



Gamification and Learners' Motivation in the New Normal

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Abstract

In the 21st century, the use of game-based and digital-based teaching methods is required. This descriptive research study aimed to determine the effects of gamification strategies on learners' motivation in the New Normal. Specifically, it aimed to identify the dominant gamification strategies employed by college professors and determine the extent of their utilization. It will also discuss the learners' level of motivation when gamification is utilized and if there is a significant relationship between the extent of utilization of gamification strategies and learners' motivation. The respondents were the 103 Teacher Education students of Iloilo Science and Technology Miagao Campus who were exposed to gamification in the 2nd semester, 2021–2022. A descriptive survey-questionnaire was administered to collect the data. The result showed that Kahoot, Quizlet, and Quizizz are the three dominant gamification tools used by college professors teaching Teacher Education students. The college professors of Teacher Education students moderately utilized gamification strategies. Yet, the students' level of motivation is high. The results revealed that there was no significant relationship between the extent of utilization and learners' motivation. The researchers nonetheless came to the conclusion that students are highly motivated to learn when gamification is used. Thus, there was a moderate positive correlation between the extent of utilization of gamification strategies and learners' level of motivation, although they were not significantly correlated. Therefore, this study proposes that gamification should be used as a sustainable method to increase the learning motivation of students to ensure quality education.

1. Introduction

1.1 Background of the Study

The world has been dealing with the impact of the coronavirus disease 2019 (COVID19) pandemic since the beginning of 2020. Consequently, numerous offline activities, from exercise to dining out, have been controlled or restricted. However, as there is a need to ensure continued education despite the pandemic, new methods of learning have been introduced. The solution so far has been online learning. With online learning, teachers and students do not meet at school for classes. Instead, they interact virtually through computers and smartphones from their own homes.

Gamification has begun to attract attention as one of the ways to solve educational problems caused by COVID-19. In this technique, game elements, including Kahoot, Nearpod, Quizlet, Quizizz and other game mechanics are used in non-gaming contexts, such as in the fields of education. The application of gamification in education enhances learner motivation and participation and also improves the learner's attitude. According to Park and Kim, gamification is most actively applied in the fields of education and training. Applying gamification to online learning programs encourages knowledge sharing activities by promoting learner-to-learner interactions. Also, gamification is used more than other techniques that also use the principle of the game and has been used in many contexts. When applied to our lives, gamification can have a positive on the motivation of the learners.

Furthermore, gamification reduces online learning-related stress experienced by learners and enhances their concentration. Online gamified learning content provides new learning experiences for learners through game mechanics and rules. This new learning experience improves learners' motivation and attitude towards participation and lessens their academic stress. Gamification is analyzed through its basic structure, which consists of its missions, points, and rewards. Missions encompass the activities that users must perform in the gamified situation. In the educational environment, the mission is a task that the instructor assigns to learners. The learners then work to complete the mission to achieve points, which serve as a reward when they complete the mission successfully. Once they accumulate points after completing multiple missions, learners can then exchange them for various rewards. In this structure, learners can exchange the points that they earned for rewards, such as a pencil, textbook, or handwriting tool that facilitates the learning activity.

The use of gamification is garnering attention as a method that promotes sustainable learning during the coronavirus disease 2019 (COVID-19) era. This study discusses the effects of gamification in online learning content to the motivation of the students. Gamification acts as a medium that connects learners with online learning content while also providing an innovative methodology for feedback-based learning. Therefore, this study aimed to prove the relationship between online gamified learning and learner's motivation.

1.2 Statement of the Problem

This study aimed to determine the effects of Gamification strategies to learners' motivation. Specifically, it sought answers to the following questions:

1. What are the dominant Gamification strategies employed by College Professors?
2. What is the extent of utilization of Gamification strategies?
3. What is the learners' level of motivation when Gamification is utilized in class?
4. Is there a significant relationship in the extent of utilization of Gamification Strategies and learners' motivation?

Hypothesis

There is no significant relationship in the extent of utilization of Gamification Strategies and learners' motivation. Research Methods

1.1 Theoretical Framework of the Study

This study was anchored on the theory of Gamified Learning. Landers (2014), suggested the need to have a theoretical framework, specific to Gamification. In his paper, Landers (2014), evaluates the Input-Process-Output model that was proposed by Garris et. al. (2002). According to him, the model suggests that the instructional material drives the process and triggers the cycle that results in the outcomes. However, Tay (2010) has argued that the purpose of the insertion of the game elements is not to teach the learner about the game elements but to influence behavior and attitude and thereby improve learning. Whitton & Moseley, (2014) have also proposed that the presence of these elements would influence the level of motivation and thereby improve learning outcomes.

This study was also anchored in the Self-determination Theory. It was one of the first macro theories that linked motivation, development and wellness (Deci & Ryan, 2008). The Self-determination Theory is the key is

to encourage and focus on Autonomous Motivation and this motivation is driven by the psychological needs of competence, autonomy, and relatedness. According to SDT, human beings are driven by three main motives; the need to experience mastery and control outcomes, to interact and relate to others and to remain the causal agents of their own lives. If an individual perceives that a particular activity would result in the fulfilling of any of these needs, they are self-motivated to participate. These motives would force the person to behave and think in a certain way (Deci & Ryan, 2008).

1.2 Scope and Delimitation of the Study

This study determined the status, challenges experienced and coping strategies of the food and beverages businesses during the COVID-19 pandemic. The informants are the eight (8) purposively selected owners and managers of food and beverages businesses operating in the Municipality of Tigbauan which are DTI registered. The interview was conducted within the period April-May 2022.

However, this study has certain limitations as it only focused on the food and beverages businesses operating in the Municipality of Tigbauan, Iloilo. The study is also not funded and the researchers have made use of their own financial resources in conducting the study.

Conceptual Framework of the Study

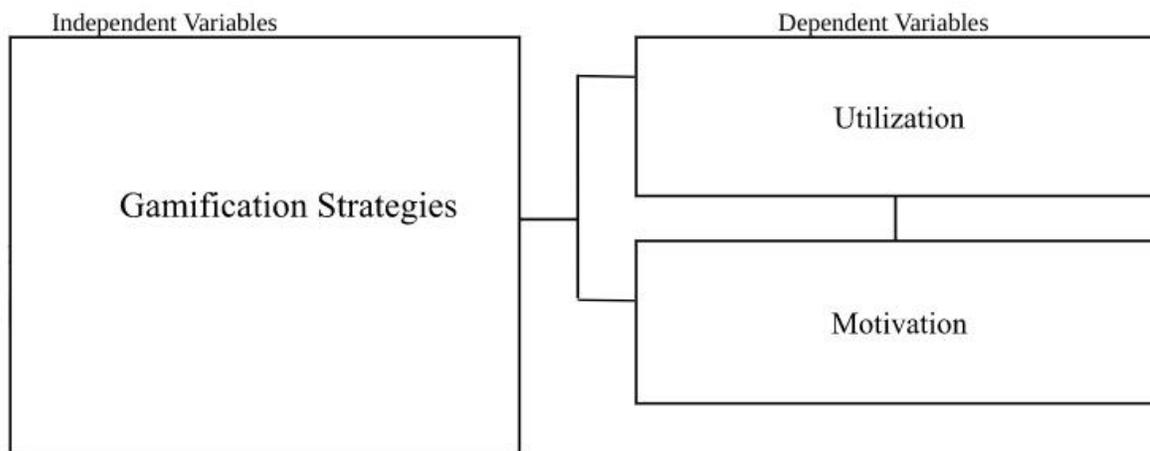


Figure1. Paradigm of the study

The relationship of variables in the study is illustrated in the figure 1. As shown, the independent variables are the Gamification strategies, while the dependent variables are extent of utilization and learners' level of motivation.

1.3 Scope and Delimitation of the Study

This present study focused on the effects of Gamification strategies to learners' motivation. The respondents were the 103 Teacher Education students of Iloilo Science and Technology Miagao Campus who were exposed to Gamification in the 2nd semester, 2021-2022. The researcher- made questionnaire was administered via Google Form at the end of the semester in order to gauge accurately the required data for the study. Also, Likert Scale was utilized to determine the extent of utilization of Gamification and the level of learners' motivation. In analyzing the data, Frequency Count, Percentage, Mean, Standard Deviation and Spearman Rho Correlation Coefficient were utilized.

1.4 Significance of the Study

The result of this study will be beneficial to the following:

Learners. The result of this research can be used as a reference to improve and enhance learners' motivation and participation and also improves the learner's attitude .It develop the ability of student in understanding more about the effects of gamification in the new normal education to their motivation in learning.

Teachers. The result of this research can help the teachers to understand and determine the effects of gamification in the learners' motivation . It provide teachers the basic knowledge on how to develop and utilize gamification strategies to make learning more engaging and appealing to the students.

School. The result of this research can help the school to determine the level of motivation of students exposed in gamification strategies and it can help develop an effective strategy for the implementation of gamification in e-learning.

Other researchers. To give additional information for other researcher who wants to conduct further research on the effects of gamification in the new normal education to the learners' motivation.

2. Research Methods

2.1 Research Design

The descriptive method of research was used in the study. This type of research involves collecting data in order to test the hypothesis and answer questions concerning the status of the subject under study (Porto, 2013). In this study, the researchers attempted to get the answers to the aforementioned problem and justify and satisfy the objectives of the study. Likewise, it also attempted to know the effect of Gamification in the New Normal education to the learners' motivation.

2.2 Informants of the Study

The respondents for this study were the 103 Teacher Education students of ISAT U Miagao Campus who are exposed to Gamification in the 2nd semester, 2021-2022. Convenience sampling was used in determining the respondents.

Table 1. shows the profile of the respondents of the study

Course	Year and Section	Frequency	Percentage
BTV TED	1-A	4	(3.88%)
BSED MATH	1-D	24	(23.30%)
BSED FILIPINO	1-E	23	(22.33%)
BSED ENGLISH	2-A	1	(0.97%)
BSED ENGLISH	3-A	15	(14.56%)
BEED	3-A	12	(11.65%)
BSED SCIENCE	3-C	11	(10.69%)

BSED FILIPINO	3-E	11	(10.68%)
BSED ENGLISH	4-A	2	(1.94%)
TOTAL		103	100%

As shown in Table 1, out of 103 respondents, 4 (3.88%) of which were from BTV TED 1-A, 24 (23.30%) of them were from BSED Math 1-D, 23 (22.33%) were from BSED Filipino 1-E, and 15 (14.56%) of them were from BSED English 3-A. Moreover, 12 (11.65%) out of 103 respondents were BEED 3-A students, 11 (10.69%) out of 103 were from BSED Science 3-C, 11 (10.68%) were from BSED Filipino 3-E, 2 (1.94%) were from BSED English 4-A, and only 1 (0.97%) respondent was from BSED English 2-A.

2.3 Data Gathering Instrument

The main instrument used for this study was a descriptive survey-questionnaire which was designed by the researchers and was subject to face and content validation.

The questionnaire contained questions that are related to the level of motivation and extent of utilization of Gamification strategies. The first part focused on the Respondents' Profile, Gamification Strategies Utilized and Extent of Utilization. The second part focused on the questions that answer respondents' level of motivation when Gamification is utilized in class. Motivation level and extent of utilization were measured using the Likert Scale and interpreted numerically and descriptively as follows: For Motivation Level:

1- Very Low, 2-Low, 3-Average, 4-High and 5-Very High

For Extent of Utilization:

4-Highly Utilized, 3- Utilized, 2- Moderately Utilized, 1-Least Utilized.

2.4 Data Gathering Procedures

Prior to the conduct of the study, the researchers sought approval from the administration to conduct the survey among the Teacher Education students of ISAT U Miagao Campus at the end of the semester. Data were then collected using a descriptive questionnaires made through Google survey forms. Accordingly, these questionnaires were sent guided by the link to respondent's messenger. After which, the data were gathered, tabulated and analyzed using appropriate statistical tools.

2.5 Data Processing Techniques

The study used frequency count and percentage distribution to determine the dominant Gamification strategies. On the other hand, mean and standard deviation were utilized to determine the extent of utilization and respondents' level of motivation. Finally, Spearman Rho's Correlation Coefficient was used to test if there is a significant relationship between utilization of Gamification strategies and learners' motivation.

2.6 Table of Interpretation

Table 2. Mean Interpretation(Extent of Utilization)

Scale	Remarks
3.51-4.00	Highly Utilized
2.51-3.50	Utilized

1.51-2.50

Moderately Utilized

1.00-1.50

Least Utilized

Table 3. Mean Interpretation (Level of Motivation)

Scale	Mean Range	Score Range	Motivational Remarks
5	Strongly agree	4.50-5.00	Very High
4	Agree	3.50-4.49	High
3	Slightly agree	2.50-3.49	Average
2	Disagree	1.50-2.49	Low
1	Strongly disagree	1.00-1.49	Very Low

Table 4. Correlation Coefficient Table of Interpretation

Positive/Negative Range	Correlation Description
0.01-0.19	Very Weak
0.20-0.39	Weak
0.40-0.59	Moderate
0.60-0.79	Strong
0.80-1.0	Very Strong

3. Result and Discussion

This chapter presents the results of the study , the analysis and interpretation of data gathered.

Table 5. Dominant Gamification Strategies employed by College Professors

Gamification Strategies	Frequency	Percentage
Kahoot	59	57.3 %
Quizlet	27	26.2 %
Quizizz	20	19.4 %

Table 5 presents the dominant Gamification strategies employed by college professors. The results revealed that the dominant strategies are Kahoot (57.3%), Quizlet (26.2%), and Quizziz (19.4%).

The result of the study is parallel to the study of Plump & LaRosa, (2017) which states that the most popular of the gamified student response systems used in education is Kahoot! . Kahoot, Quizlet and Quizziz were the popular gamification tool that can easily be used to add vitality, student engagement, and meta-cognitive supports to higher education classrooms.

Table 6. Extent of Utilization of Gamification Strategies

Gamification Strategies	M	SD	Description
Kahoot			
Quizlet	1.88	0.88	Moderately Utilized
Quizizz			

Table 6 presents the extent of utilization of Gamification. The results show how often professors utilize gamification strategies in class. Iloilo Science and Technology University Miagao Campus college professors of teacher education students revealed that gamification is only "moderately utilized" (M =1.88, Sd =0.88). This implies that gamification was only used sometimes by college professors of Teacher Education students regardless of year level.

Table 7. Learners' Level of Motivation when Gamification is Utilized

	M	SD	Description
Level of motivation	4.15	0.70	High

Table 7 shows the learners' level of motivation when Gamification is utilized. The results show that regardless of year level and major, Teacher Education students' level of motivation when gamification was utilized was described as "high"(M=4.15,Sd=0.70). This signifies that students are highly motivated when college professors of Teacher Education students employ gamification in their class.

Table 8. Spearman Rho Correlation Coefficient Result

	rho	p	Description
Level of motivation	4.15	0.70	Moderate Positive Correlation
Level of Motivation			

*Significant at $p < 0.05$

Table 8 presents the relationship of extent of utilization and learners' level of motivation. Based on the result, there was a moderate positive correlation but no significant correlation between the extent of utilization of gamification strategies and learners' motivation ($p = 0.692 > 0.05$). Therefore, the null hypothesis which states that there is no significant relationship between the extent of utilization of gamification strategies and learners' motivation was not rejected. This implies that the utilization of Gamification strategies do not affect the learners motivation in certain subject areas.

The result of the study is parallel to the study of Mekler (2017) which states that game elements do not significantly affect competence or intrinsic motivation.

4. Conclusions

Based on the findings of the study, the following conclusions were drawn: Kahoot is the most commonly used Gamification strategy among Teacher Education teachers and students. It is the dominant game-based learning strategy that was utilized by college professors of Teacher Education. Gamification strategies are not used more frequently. In their online classes, gamification is only slightly utilized. Despite this, when gamification is used, the learners are highly motivated. Learners' engagement and participation were increased when gamification strategies were employed. The extent of utilization and students' motivation do not significantly correlate. This indicates that the use of gamification strategies do not affect the learners' motivation. Even though the results indicated that there is no correlation between the extent of utilization of gamification and students' level of motivation, the researchers still came to the conclusion that students are highly motivated to learn when gamification is used, regardless of how frequently college professors utilize gamification in their classes. There was also a moderate positive correlation between the extent of utilization of gamification strategies and learners' level of motivation although they are not significantly correlated.

Implications

According to the findings and discussion explained, Gamification strategies were not frequently utilized by college professors teaching teacher education students, despite the fact that they could be quite effective at motivating the students. Kahoot, Quizlet and Quizziz were used more often than any other game-based elements or gamification strategies. The implementation of gamification in the new normal education could positively improve Teacher Education students' motivation in learning. It indicated that the utilization of gamification had successfully established pleasant atmosphere in digital-based teaching method. As an implication, gamification is suitable to be used to facilitate students' learning and boost their motivation in learning.

Recommendations

Based on the findings and conclusions of the study, the following recommendations are given:

Learners should explore how to use Gamification to enhance their engagement, motivation, and participation in the new normal education. Furthermore, learners should develop their ability to understand more about game-based learning strategies that can also improve their overall behavior in class.

Teachers should utilize gamification strategies more often since the results revealed that learners' levels of motivation and engagement are enhanced. In addition to Kahoot, Quizlet, and Quizziz, teachers should explore other effective gamification strategies and try to develop their own gamified learning techniques that could make their class more engaging and appealing to their students.

The school should implement the use of gamification strategies in all courses and at all year levels in new normal education. The school should conduct seminars or workshops on how to utilize gamification in online classes and develop effective gamified learning strategies for the best learning experience of the students.

Other researchers should conduct study regarding the teacher's perception of the effectiveness of utilizing gamification in the New Normal Education. Additionally, future researchers should investigate the negative impact of utilizing gamification in a new normal educational setting.

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