since most of the students were familiar with the game. The researchers strongly recommended these gamified elements for innovative classroom strategies and future research.

Moreover, the study showed that participants have positive experiences with gamified classrooms. The result was similar to the study of Rouissi, et al. (2020). Gamification was fun, interesting, motivating, and engaging because they felt like they were playing online or video games in the classroom. Based on the interview, the basic psychological support from SDT was fulfilled by the participants because of the gamified elements used in the classroom. The gamified element, group power, showed a need for autonomy since they have the freedom to choose power. Competence was seen from the utilization of diamond points, ranking and group activities. They must compete with their classmates to achieve higher ranks at the end of the season/quarter. While relatedness was evident in group selection and group activities. The fulfillment of these three psychological supports led to motivation and voluntary engagement (Ryan & Deci, 2020). The results showed evidence on the presence of basic psychological supports in the gamified classroom as mentioned by Sailer et al. (2017).

Based on the findings, the researchers concluded that gamification increased motivation of the students. The participants were motivated by different factors such as rewards, interest, and enjoyment but the most common was rewards such as diamond points and ranking. Therefore, it can be concluded that extrinsic factors were more evident than intrinsic factors. The participants were motivated to collect points and badges and to achieve higher ranking.

The study also showed limited negative experiences of the participants in the gamified classroom. Loss of diamond points was the most negative experience of them. Similar with the study of Rouissi, et al. (2020), few of the participants showed frustration because of loss of diamond points. Frustration might lead to demotivation of the students. To prevent these cases, the researchers recommended monitoring the points earned by each student weekly. This allowed them to decrease frustration when losing or misplaced points. Another negative experience was lack of time for group activities. The time allotment for every subject area in secondary public schools in the Philippines has 50 minutes only per day. The students need ample time to finish or complete the given tasks or activities to execute the skills effectively. With this, it was recommended that the group activities must be given 2 to 3 days preparations for them to plan, collaborate with their groupmates effectively.

Overall, the study showed that gamification was effective in increasing motivation and engagement level of the students in the classroom. Additionally, since this study was conducted only for Grade 8 students and during MAPEH classes only, teachers must explore utilizing the gamified elements used on this study with other grade levels and subject areas.

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