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GAMIFICATION-BASED TECHNIQUE AND MOTIVATION OF LEARNERS IN ENGLISH: AN EXPERIMENTAL STUDY

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Abstract

The dismal performance of the Philippines in the recent Programme for International Student Assessment (PISA) results compels teachers to implement innovative techniques that will motivate and engage students to learn in class. This study employs an experimental research design to identify the effect of the Gamification-Based technique on the motivation of the Grade 8 learners of Esperanza National High School for 2024-2025. It investigated the level of acceptability of the gamification-based technique as assessed by the experimental group in terms of its component, dynamics, and mechanics; the extent of intrinsic and extrinsic motivation of learning English; and the significant difference of motivation between the experimental and control group, then relationship in the acceptability of the gamification-based technique to the motivation of grade 8 learners. The level of acceptability of the gamification-based technique is very satisfactory, as assessed by the experimental group. Learners become more motivated to perform in the class after receiving badges and moving up in the leaderboard as rewards for completing the tasks and getting good grades on the quizzes. The intrinsic and extrinsic motivation in learning is significantly higher in the experimental group than in the control group. Gamification-based technique positively influences the motivation of students to learn English. The more the students like and accept the gamification-based technique used in the class, the more motivated they become to participate actively.

Keywords: Gamification-Based Technique, Motivation, Learners, Intrinsic, Extrinsic.

Introduction

The Department of Education is constantly faced with challenges concerning students' behavior and academic performance. The dismal standing of the Philippines in the 2018 and 2022 Programme for International Student Assessment (PISA), which placed the country at the forefront of shame and embarrassment, being the 3rd from the bottom among the 81 countries tested, is enough reason for teachers to implement innovative techniques to motivate and engage their learners. The battle is halfway won if teachers motivate their students to learn in class. Traditional teaching methods often fail to resonate with digitally savvy students, necessitating innovative approaches such as gamification-based techniques in the 21st-century classroom.

One of the most difficult tasks for teachers is addressing the needs of unmotivated students as their lack of engagement significantly complicates the teaching process and limits learning outcomes. As noted that motivation and learning behavior are key determinants of academic achievement, with intrinsic and extrinsic motivations contributing to students' engagement (Motevalli et al., 2020). In response to the limitations of traditional teaching methods in engaging digital-age learners, gamification has emerged as a promising strategy. Educators can leverage students' natural tendencies for achievement, competition, and social interaction by integrating points, badges, and leaderboards, creating a more engaging learning environment (Dicheva et al., 2017). Research conducted in China further supports this approach, showing that gamification enhances student engagement by increasing the enjoyment of learning activities. Valdez and Protacio (2025) also posited that higher emotional engagement towards learning English makes the students more likely to be motivated and see learning English as a positive experience.

In the Philippines, a study by Pacturan et al. (2024) found a positive correlation between the integration of gamified techniques and students' academic performance, highlighting both the benefits and challenges educators face in implementing these strategies. In Esperanza National High School,

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research by Taladtad (2023) highlighted that students' passive learning behaviors challenge teachers seeking to engage and motivate them. Taladtad suggested that teachers should implement adaptable learning strategies to capture the interest of passive and unmotivated learners. Therefore, teachers relentlessly seek ways to motivate and engage their learners. A lack of enthusiasm, engagement, and progress in learning characterizes a classroom of unmotivated learners.

Research has been done on the influence of gamification on student motivation and performance when learning English as a foreign language in higher education, how gamification can improve EFL students' writing abilities, and how gamification can help students learn the language through mobile devices: high school students' perception, gamification in education: a case study of using gamification approach in the acquisition of English verb tenses, and gamification approach in language (Baytekin & Avara, 2023; Huseinović, 2024; Liepa, Semeneca, & Olehnovica, 2021; Llabrés Estelrich, 2022; and Pingmuang, & Koraneekij, 2022; Gabio & Protacio, 2025).

However, limited studies have been conducted locally using gamification-based techniques to increase students' motivation in high school. Moreover, no experimental undertakings that account for its effectiveness among grade 8 students have yet been explored in Esperanza National High School.

Hence, this study was conducted to identify the level of acceptability of gamification-based technique in terms of components, dynamics, and mechanics; the level of motivation of learners between the control and experimental groups; the significant difference in the motivation of learners between control and experimental groups; and the significant relationship between the acceptability of the gamification-based technique and the motivation of learners.

Methodology

The study employed a quasi-experimental design and was conducted among the randomly selected grade 8 students from Esperanza National High School. There were 45 students in the experimental group, and another 45 students in the control group. A researcher-made questionnaire was utilized to gather data from the respondents, was validated, and underwent pilot testing before it was utilized among the respondents. A permission letter was sent to the Schools Division Superintendent and the school principal before the experimentation process and survey among the respondents were conducted. The responses of the respondents were gathered, tallied, computer-analyzed, and interpreted using mean to determine the level of acceptability of gamification-based technique and motivation, Mann-Whitney U test to find the significant difference in the motivation of learners between control and experimental groups, then the Spearman rho test to find the significant relationship between the acceptability of gamification-based technique and motivation of learners.

Results and Discussion

The following tables present the level of acceptability of the gamification-based techniques based on the three elements: components, dynamics, mechanics, and learners' motivation. They also show the significant difference in motivation between the control and experimental groups and the relationship between the gamification-based technique and learners' motivation.

Table 1: Acceptability of the Gamification-Based Technique in Terms of Components, Dynamics and Mechanics

	Indicators	Mean Rating	SD	Description
1.	Game Elements/Components	4.23	0.38	Very Satisfactory
2.	Dynamics	4.20	0.36	Very Satisfactory
3.	Mechanics	4.42	0.42	Excellent
	Mean	**4.28**	**0.41**	**Very Satisfactory**

The three factors of the gamification-based technique, which are game components, dynamics, and mechanics, had an overall mean of 4.28, which is described as very satisfactory (M=4.28, SD=0.41). Mechanics got the highest mean of 4.42, which is described as excellent, while the game elements/components and dynamics are both described as very satisfactory, with means of 4.23 and 4.20, respectively. These data showed that the respondents viewed the gamification-based technique as very satisfactory. These data showed how the learners appreciate the gamification-based technique, enabling them to be emotionally engaged in the lesson while learning.

Game-based learning effectively engages students in classroom activities (Murshidi et. al, 2024). Lamprinou and Paraskeva (2015) stated that the use

of gamification in learning and instructional design can improve student motivation. By incorporating gamification-based techniques into teaching and learning, it is possible to influence students' motivation and engagement, both of which are critical for improving academic performance.

Therefore, it is advised that teachers in the classroom incorporate both collaborative and competitive elements to accommodate various learning styles and match the mechanics of their activities to their learning objectives. Group challenges foster collaboration, while leaderboards can foster competition. However, competition should be counterbalanced with encouragement and supported by significant rewards to maintain students' motivation and engagement, which are critical to learning. Do et al. (2024) support this notion and state that, because they are simple to integrate into popular learning management systems, leaderboards are a helpful gamification-based technique to enhance learning.

Learning through association is the basis of the gamification-based technique's synchronization with the Stimulus-Response (S-R) Theory of Classical Conditioning. According to Park University (2024), psychology has a solid basis for the effectiveness of gamification. Gamification activates the reward system in the brain, including incentives and recognition like digital badges and points, boosting inspiration and supporting good behavior.

Gamification in education provides a potential solution to declining student motivation and engagement. Research indicates that collaboration, competition, feedback, self-expression, and control can positively impact intrinsic motivation (Luarn et al., 2023). Leaderboards, badges, and point systems encourage students to interact more fully with the material by clearly recognizing accomplishments. These statements align with Do et al. (2024), who explained that leaderboards are a helpful gamification tool for enhancing learning, partly because they are simple to integrate into popular learning management systems.

As Flores-Aguilar et al. (2023) state, incorporating game or video game elements into non-gaming contexts influences players' behavior through the motivation it inspires. Also, Sappaile (2024) stated that students who participated in gamification-enhanced learning demonstrated higher motivational increases than those who received traditional instruction. Teachers in the 21st-century classroom should include these gamification elements to make learning more engaging and fun. In this scenario, learners will be more motivated to come to school, stay in school, and learn every day.

Table 2: Intrinsic Motivation of Learners in Learning English Between Control & Experimental Groups

	Indicators	Control Group			Experimental Group		
		Mean	SD	Description	Mean	SD	Description
1.	I enjoy leaning in English.	4.71	0.60	Very High	4.97	0.62	Very High
2.	I enjoy working with my classmates during group activities.	4.29	0.79	High	4.47	0.76	Very High
3.	I like difficult and challenging assignments.	4.07	0.81	High	4.27	0.75	High
4.	I am interested in learning new things	3.78	0.82	High	4.51	0.63	Very High
5.	I find learning English pleasurable.	4.16	0.74	High	4.51	0.55	Very High
6.	I join the activities in class because I find it challenging.	4.07	0.75	High	4.64	0.53	Very High
7.	I participate in class activity because I want to learn.	4.18	0.83	High	4.49	0.76	Very High
8.	I want to be recognized as one of the top student in class.	4.22	0.82	High	4.58	0.62	Very High
9.	I participate in school activities because I find it fulfilling.	4.36	0.83	Very High	4.58	0.69	Very High

10.	I want my parents to be happy if I perform well in school	4.27	0.72	High	4.44	0.62	Very High
	Mean	**4.23**	**0.32**	**High**	**4.46**	**0.42**	**Very High**

The combined result of intrinsic motivation between the control and experimental groups is described as high and very high, respectively (Control group M=4.23, SD=0.32; Experimental group M=4.46, SD=0.42). These data further reveal that the experimental group using the gamification-based technique shows a higher mean than the control group using the traditional technique in the classroom. All the indicators except one in the experimental group are described as very high, while only two indicators are described as such in the control group. These data indicate that the student's intrinsic motivation in the experimental group is higher than that of the control group or that the experimental group is more intrinsically motivated.

Intrinsic motivation is the innate drive to engage in events for their benefit, free from outside rewards or pressure. Since it fulfills fundamental psychological needs like autonomy, competence, and relatedness, intrinsic motivation also helps higher psychological well-being and personal development. Moreover, intrinsically motivated kids usually excel academically and get better marks since they like the learning process instead of being driven by outside rewards.

According to the Self-Determination Theory, establishing a supportive learning environment that prioritizes relatedness, competency, and autonomy helps students to increase their motivation (Wang, et. al, 2029). Effective teaching and meaningful student involvement depend mostly on intrinsic motivation since it motivates students to learn from a position of real interest, thus fostering deeper knowledge and retention.

Li et al. (2023) identified one of the most pressing issues confronting modern education as students' lack of passion and drive to participate actively in the learning process. Offering prizes and acknowledgment for students' efforts and triumphs is one way to address this issue and increase their commitment and motivation.

By raising student motivation, engagement, and enjoyment, gamification-based activities improve learning outcomes, say Seabom & Fels (2015). Gamification combines game-based components such as leaderboards, points, badges, and awards, which help students feel successful and competitive. According to a recent study, gamification allows students to fully immerse themselves in experiential learning (Lopez & Tucker, 2019), which increases their motivation, engagement, and involvement in the classroom. This is especially essential in psychology since affective processes interact dynamically with internal and intrinsic forces to generate psychological, social, and personal well-being, and motivation is considered the driving force behind behavior (Li et al., 2023).

Gamification-based techniques use elements that capture students' attention and interest in learning. By tapping into the students' psychology, which responds to the challenges and excitement of the gamification-based technique in teaching and learning, teachers can improve students' motivation and engagement, which are essential to the learning process.

Table 3: Extrinsic Motivation of Learners in Learning English Between Control & Experimental Groups

	Indicators	**Mean**	**SD**	**Description Rating**	**Mean**	**SD**	**Description Rating**
1.	I study because of the rewards I can receive from my teacher.	4.29	0.76	High	4.36	0.74	Very High
2.	I study to gain additional points from my teacher.	4.07	0.78	High	4.31	0.67	Very High
3.	I participate in performance tasks to receive badges from my teacher.	4.22	0.74	High	4.39	0.73	Very High
4.	I study to get higher rank in the leaderboard and receive an award.	4.22	0.64	High	4.33	0.60	Very High

5.	I collaborate with my groupmates to receive higher points.	3.71	0.79	High	4.51	0.55	Very High
6.	I collaborate with my classmates to get the badges and awards.	4.47	0.55	Very High	4.53	0.55	Very High
7.	I behave appropriately in the class to get additional grades.	4.07	0.72	High	4.31	0.63	Very High
8.	I do my assignments and projects to get a good score.	4.20	0.66	High	4.44	0.62	Very High
9.	I do special projects to raise my grades.	4.33	0.60	Very High	4.62	0.53	Very High
10.	I study to get high grades	4.13	0.76	High	4.50	0.73	Very High
	Mean	**4.17**	**0. 29**	**High**	**4.42**	**0.35**	**Very High**

The experimental group showed a very high extrinsic motivation compared to the control group, as presented by the section means (Control group M=17, SD=0.29; Experimental group= 4.42, SD= 0.35). All the indicators for extrinsic motivation in the control group have two indicators described as very high, while in the experimental group, all the indicators are described as such. It entails a positive influence of the gamification-based technique used among the experimental group. Students gain motivation through the tangible items they receive from their class performance, like grades, scores, points, awards, and badges.

Learning benefits greatly from extrinsic motivation, particularly in educational settings, since it can affect behavior and performance through external rewards or penalties. When dealing with demanding or dull jobs, extrinsic motivation is a powerful tool for behavior modification. Extrinsic motivation, driven by external rewards or outcomes, significantly shapes behavior and performance. Educators can foster extrinsic motivation among students through various strategies (Damiani et al., 2018). However, overreliance on extrinsic motivators may potentially stifle intrinsic motivation and creativity. Interestingly, extrinsic motivators can serve as a pathway to intrinsic motivation by opening doors to new possibilities and interests (Ellwood, 2020). While extrinsic motivation helps shape what we know, it can also lead to personal discovery and success. However, extrinsic motivation has limitations, as extrinsic motivators work well for short-term objectives like paying attention in class or finishing assignments. Even if the tasks lack intrinsic appeal, they can guarantee adherence to educational requirements.

The length of the "gameful," or the amount of time gamification is used, is important in determining how it influences student achievement. Previous studies produced contradictory results (Tsay et al., 2018; Mahmud et al., 2020; Mays et al., 2020). According to Kim and Castelli (2021), long-term interventions, like 20 weeks, can greatly increase students' interest and involvement, boosting their academic accomplishment. Other research, however, has discovered that gamified learning produces the greatest effects in shorter time frames, typically less than a week (Racey et al., 2016; Lei et al.).

Table 4: Significant Difference in the Motivation of Learners Between the Control & Experimental Groups

		N	Mean Rank	df	U	p (2-tailed)	Mean Difference	Rank
Motivation of Learners	Control group	45	34.07	88	498.00	Less than	0.001	22,86
	Experimental Group	45	56.93					

0.05- level of significance

The score for the motivation of the learners in the control group is 34.07, which is lower than the score of the motivation of learners in the experimental group, which is 56.93. Moreover, the U value is 498.00, and the computed probability value is less than 0.001, which is highly significant since it is less than 0.05. Hence, there is a significant difference in learners' motivation between the control and experimental groups. These results imply that the experimental group showed higher motivation than the control group, as manifested by the survey results.

Several studies have proven that gamification-based techniques effectively motivate and engage learners and increase their academic performance. However, there is always a downside to the technique. When gamification-based techniques are used for a longer period, students can become bored and lose their enthusiasm for engaging more and performing in class.

Motivation declines over time, as Toda et al. (2018) demonstrate that performance loss is a drawback of gamification. Time is a key component of motivation. Teachers should be aware of the psychology of learning and how it relates to an individual's learning span. In order to address the negative effect, which is a decline in performance, teachers must keep coming up with new ideas and learning about the various personalities of their students in order to provide differentiated activities and incorporate gamification elements that will work for each of them.

Table 5: Significant Relationship Between the Acceptability of the Gamification-Based Technique & Motivation of Learners

Variables	df	r_s	p-value	Significance	Decision
Acceptability of the gamification-based technique	44	0.860	Less than 0.001**	Significant at 0.05	Reject H_o
Motivation of learners					

**0.05-level of significance

The computed probability value of 0.001 is less than 0.05, so reject the null hypothesis. Hence, there is a significant relationship between the Acceptability of the gamification-based technique and learners' motivation. Moreover, r_s is 0.860, which is interpreted as a high correlation. This confirms a high positive correlation between the gamification-based technique's acceptability and learners' motivation.

This finding aligns with Jang, Park, and Yi (2015), who discovered in their study that users with low agreeableness who interacted with a non-gamified system had lower learning rates than those who engaged with the gamified version. However, Smiderle et al. (2020) argue that students' responses to gamification change depending on their personality traits.

The results suggest that students' class responses are influenced by their degree of agreement with the use of gamification-based techniques. According to Smiderle et al. (2020), students' responses to gamification vary based on their personality types. Therefore, to accommodate their students' learning needs and styles, teachers should contextualize their gamification-based technique, if not always innovate. This insight will help educators further inspire their students to achieve academic success.

Conclusion

The experimental group highly accepts the gamification-based technique, with significantly higher intrinsic and extrinsic motivation than the control group. The strong association between the acceptability of the gamification technique and learner motivation confirms that gamification elements like components, dynamics, and mechanics used in implementing the gamification-based technique influence learners' motivation in the 21st-century classroom. When students enjoy and accept gamification-based techniques, they become more motivated, highlighting the potential of this technique to enhance learner engagement and motivation.

Conflict of Interest

There is no conflict of interest by the authors in this manuscript.

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