

GAME-BASED LEARNING PLATFORMS AND ITS RELATIONSHIP TO STUDENTS' MOTIVATION IN 21st CENTURY LITERATURE

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ABSTRACT

This study aimed to determine the relationship of game-based platforms in students' motivation in learning 21st Century Literature.

Specifically, the study sought to answer the following questions: What is the level of students' game-based platform usage through: Game Mechanics; Game Dynamics; and Game Aesthetics? , What is the level of students' motivation in terms of: Self-interest; Self-determination; and Learning focus? Is there a significant relationship on using game-based platforms between the students' motivation in learning 21st Century Literature?

The study used a descriptive method to gather the necessary data and reliable sources on gamified learning; its relationship in students' motivation in learning 21st century literature. The main source data of this study is the survey questionnaire which prepared by the researcher and statistically treated using mean and standard deviation were used to get the level of the game-based platforms in student's motivation in Learning 21st Century, the Pearson product moment correlation coefficient was used to determining the significant relationship of game-based platforms in student's motivation and performance in Learning 21st Century.

Based on the gathered data, the findings of this study were the following.

The respondents' reaction on the level of Game-based learning platforms and Student's motivation were "Highly Effective". It proves that Game-based learning platforms has significant relationship in Grade 12 students' motivation in learning 21st Century Literature in Liceo de San Pablo,

Therefore, the null hypothesis, "Game-based learning platforms have no significant relationship in student's motivation in Learning 21st Century was rejected.

In view of the findings and conclusions of the study, the researcher recommends that the teachers may engage students in game-based learning activities to enhance and inspire students to think critically and to give a chance to collaborate, compete, and actively participate in their learning process. The study to be proposed to school administrators to conduct School administrators may conduct webinars and training workshops on the usage of game-based learning systems, which could improve teachers' abilities to utilize learning resources. Consider the benefits of incorporating various teaching strategies into the School Improvement Plan (SIP) in order to increase student motivation and performance.

Keywords:

Game-based platforms, Game mechanics, Game dynamics, Game aesthetics, Students motivation, Learning focus, self-determination, self-interest

INTRODUCTION

Collaboration, innovation, and executive functioning are crucial 21st century abilities that are necessary for today's learners to succeed in school. Simple memorizing of data, rote learning, and extensive reading are no longer sufficient to encourage students to learn the subject (Child and Shaw 2016).

The overwhelming amount of text in literary courses has made it difficult for students to stay motivated and engaged. As a result, learning methods with a high level of interaction and difficulty, including game-based learning, have gained popularity. Game-based features have been available for more than ten years, and the use of game features for learning is nothing new.

AL-Smadi M. (2014) contends that interactive learning environments promote information transfer, general skill and ability growth, and social skill development. There are now several instructional video games that can be played online that can boost students' motivation, assist group learning, and encourage learning.

Game-based learning platforms are being employed more and more in educational settings. Game-based learning "makes tough learning more fun," encouraging students and increasing their interest in the lessons and interactive discussions.

In education, game-based learning platforms integrate game dynamics, mechanics, and aesthetics into non-game contexts to encourage interaction and influence behavior. The purpose of this is to engage the students, aid in their assimilation of new material, and assess their level of knowledge.

Game-based learning has become very appealing to second language teachers as a motivating factor for the English as a Second Language (ESL) Learners to break the boredom in extensive reading and lack of inner drive to learn 21st century literatures. Game-like activities in education seem to help students be engaged and motivated in learning tasks. Because ESL students learn best when they have objectives, benchmarks, and successes to strive for—of course, in a way they still find enjoyable (Saha & Singh 2016). The aim of this paper is to analyze the relationship of game-based platforms as motivating factors to improve learners' in 21st century literature.

The purpose of this study aims to determine the relationship between game-based platforms in students' motivation in learning 21st Century Literature.

Specifically, the study sought to answer the following questions:

1. What is the level of usage of game-based platforms components as to:
 - 1.1 Game Mechanics;
 - 1.2 Game Dynamics; and
 - 1.3 Game Aesthetics?
2. What is the level of students' motivation in terms of:
 - 2.1 Self-interest
 - 2.2 Self-determination; and
 - 2.3 Learning focus?
3. Is there a significant relationship between using game-based learning platforms and students' motivation in learning 21st Century Literature?

REVIEW OF RELATED LITERATURE

Developing student motivation is a challenging but important part of teaching that teachers must take into account. Many may have taught literature classes where students are focused, motivated, and eager to learn, but they may also have taught classes where students are easily offended, uninterested, or reluctant to participate—and, most likely, they have taught classes that are a combination of the two (Yarborough & Fedesco, 2020).

Academic success depends on interest, a potent motivating factor that drives learning, directs academic and professional paths, and energizes learning. Interest is a persistent propensity to reengage over time as well as a psychological condition of attention and affect toward a specific item or topic (Harackiewicz et. al., 2016).

Cherry (2022) explained that the ability of students to make decisions and control their own actions is referred to as self-determination. When they are self-determined, they feel more in charge than when they are not, which may make them feel as though individuals are running your affairs.

Learning focuses on knowledge acquisition, problem-solving, and skill development. Becoming the best student one can be is the objective of a learning focus. Students that are learning-focused are more likely to put in a lot of effort, desire to learn more, love discovering new information, appreciate working hard to find solutions to difficulties, and perform well for their own satisfaction rather than just for rewards (Kibble, 2017).

According to Marczewski (2013) Game-based platforms are the use of game features, game aspects, and game components that are distinct from games and that are intended to increase player motivation and influence positive player behavior. Gamification differs from serious games that place more of an emphasis on training to reach a set objective or outcome by including game components like empowerment, engagement, and commitment.

Plump (2017) discussed that these student response systems' ultimate purpose is to encourage active learning rather than passive learning in a teacher-centered atmosphere by including and promoting student interaction in big lecture halls at the college level.

A variety of minigames are available on online game-based learning platforms like Wordwall that can be utilized in the classroom to review vocabulary, concepts, and theory. As stated by Hasram et. al (2021), Wordwall can help students, improve their learning, and keep their interest. As a result, it will be possible to increase and improve the students' participation in the class.

Game mechanics include, for instance, awards, points, levels, leaderboards, team assignments, and avatars. Whereas dynamics, such as successes, rewards, status, rivalry, teamwork, or development, might come from those mechanics. Levels, ranks, badges, quests, points, etc. are just a few examples of game mechanics that may be used to gamify any product. Game dynamics, meanwhile, influence players' motivation and behavior (status, altruism, reward, self-expression etc. (Kim, 2022).

According to Denton (2023), The majority of the game aspects that are instantly apparent are made up of these. Game dynamics, on the other hand, are those aspects of a game that deal more abstractly with how players and concrete game components interact. Appointment, behavioral momentum, feedback, progress, time pressure, and specific powers that game avatars can acquire are a few examples of game dynamics.

According to the study of Tay (2015), game aesthetics are a component of instructional design that is growing in importance, with modest development in research momentum, particularly for initiatives addressing K–12 education. Wherever there is interaction, aesthetics is crucial because they represent all of the game's sensory elements.

METHODOLOGY

Research design

The research design used in this study was the descriptive research design to determine the relationship of game-based learning platforms and its relationship to students' motivation in learning 21st century literature.

According to Nassaji, (2015), Descriptive research is a type of study in which quantitative methods are used to analyze qualitatively gathered data. Frequencies, averages, and other statistical calculations are done using this study methodology. Doing a survey investigation is frequently the best course of action prior to producing descriptive research. The environment in which the subject is being viewed is entirely natural and unaltered. The overall overview provides some helpful hints as to what variables are worth evaluating quantitatively, hence it is frequently employed as a precursor to quantitative research design.

Descriptive research aims at defining or giving a verbal portrayal or picture of a person, thing, event, group, situation, etc. This is liable to repeated research because its topic relates itself only to a certain period or a limited number of years. Based on the results of your descriptive studies about a subject, you develop the inclination of conducting further studies on such a topic. Since the researcher wanted to find out how game-based learning platforms have significant relationship to the students' motivation, this method was used.

Subsequently, permission to conduct this study was secured from the principal of the grade 12 students of Liceo De San Pablo, where the study was conducted. Stratified random sampling was used to identify students-respondents. The day of the survey was scheduled in consideration of the convenience of the respondents as well as of the researcher who needed enough time in preparation of the materials.

Respondents of the Study

The respondents involved in this study are one hundred (100) Grade 12 students in Liceo de San Pablo in San Pablo City, Laguna.

Based on Parsons (2017), random stratified sampling is a probability sampling technique used. Within each stratum, the components of the target population are comparable to one another in terms of a few key features that are significant to the survey. The components of the target population are separated into distinct groups or strata. A sample design's efficiency in terms of survey expenses and estimator accuracy is also improved through stratification.

The researcher used a random sampling method. By using this sampling method, the researcher was able to gather information relevant to the study. The ability to obtain a sample population that most accurately represents the overall population being investigated while ensuring that each subgroup of interest is represented makes stratified random sampling one popular technique employed by researchers.

Research Procedure

The researcher first identifies the problem of the study to clearly understand the root cause of the problem. After identifying the problems, the researcher investigates by reading recent research, theory and debates on related topics to find a gap on what is currently known about it.

This study is conducted during the 1st Semester F.Y 2021-2022 on Grade 12 students at Liceo De San Pablo. First the researchers defended the three chapters of the study. After the content validation of the questionnaire, the number of the subjects are consulted. The researchers' adviser and research instructors. The researchers' adviser suggested that the best number of the subjects that fits their study would be 100 individuals.

The researcher sent letters to the SPDCSS Superintendent, and to the Principal of Liceo de San Pablo to ask permission to conduct study on Grade 12 students in the Senior High School Department. The researcher prepared a lesson plan incorporating game-based platforms and submitted it for content validation to the Head teacher II of the English Department in Linga National High School, then submitted it to senior High School Academic Coordinator. The researcher used a variety of game-based learning tools, including Kahoot, Wordwall, and a custom game-based PowerPoint presentation. The Senior High School students were taught 21st Century Literature using these gaming-based educational platforms.

Thereafter, the study's data gathering process using the approved questionnaire was conducted through Google Forms. After collating the results, the obtained data were subjected to the tallying and application of the study's statistical treatment.

The purpose of the survey is explained briefly before conducting it. The data that are gathered are tallied, analyzed, and interpreted with the assistance of the statistician.

Research Instrument

Instead of floating the questionnaire to the students using paper, google forms were used as a mode of answering the questionnaire. The result generated from the Google forms that were used to interpret the data.

AMS Likert Rating Scale was used to determine the mean level of game-based learning platforms learning and its impact on students' motivation in learning 21st Century Literature. The respondents answered these questionnaires – imperative to obtain the needed quantitative data. This research made use of close-ended questions, specifically AMS Likert scale questions to limit responses to be gathered within the scope of the study. The questionnaire is in the form of a checklist and the responses were interpreted as Highly Effective, Effective, Moderately Effective, Less Effective and Not Effective.

Statistical Treatment of Data

The data gathered in this study were presented and analyzed. The mean, standard deviation, frequency and percentage were used to get the level of the game-based platforms in student's motivation and performance in Learning 21st Century. It was used to test the hypothesis

The Pearson product moment correlation coefficient was used to determined game-based platforms relationship in students' motivation in Learning 21st Century. Weighted mean is used to find out the average responses of the respondents as measurement of the central tendency.

RESULT AND DISCUSSION

Level of Usage of Game-Based Learning Platforms

In this study, the level of usage of game-based learning platforms components refers to game mechanics; game dynamics; and game aesthetics.

The level of Game Based Learning Platforms was revealed in the following table, which shows the statement, mean, standard deviation and verbal interpretation.

Table 1 reveals the level of game-based learning platforms component in terms of game mechanics. The students perceived that the usage of game mechanics was highly effective as it helps them to determine their target goals in doing their learning tasks ($M = 5.00$, $SD = 0.00$). It also shows that It boosted and pique their interest to be part of the activity in their class discussion ($M = 4.65$, $SD = 0.59$) and encouraged them to analyzed and finish the given task on time ($M = 4.60$, $SD = 0.64$). It also indicates that it enabled them to focus on the learning goals to be attained in each task ($M = 4.64$, $SD = 0.61$) and to work with others with confidence and keep them alert in the duration of the activity ($M = 4.73$, $SD = 0.51$).

Table 1 presents the level of Game Based Learning Platforms in terms of Game Mechanics.

Table 1. Level of Game Based Learning Platforms in terms of Game Mechanics

Statement	Mean (x)	Standard Deviation	Verbal Interpretation
1. It helps me to determine my target goals.	5.00	0.00	Highly Effective
2. It boosts my interest to be part of the activity.	4.65	0.59	Highly Effective
3. It encourages me to analyze and finish the given task on time.	4.60	0.64	Highly Effective
4. It enables me to focus on the learning goals to be attained in each task.	4.64	0.61	Highly Effective
5. Enable me to work with others with confidence and keep me alert in the duration of the activity.	4.73	0.51	Highly Effective
Overall Mean	4.72	Highly Effective	

Legend:

- 4.20 – 5.00 Highly Effective
- 3.40 – 4.19 Effective
- 2.60 – 3.39 Moderately Effective

1.80 – 2.59	Less Effective
1.00 – 1.79	Not Effective

The teacher's usage of the game mechanics was highly effective as shown by the mean of 4.72. It engaged students to determine their target learning goals, boosted their interest to participate in a given task and enabled them in analyzing and focusing on attaining the learning goal, especially if they believe they are working to achieve something great, something awe-inspiring, and something bigger than themselves.

Table 2 presents the level of Game Based Learning Platforms in terms of Game Dynamics.

Table 2. Level of the Game Based Learning Platforms in terms of Game Dynamics

Statement	Mean (x)	Standard Deviation	Verbal Interpretation
1. It enables me to work with others with confidence.	4.44	0.72	Highly Effective
2. It allows me to increase productivity, ideas, and creativity	4.60	0.65	Highly Effective
3. It helps me share ideas with others and build on collective ideas	4.72	0.53	Highly Effective
4. Helps me with fast strategic thinking and problem-solving.	4.62	0.68	Highly Effective
5. It gives me opportunities to be part of different learning platforms that help me to discover my learning preferences.	4.68	0.63	Highly Effective
Overall Mean	4.61	Highly Effective	

Legend:

4.20 – 5.00	Highly Effective
3.40 – 4.19	Effective
2.60 – 3.39	Moderately Effective
1.80 – 2.59	Less Effective
1.00 – 1.79	Not Effective

Table 2 reveals the level of Game Based Learning Platforms in terms of Game Dynamics. It enabled the learners to work with others with confidence with a ($M = 4.44$, $SD = 0.72$) and allows them to increase productivity, ideas, and creativity ($M = 4.60$, $SD = 0.65$). It also helps them to share and collaborate their ideas with others and build on collective ($M = 4.72$, $SD = 0.53$). It also indicates that game dynamics helps them to a fast strategic thinking and problem-solving ($M = 4.62$, $SD = 0.68$) and gives them opportunities

to be part of different learning platforms that helped them to discover my learning preferences ($M = 4.68$, $SD = 0.63$).

The teacher's usage of the game dynamics was highly effective as shown by the mean of 4.61. It enabled learners to collaborate with others, sharing collective ideas and gives them opportunities to create fast strategic thinking, problem-solving and gives them to discover varieties of their academic preferences.

Table 3 presents the level of Game-Based Learning Platforms in terms of Game Aesthetics.

Table 3. Level of Game Based Learning Platforms in terms of Game Aesthetics

Statement	Mean (x)	Standard Deviation	Verbal Interpretation
1. It provides excitement and fun while doing the activities.	4.52	0.67	Highly Effective
2. It increases my motivation and challenges me to be involved in the learning activity.	4.62	0.65	Highly Effective
3. It allows me to boost my self-esteem.	4.69	0.68	Highly Effective
4. It lessens boredom while creating an enjoyable and interactive learning experience.	4.71	0.59	Highly Effective
5. It increases participation in class discussion creating a fun collaborative learning	4.58	0.71	Highly Effective
Overall	4.62	Highly Effective	

Legend:

- 4.20 – 5.00 Highly Effective
- 3.40 – 4.19 Effective
- 2.60 – 3.39 Moderately Effective
- 1.80 – 2.59 Less Effective
- 1.00 – 1.79 Not Effective

Table 3 reveals the level of usage of game-based learning platforms components in terms of game aesthetics was highly effective. Students viewed that game aesthetics provided excitement and fun in doing the learning activities ($M = 4.52$, $SD = 0.67$), It also shows that students increased their motivation and challenged them to be involved in the learning activity ($M = 4.62$, $SD = 0.65$). It also allowed them to boost their self-esteem to have courage and be part of class activities ($M = 4.69$, $SD = 0.69$) and lessened boredom while creating an enjoyable and interactive learning experience ($M = 4.71$, $SD = 0.59$), Lastly, It also shows that the learners increased their participation in class discussion creating a fun collaborative learning resulting to a meaningful learning ($M = 4.58$, $SD = 0.71$).

It can be gleaned that the teacher's usage of game aesthetics is highly effective as shown by the mean of 4.62. Game aesthetics represent the desired experience that games aim to produce through gameplay. achievement, challenge, discovery, epic purpose, happy productivity, pleasure, and imagination are only a few of the game aesthetics that are present.

Level of Student's Motivation

In this study, the level of Student's Motivation refers to Self-interest; Self-determination; and Learning focus.

The level of Student's Motivation was revealed in the following table, which shows the statement, mean, standard deviation and verbal interpretation.

Table 4 reveals the level of student's motivation in terms of self-interest. The students perceived that game-based platforms triggered their interest during learning activities ($M = 4.58$, $SD = 0.62$). It also shows that they enjoyed being part of different learning activities if it pique their interest ($M = 4.64$, $SD = 0.64$) and indicated that the students easily grasped their lesson through game-based platforms ($M = 4.76$, $SD = 0.51$), and it gave them confidence in joining game-based activities ($M = 4.63$, $SD = 0.61$) because these activities boost their self-esteem in class participation ($M = 4.66$, $SD = 0.57$).

Table 4 the level of Student's Motivation in terms of Self-interest.

Table 4. Level of Student's Motivation in terms of Self-interest

Statement	Mean (x)	Standard Deviation	Verbal Interpretation
1. Game-based platforms triggered my interest during learning activities.	4.58	0.62	Highly Effective
2. I enjoy being part of different learning activities.	4.64	0.64	Highly Effective
3. I easily grasp the lesson through game-based activities	4.76	0.51	Highly Effective
4. I am confident in joining game-based activities.	4.63	0.61	Highly Effective
5. Game-based activities boost my self-esteem in class participation.	4.66	0.57	Highly Effective
Overall Mean	4.65	Highly Effective	

Legend:

- 4.20 – 5.00 Highly Effective
- 3.40 – 4.19 Effective
- 2.60 – 3.39 Moderately Effective

1.80 – 2.59 Less Effective
 1.00 – 1.79 Not Effective

The students' level of self-motivation in terms of self-interest was highly effective as shown by the mean 4.62. Self-interest can be both a short-term tendency to frequently interact with a certain subject or issue over time and a psychological state that is characterized by heightened attention, effort, and effects in a particular situational interest.

Table 5 reveals the Student's Motivation in terms of Self-determination. Game-based activities helped the learners to easily determined the class discussion ($M = 4.51$, $SD = 0.72$). It also shows that it gave them opportunities to lead their classmates during class activities ($M = 4.61$, $SD = 0.65$) and Game-based platforms assisted them in analyzing the lessons given by the teacher ($M = 4.61$, $SD = 0.65$), it also helped them to take the initiative to be part of the activity and reach learning objectives that is needed to be attained. ($M = 4.49$, $SD = 0.70$). It also shows that it allowed the learners to collaborate with their classmates during the discussion ($M = 4.62$, $SD = 0.65$).

Table 5 presents the level of Student's Motivation in terms of Self-determination.

Table 5. Level of Student's Motivation in terms of Self-determination.

Statement	Mean (x)	Standard Deviation	Verbal Interpretation
1. Game-based activities help me determine the class discussion	4.51	0.72	Highly Effective
2. It gives me opportunities to lead my classmates during activities.	4.61	0.65	Highly Effective
3. Game-based platforms assist me in analyzing the learning goal.	4.61	0.65	Highly Effective
4. It helps me to take the initiative to reach learning objectives.	4.49	0.70	Highly Effective
5. It allows me to collaborate with my classmates during the discussion	4.62	0.65	Highly Effective
Overall Mean	4.57	Highly Effective	

Legend:

4.20 – 5.00 Highly Effective
 3.40 – 4.19 Effective
 2.60 – 3.39 Moderately Effective
 1.80 – 2.59 Less Effective
 1.00 – 1.79 Not Effective

It can be gleaned from table 5, that the level of Student's Motivation in terms of Self-determination is 4.57 with "Highly Effective" as verbal interpretation.

Table 6 presents the level of Student's Motivation in terms of Learning focus.

Table 6. Level of Student's Motivation in terms of Learning Focus.

Statement	Mean (x)	Standard Deviation	Verbal Interpretation
1. Game based activities make me attentive during class lessons.	4.41	0.87	Highly Effective
2. It makes me focused on the learning process.	4.44	0.78	Highly Effective
3. Game-based helps me to sustain focus on discussion.	4.52	0.75	Highly Effective
4. It helps me to disregard distractions on learning the lesson.	4.55	0.66	Highly Effective
5. Game-based activities encouraged me to focus on the lesson.	4.59	0.59	Highly Effective
Overall Mean		4.50	Highly Effective

Legend:

4.20 – 5.00 *Highly Effective*

3.40 – 4.19 *Effective*

2.60 – 3.39 *Moderately Effective*

1.80 – 2.59 *Less Effective*

1.00 – 1.79 *Not Effective*

Table 6 reveals the Student's Motivation in terms of Learning Focus. Game based activities make them more attentive during class lessons. ($M = 4.41$, $SD = 0.87$) and also makes them more focused on the learning discussion ($M = 4.44$, $SD = 0.78$). Game-based platforms also helped them to sustained focus on discussion ($M = 4.52$, $SD = 0.75$) and enabled them to disregard distractions that may cause on learning the lesson ($M = 4.55$, $SD = 0.66$). It also shows that the Game-based activities encouraged them to pique their interest and encouraged them to be part of the lesson ($M = 4.59$, $SD = 0.59$).

It can be gleaned from table 5, that the level of Student's Motivation in terms of Learning Focus is 4.50 with "Highly Effective" as verbal interpretation.

Relationship between the Student' Motivation and Game Based Learning Platforms

Table 7 shows the significant relationship between the Students' Motivation and Game Based Learning Platforms.

Table 7. Relationship between the Student' Motivation and Game Based Learning Platforms

Student's Motivation	Game Based Learning Platforms	r-value	Degree	p-value	Analysis
Self-interest	Mechanics	0.259241*	Weak	0.000	S
	Dynamics	0.466258*	Moderate	0.000	S
	Aesthetics	0.52219*	Moderate	0.000	S
Self-determination	Mechanics	0.254415*	Weak	0.000	S
	Dynamics	0.414782*	Moderate	0.000	S
	Aesthetics	0.48135*	Moderate	0.000	S
Learning focus	Mechanics	0.222093*	Weak	0.000	S
	Dynamics	0.448632*	Moderate	0.000	S
	Aesthetics	0.441234*	Moderate	0.000	S

***significant at 0.05**

ns-not significant

Significant relationship was noted between the students' level of self-interest and the game components as to mechanics (r-value= 0.259241*, p-value=0.000), dynamics (r-value= 0.466258*, p-value=0.000), and aesthetics (r-value=0.52219*, p-value=0.000). It also shows that there is a significant relationship was noted between the students' level of self-determination and the game components as to mechanics (r-value= 0.254415*, p-value=0.000), dynamics (r-value= 0.414782*, p-value=0.000), and aesthetics (r-value=0.48135*, p-value=0.000). Lastly, there is a significant relationship between the students' level of learning focus and the game components as to mechanics (r-value= 0.222093*, p-value=0.000), dynamics (r-value= 0.448632*, p-value=0.000), and aesthetics (r-value=0.441234*, p-value=0.000). The correlation coefficient was positive and ranged from weak to moderate in terms of self-interest, self-determination, and learning focus, it was found that there is a significant relationship between the Students' Motivation and Game Based Learning Platforms.

CONCLUSION

Based on the findings of the study, the following conclusions were made.

The respondents' reaction on the level of Game-based learning platforms and Student's motivation were "Highly Effective". It proves that Game-based learning platforms have significant relationship in Grade 12 students' motivation in Liceo de San Pablo.

Therefore, the null hypothesis, “Game-based learning platforms have a significant relationship in student’s motivation in Learning 21st Century. Thus, this calls for the acceptance of the null hypothesis.

RECOMMENDATIONS

Based on the conclusions drawn from the study, the following were recommended:

1. The researcher suggests that the teachers may engage students in game-based learning activities to encourage student participation in the learning discussion, create social and emotional learning, and enabled students to build their self-esteem and confidence to participate in the classroom.
2. School administrators may conduct webinars and training workshop on the usage of game-based learning platforms, which could improve teachers' abilities to utilize learning resources.
3. Future researchers may use this study to further understand Game-based learning platforms in students’ motivation and achievements of the students.

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