

Gamification Techniques in Teaching and Learning Exploratory Courses in Technology and Livelihood Education: A Phenomenological Study

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Abstract

The traditional teaching method has been employed in the educational system for a long time and requires no active engagement from the students, making lessons challenging to comprehend. The use of gamification techniques in learning, on the other hand, removes the formalities of learning and allows learners to learn while having fun. This qualitative phenomenological study aimed to investigate the students' perspective on using gamification techniques in teaching and learning exploratory courses in Technology and Livelihood Education. The study explored the game experiences of 7 participants who experienced and were affected by using gamification techniques in education. This study used the Modified Stevick-Colaizzi-Keen phenomenological method of data analysis to examine the participants' transcripts. Analysis of the data gathered during the interviews developed four themes: 1) Connect Building relationships; 2) Change: Traditional schooling is too formal and Boring; 3) Captivate: Learning is fun when it is linked to memorable experience; 4) Compete: To compete and be recognized. Findings from the study recommended the following: a) educational institutions should consider including the use of gamification techniques in their curriculum to provide students with appropriate learning opportunities; b) researchers and developers can create more engaging resources for students' enjoyment and learning; c) school administrators should consider enrolling teachers in professional development seminars and training linked to gamification approaches; d) future scholars can choose to perform a qualitative and quantitative study on their subject areas to add to the body of knowledge in this understudied field, and e) future study collaborations on the application of gamification approach in teaching and learning can be done with educators from other countries.

Keywords: *Gamification Techniques; Games; TLE; Exploratory Courses*



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INTRODUCTION

The traditional teaching approach has been used in the Philippine educational system for a long time, and it requires nothing from the students in terms of active participation—all they must do is sit quietly in their seats and pay attention to the teacher's didactic style. Teachers "spoon-feed" their students' knowledge and understanding of concepts and values (Chi-kin et al., 2010). When a classroom is teacher-centered, it becomes organized, and the instructor can easily manage the pace of the class. Additionally, since the teacher oversees the classroom activities, the teacher should not be concerned that a student would miss an important concept. The student's only opportunity for participation is through recitation. In addition, the pupils undertake homework assignments at home and memorize the lessons. Their test may consist of oral recitation, quizzes,

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and a signed written exam. Here, pupils only acquire "declarative knowledge," which consists of memorizing, reciting, describing, and classifying the information provided by the teachers. It is a task-focused teacher-centered approach where the learner's retained knowledge mostly depends on the instructor's preparation and teaching style. Therefore, students who struggle with memorization are most likely to fail the course, making them feel intellectually inadequate and preventing them from continuing to the following degree. The traditional teacher-centered model dominated the Philippine educational system for a long time. Some teachers in the current system still use it with increased knowledge that students' passive responses during teaching sessions are one of the reasons why students lose interest in attending school.

In the Philippines, the pandemic caused enormous educational changes, and the effects are seen even now as teachers offer classes in the new typical arrangement. The pandemic also prompted us to experiment with blended learning and identify only the most essential learning competencies, or MELCs, in the classroom. These modifications result in abrupt shifts in how courses are delivered, particularly in Technology and Livelihood Education (TLE). It is a subject in the K-12 curriculum that attempts to provide students with the required skills through training and hands-on activities. It involves the application of students' skills rather than their knowledge. The challenge is how to inspire students to engage themselves and develop new abilities in an online distance learning environment—finding out how this generation may learn more efficiently and what their preferred learning methods have become a new educational challenge.

Furthermore, new generations of students prefer learning valuable, enjoyable, and relevant information. It has become a new educational challenge to figure out how this generation can learn more effectively and their preferred learning methods. Traditional schooling, as stated by many students, is ineffective and boring (Dicheva et al., 2015). Even though teachers are continually looking for new ways to engage students, it is widely acknowledged that today's schools have primary motivation and engagement issues. Gamifying education is one approach to solving these challenges. Educational games as learning aids are a promising strategy since they may teach and reinforce critical skills such as problem-solving, cooperation, and communication. Games have a unique ability to inspire people; they use a variety of tactics to entice people to connect with them, often without any monetary incentive, simply for the sake of having fun and the chance to win (Lee & Hammer, 2011). [3] There aren't many studies currently being done on the application of gamification in education, particularly those that concentrate on adult learning as a general idea or process. Only one publication specifically addressed the use of gamification in education, while most papers examined its application in more broad contexts (Hamari et al. 2014), (Thiebes et al., 2014), (Connolly et al., 2012) and (Borges et al., 2014). It is difficult to form a reliable and valid conclusion about the subject due to the lack of studies, which emphasizes the need for more research in this field

This research aims to contribute to the empirical evidence in the gamification field by gathering data from gamified learning experiences in a basic education environment to close the distance between theory and reality by investigating the educational effect of gamification in a real-world environment. With these ideas in mind, the researcher was eager to conduct the study. The researcher used a qualitative approach to determine how the gamification techniques affect users' subjective experiences and behavior and how the game elements are used to inspire and maintain user engagement in learning exploratory courses in the TLE subject. Thus, this study aims to

explore students' perspectives on using gamification approaches in online learning. Understanding perceptions aids policymakers in making well-informed decisions based on the actual experiences of the target learner.

LITERATURE REVIEW

Students in the school system have regarded traditional teaching and learning methods as ineffective and uninspiring (Dicheva et al., 2015). Generations Y and Z have a wide range of experiences and viewpoints on what form of education will be most beneficial. Furthermore, compared to past generations, these children process and comprehend information differently (Poole et al., 2014). In addition, today's students are unmotivated and disengaged from the learning process, as cited by Glover (2013), a problem that instructors, tutors, and education administrators are all aware of. The concept of teamwork and collaborative learning achievements has been proven to appeal to the Millennial generation. Among other things, they are "brilliant, social, demanding, and eager." Based on the existing literature, they are technologically informed and prefer a world with computers and the internet. (Poole et al., 2014).

Learning is an active, continuing process that begins with motivation (Glover 2013). Teachers and educational institutions are attempting to establish a method for inspiring and engaging students in the learning process that is both successful and efficient (Wilson, Calongne & Henderson, 2015). However, technological improvements (computers and the internet) have played an essential role in the education system, promoting the use of online learning programs (Nguyen, 2015).

While the relevance of student participation appears obvious, it is possible to claim that the degree and quality of students' learning experiences are directly determined by the teaching methods utilized in class. Although lectures are still crucial in education, they must be supplemented by more engaging and novel ways to rekindle students' interest and attention (Aljezawi & Albashtawy, 2015). Students learn better when actively engaging in the material and can relate to it. In contrast, lectures that do not alternate with more interactive approaches tend to tire students and detach them from their studies. Landers et al. (2015) state that learners should never be forced to participate in gamified modules or activities since successful gamification inspires learners to do the things they know they should serve when done right, and students should not be pressurized. When students are engaged with the lesson and demonstrating behaviors and attitudes that reflect favorably on the gamified instructional design, they will most likely be in a state of flow, visibly combining the two theories in the classroom.

In line with this, educators should be open to new teaching and learning techniques rather than thinking that the general use of advanced technology such as cellphones, tablets, and laptop computers in every aspect of society is the cause of learner attention deficit (Griffin, 2014). Based on the findings of separate experiments conducted in secondary and higher education environments, students who were exposed to learning with video games had significant changes in topic comprehension, diligence, and motivation (Barata et al., 2013). Furthermore, gamification of learning is becoming increasingly relevant as learners seem to be less engaged with conventional teaching methods. Based on many reports, game-based learning is more engaging for students.

Gamification of learning has also been shown to help students improve their problem-solving and higher-order thinking skills (Kapp, 2012).

Students in classrooms work hard to achieve primary learning goals, while game players work hard to win. Furthermore, to progress academically, students must demonstrate a certain degree of understanding and pass prerequisite courses, while players can advance to the next level based on their results. Erenli (2013) proposed that integrating gamification into the education curriculum could be a logical approach to improving learning based on these overlaps between classroom and game experiences. Gamification for learning should apply game mechanics, dynamics, and structures to non-game processes by the following concepts, which were adapted from Ryan and Deci's Self-Determination Theory (SDT). SDT has three components which are relatedness, competence, and autonomy. Relatedness refers to the universal desire to communicate with and be related to others. On the other hand, competence is the universal desire to be productive and master a problem in each environment—lastly, autonomy means the universal desire to control one's own life.

In connection with this, both intrinsic and extrinsic motivation has been proven to be influenced by these factors, which can significantly impact student motivation and engagement (Deterding et al., 2011). Intrinsic motivation is motivated by a desire to engage in a goal for its own sake (e.g., benevolence, competition, collaboration, sense of belonging, affection, or hostility). Intrinsically motivated students are more likely to participate freely in a challenge and try to improve their skills and talents. Extrinsic motivation, on the other hand, refers to doing something to achieve a goal (e.g., earning grades, levels, points, badges, or prizes) or escaping punishment. Extrinsic incentives include competitions, cheering crowds, and the chance to win medals.

The researcher concludes that standard and monotonous teaching approaches are generally uninteresting to students' classroom experiences. Given that student engagement is a key factor in academic performance, teacher-centric lectures that fail to interest students should be overhauled. While traditional lectures have a place in the classroom, new techniques are required to shift from a teacher-centered to a more student-centered classroom, where students are constantly engaged in learning activities.

One of the ways to solve this problem is with the use of gamification techniques. Gamification enables learners to develop their own motivation to learn. Instructors that use gamification in online courses set clear goals and provide a learning environment for students (Han, 2015). Even though gamification is still a hot topic in online education, research into student opinions on the phenomenon should continue. As a result, before rushing to add gamified learning activities into the curriculum, we must first study their influence on student engagement and learning. We must also comprehend the settings in which gamified learning activities are successful. There is a definite need for a large amount of additional research to look at these and other difficulties.

Landers et al. (2015) cited that learners should never be forced to participate in gamified modules or activities since successful gamification inspires learners to do things, they know they should serve as learners when done right, and students should not be pressured. When students are engaged with the material and demonstrate behaviors and attitudes that reflect favorably on the gamified instructional design, they will most likely be in a state of flow, visibly combining the two theories in the classroom.

If educators are to succeed in applying a particular education-boosting method in education, learners must have a favorable attitude and view of it. Although research has established the benefits of gamification in education, there is little research on this method from students' perspectives. Students are essential to the educational system because they get teacher input. Educational planners and teachers need to have a good understanding of how people view gamified activities. With so few studies, drawing a valid and trustworthy conclusion on the subject is challenging, highlighting the need for more research.

Theoretical Framework of the Study

This study was anchored on theories of Gamified Learning Theory and Self-determination Theory. Landers et al. (2015) asserted that gamification could affect learning and assist decision-making for teachers who are building, enhancing, or producing gamified learning activities, following the *theory of gamified learning*. As Landers et al. pointed out, gamified learning experiences should not be created for students to memorize content or acquire material without any teacher-delivered instruction. Instead, the instructor is still an essential aspect of the classroom, and gamification should be used to augment rather than replace teacher-led learning. Nothing can substitute for high-quality instruction offered by a teacher. Gamification's purpose should be to address student attitudes and behaviors while including material.

The academic ability of gamified applications to leverage the motivational power of games has been the driving force for their utilization. As a result, while various theories might be linked to gamification, the self-determination theory is the most popular and associated with its primary aim, motivation. Relatedness, autonomy, and competence are three primary psychological demands that all people have and strive to meet (Ryan & Deci, 2000). Extrinsic motivation, i.e., behaving because of a reward or incentive, and intrinsic motivation, i.e., acting essentially because of interest and enjoyment, are linked and enhanced by these demands. Ryan & Deci stated that the three sorts of extrinsic motivation, identifiable regulations, introjected regulations, and external regulations, all begin with intrinsic motivation and conclude with motivation.

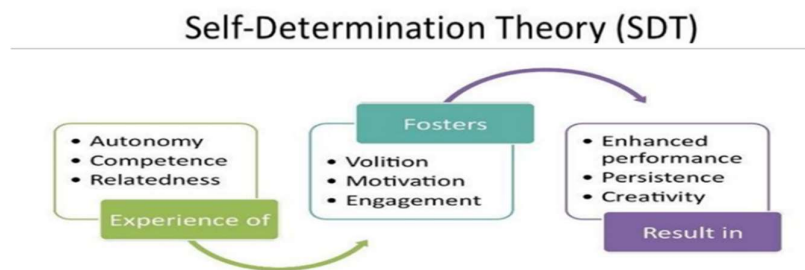


Figure 1. Self-Determination Theory (SDT) (Ryan and Deci, 2000)

There are two significant aspects that the gamified learning theory suggests. For starters, gamification can be used to target student behaviors or attitudes that have been shown to influence learning, as presented in Figure 1. Gamification, for example, may lead to greater metacognition, in which students spend time reflecting on their learning processes and how they learn best to

succeed in their chosen careers. Gamification can also be used to target a particular student's behavior or attitude, allowing teachers to provide teaching more effectively than before.

Gamification can also be utilized to target a specific student's behavior or attitude, allowing teachers to deliver more effective instruction than ever before. In this case, gamification can be used to make information more engaging and exciting. For example, a gamified experience enriched with video, audio, player challenges, or the potential to beat a level by creating material that reflects what was learned about the three layers of rock may be significantly more engaging and exciting, leading to higher student achievement.

Conceptual Framework

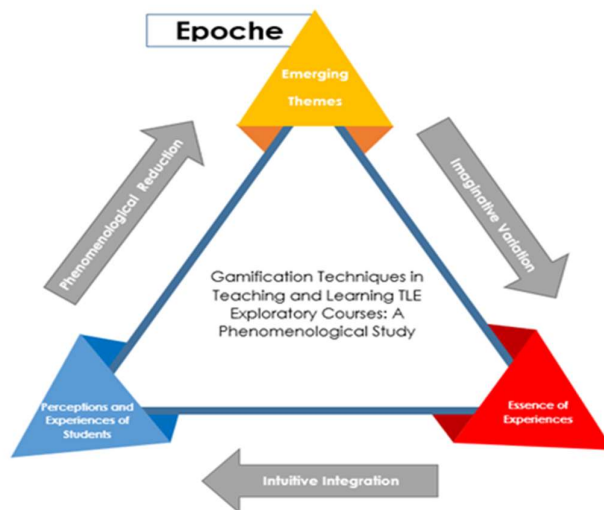


Figure 2. Research Framework as to Moustakas (1994)

The researcher used transcendental phenomenology to explore the students' perspective on using gamification techniques in teaching and learning exploratory courses in the TLE subject. Figure 2 outlines the research framework of the study. In this sense, transcendence means approaching the phenomenon with an open mind and a fresh eye, acquiring new insight derived from the essence of experiences. Initially, epoche helps the researcher to share his personal feelings and experiences. It is essential to have the ability to reflect on his experiences to avoid prejudices and judgments later in the research process. The essences of the phenomena were defined using transcendental-phenomenological reduction. Perceptions and thoughts about the phenomenon were compiled. Finally, creative variation was employed to determine the structural nature of interactions (Moustakas, 1994).

The research question's noema (phenomenon) and noesis (meanings) are reported and analyzed through these measures. Subjectivity is emphasized in this approach. The participants' perceptions and emotions are systematically collected and analyzed, creating interpretations through discourse (Moustakas, 1994).

RESEARCH METHOD

Population and Sample

This study was conducted at the De La Salle University – Laguna Campus, Brgy. Malamig, Binan Laguna. The study focused on a group of 7 people who had encountered the phenomena, which aligns with Creswell and Poth's recommended participant size. Criterion sampling selected eligible participants based on preset criteria, ensuring that the information gathered represented the population. For inclusion, the potential participant must be (a) a Grade 7 student of the DLSU Laguna campus for the last Academic Year 2020-2021, (b) have experienced gamification techniques in learning exploratory online courses in TLE, and (c) be between the ages of 11 and 13. If a participant fails to meet one of the requirements, does not respond to outreach, or does not submit the required informed consent form, they will be excluded from the study.

Participants were given the option to participate voluntarily. A recruitment email was sent to interested participants with information on the study's goals, research objectives, and data collection techniques (semi-structured interviews). Interested participants were asked to read the informed consent, which included the study's objectives. In order to recruit research subjects for the study, the researcher employed the purposive sampling approach in conjunction with snowball sampling methods. The snowball sampling method entails having participants who are already enrolled in the survey invite people from their networks to join the research study (Kamarudin et al., 2018). The interview is one of the qualitative research's most common data collection procedures (Englander, 2012). The researcher chose a semi-structured interview methodology with open-ended questions as the data-gathering strategy for this study. During the proposal phase, it was expected that the researcher would recruit about 10 study subjects to participate in the interview process, which would include gamification approaches in the learning process. Three people expressed initial interest in the study but later informed the researcher that they had decided not to participate. Despite this, there were a total of 7 people who had indicated their readiness to participate in the study.

The phenomenological study aimed to corroborate and analyze participants' lived narratives using thorough descriptions of gamified learning experiences. Participants had to meet preset criteria, including the phenomenon's experience, to participate in criterion sampling.

Participants demographic profile

Age

One participant was 13 years of age, 3 participants were 12 years old, and 3 participants were 11 years old. Figure 3 below depicts the age categories of the participants.

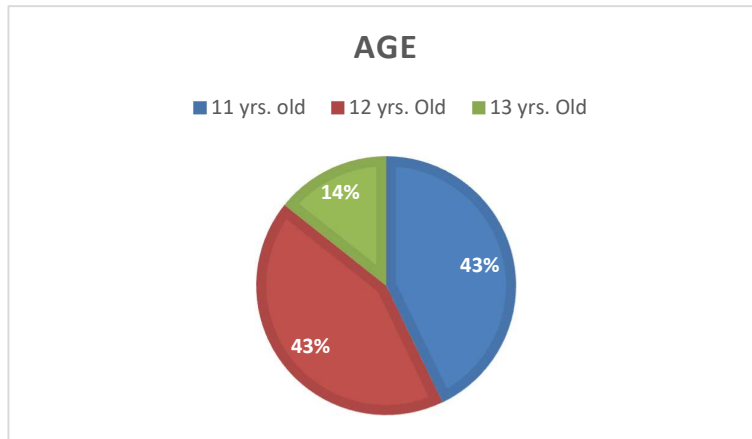


Figure 3. Demographic information by age

Gender

The sample consisted of two males and five females. Figure 4 illustrates the total number of male and female participants involved in this study.

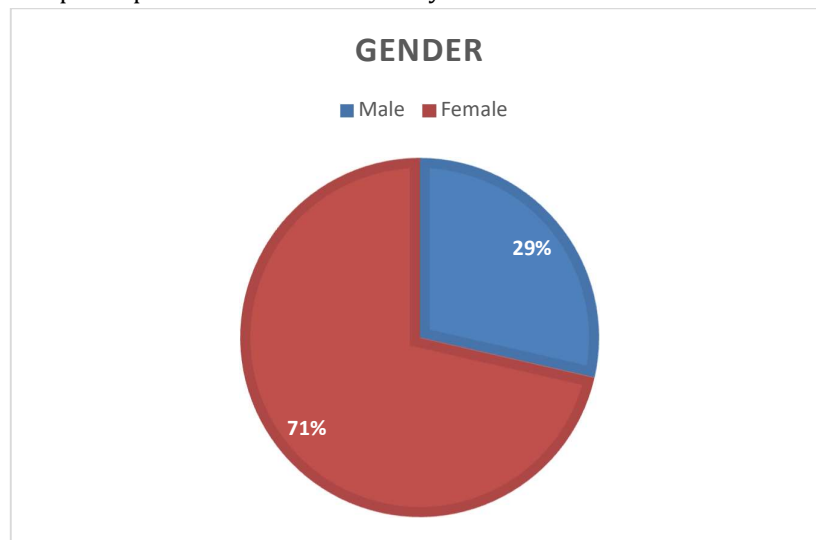


Figure 4. Demographic information by Gender

Treatment of Qualitative Data

For data analysis, the researcher used the Modified Stevick-Colaizzi-Keen approach rather than the Modified Van Kaam method, described by Moustakas (1994). It is because the researcher's profile matches the sample criteria, and the topic of inquiry is his interest. In the first method, the researcher is the first source of information for the study. Additionally, researchers prefer the Modified Stevick-Colaizzi-Keen technique (Creswell, 1998). Its success may be due to the method's distinctiveness and clear presentation of the procedures.

The method uses phenomenological reduction, which entails bracketing, horizontalizing, organizing invariant features and themes, and creating textural descriptions. Data analysis begins as soon as this procedure's first batch of data is accessible. The researcher's own experience has been the primary source of data. Horizontalization equalizes the value of each statement that reflects a meaning segment (Moustakas, 1994). The segments were grouped according to themes. Segments and themes are combined to create a texture description (what).

The textural description was analyzed from many angles (imaginative variation) to arrive at a structure description (the how). The meaning and essence of the experience are captured in a textural-structural description that develops—repeating the processes above developed a textural-structural description for each participant (or co-researcher). The entries were used to comprehensively summarize the group experience (Moustakas, 1994).

The following diagram summarizes steps in the Modified Stevick-Colaizzi-Keen method as described by Moustakas (1994) as illustrated by Figure 5 below:

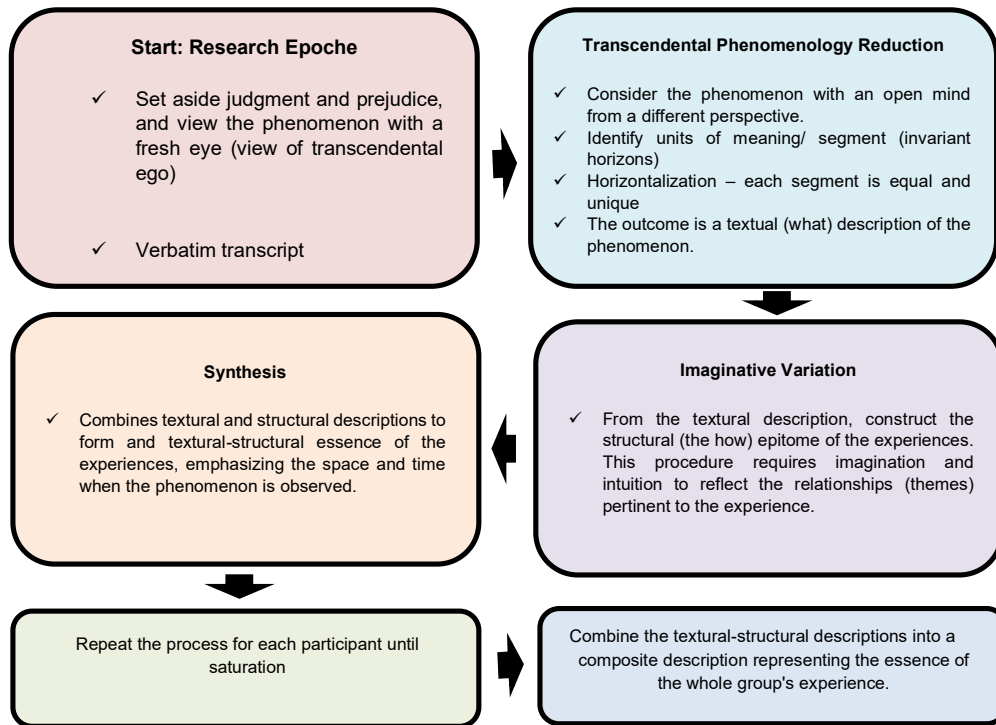


Figure 5. Modified Stevick-Colaizzi-Keen Method (Moustakas 1994)

Research Instrument

The researcher used interviews as the mode of data collection. One of the most basic and widespread approaches for collecting qualitative research data is via interviews. As a result, semi-structured interviews were utilized for the research. In information systems, it is the most popular

sort of qualitative study. Semi-structured interviews usually have a pre-formed structure but an unfinished script, allowing the researcher to delve deeper (Myers & Newman, 2007).

Data Gathering Procedure

This research paper aimed to discover more about students' perceptions, experiences, and attitudes concerning the usage of gamification in TLE exploratory courses. Interviews are, therefore, the most appropriate methodology for the study. Interviews are the most common and essential approach for collecting qualitative research data (Myers & Newman, 2007).

Consent forms were sent to all the participants of the study, and after such forms were secured, they were compiled for documentation. The researcher interviewed each participant at a mutually agreeable time and location conducive to respectful interviewing and audio recording from January 2022 – March 2022. Zoom, a telecommunications application software specializing in internet video calls, was used for the interviews. Interviews lasted from 30 minutes to 1 hour and were recorded for the purpose of documentation and evaluation. The recorded video was turned into verbatim transcripts before coding and analysis. In order to have a complete comprehension of the discussions, the transcripts were read and reread several times. The study's primary goal is to identify the significant emerging themes. Each topic was given a code, and the process was repeated until no new categories appeared. Patterns and commonalities across categories were then recognized, and higher-order themes were formed. Following that, the transcripts were re-examined, considering the discovered themes.

Ethical Considerations

The researcher applied to the DLSU - Research and Development for permission to gather data for this research paper. Before receiving approval, the researcher contacted the management of De La Salle University - Laguna Campus's Junior High School Department to collect data at their academic institution. The data was not collected until the Research Department had approved the study.

The participants in the research study are Grade 7 students in the TLE exploratory course. A participant I.D. number was assigned to each pupil to preserve their privacy. Participants received an email before the data collection activity introducing the study, including the purpose, consent information, a description of confidentiality protections, and the data gathering process. The researcher conducted and recorded interviews using private application accounts, and the names of the participants were kept confidential. All interviews and transcripts were maintained on a laptop protected by a password.

Trustworthiness. To ensure the study's trustworthiness, the researcher transcribed the interviews verbatim. In-vivo codes were used, so the participants' exact words were used to identify recurring themes in the transcripts (Creswell, 2013). Participants were each allowed to review the research to confirm that their ideas were represented accurately and clearly.

Credibility. The interviews were transcribed to ensure accuracy and trustworthiness, and the broad structural description was submitted to each participant for evaluation. The degree to which the structural description reflects the data received from the participants determines the study's dependability. The researcher avoids interfering with the participants' accounts of their lived experiences. As a result, the data may be erroneous because it did not accurately reflect the

participant's sentiments and thoughts. The transcripts have been written verbatim, allowing the theme to be discovered without any discrepancies. The procedure was done to ensure that the interviews, transcripts, and general structural descriptions were all consistent (Creswell, 2013).

Triangulation. Triangulation aims to enhance the process of qualitative research by using multiple approaches. The researcher used methodological triangulation by gathering data utilizing different data collection methods such as in-depth interviews, asynchronous interviews, and literary searches. Data gathered from these sources are compared and validated.

Member check. The transcripts of all the interviews and focus group sessions were emailed to the participants for their comments. A meeting with participants who could participate in either the interviews or the focus group discussions was held halfway through the study period, allowing them to correct the interpretation and question what they saw as 'wrong' interpretations. Participants who could not attend the meeting provided input by email and google chat. Finally, the findings were given to the participants and the produced themes, and they were emailed to confirm the results.

FINDINGS AND DISCUSSION

This research is guided by the following central question: What is the student's perspective on using gamification techniques in TLE exploratory courses? Corollary Question 1: What are the students' attitudes toward using gamification approaches to teaching TLE exploratory courses? Corollary Question 2: Are there changes in the student's behavior in applying the gamification technique? Corollary Question 2: Does the use of gamification techniques affect students' learning engagement and participation in TLE class? The horizontalization of the study was presented by listing significant statements that were extracted from the verbatim transcription of the participants' responses. These statements were read and analyzed frequently to answer the central question with probing questions in the research interview protocol. As a result, the researchers developed 120 significant statements from the participants' conversations. The researchers classified four (4) themes for textural descriptions in theme clustering.

Theme 1. Connect: Building relationships. Research shows that personal characteristics significantly impact gaming preferences and social interactions. People with higher levels of shyness enjoy "superior quality friendships" with their online pals. According to Park et al. (2011), "agreeableness" and "extraversion" are "major incentive factors" for playing online games. Extraversion is characterized as "sociability," "talkativeness," and "extroversion," three of the five essential personality traits. Digital gamers with a high extraversion score prefer to play a game requiring much social interaction. For gamers, forming virtual connections can be much more fun and sometimes lead to meaningful real-life relationships (Fang and Zhu, 2011). The participants stated that they developed relationships through games, which have continued to deepen over time. This topic is reflected in the following participant statements:

- a. *During the game, we feel like we are opening our thoughts, which is why we have a **strong connection even during online distance setups.** – Participant D*

- b. *Yes, I can say that because even though we're not in person through games, be it online or in person, **there's a connection there. I feel it's a way to get closer to my classmates, especially since I can't see them most of the time.*** – Participant F
- c. *I find it really fun, and **it makes us closer** in a way, and I think it benefits us and helps strengthen our team.* – Participant D.
- d. *I think **it does benefit not only our connection with each and the overall experience** but also the study experience so that we are able to absorb the lesson better compared to boring classes.* – Participant D
- e. *You can communicate with each other while playing games, and you can find a bond. **You can find unity and the same understanding** when you want to win that game.* – Participant E

Theme 2. Change: Traditional way of teaching is too formal and dull. The common practice of lecturers reading directly from slides as a teaching method has suffocated the vibrant learning atmosphere. In light of the study, students are also less motivated to learn when lecturers offer too much material and speed up the process during slide presentations. Traditional teaching and learning methods have also been considered ineffective and uninspired by students in the educational system (Xingeng, D., and Jianxiang, L., 2012); (Dicheva, Dichev, et al., 2015). Gamified learning, on the other hand, is more effective in motivating students than traditional techniques. This strategy allows students to study while having fun and enjoying themselves (Boeker et al., 2013). The following statements by the participants demonstrated their disinterest in the traditional learning process:

- a. *I wasn't really as engaged with them, and **I didn't pay that much attention compared to when gamification methods were included** because they weren't interacting with me and the community or the class.* – Participant A
- b. *I feel like **it's a bit formal since it's not that engaging**, and sometimes it's a bit boring, which makes the lesson a bit difficult to understand.* – Participant D
- c. *I feel **a bit disappointed if the teacher fails to make the lesson engaging or interesting** for the students since that's what we actually need.* -Participant D
- d. *In a regular class without a gamification process, **it gets really boring**, mostly in Math, when they just teach you numbers and letters.* - Participant B
- e. *While **for non-gamified learning, we just have to answer, and there's no thrill in it.*** – Participant G
- f. *In my personal opinion, **it's not engaging**; they are simply saying what's on the screen and what they researched about* – Participant A

Theme 3. Captivate: Learning is fun when it is linked to a memorable experience. Motivation is a fundamental factor of learning in education. "Motivating, addictive, and encouraging players through extremely short-term goals, allowing them to fail and try again until they succeed" (O'Donnell, Gain, & Marais, 2013). Gamification can also be used with the SDT to target a particular student's behavior or attitude, allowing teachers to teach more effectively than before. It can be used to improve the engagement and excitement of content. As indicated by the following

assertions, research participants are eager to engage even without incentives, and topics are easier to grasp when gamification is used:

- a. ***It helps me remember the facts and the contents of the lesson more since it is linked to happy memories and stuff*** – Participant C
- b. ***I find games very engaging. It's fun whenever you play games because you can engage with them, and it can also be a pastime to relieve the stress you feel.*** – Participant E
- c. ***With gamification, I find that concepts can become much easier to grasp, and I enjoy it.*** – Participant C
- d. ***I tend to see more participation in those who use games and other forms of teaching for their lessons because it allows students who don't necessarily like normal questions and answers to give their hearts to a certain topic.*** – Participant F
- e. ***It's fun and better to learn because you'll get things done easier, and you'll have fun while doing that project.*** – Participant A
- f. ***When there is a game, it makes the class lighter, which in turn, makes it engaging and fun.*** – Participant D
- g. ***Whenever the word game is mentioned, I tend to focus more because I want to try to win that game.*** – Participant E
- h. ***It makes me focus on my goals and makes me inspired and motivated to do the task.*** – Participant D
- i. ***It does help me focus more on studying and helps me enjoy it at the same time.*** – Participant G

Theme 4: Compete. To compete and be recognized. Competition is regarded to be an effective motivator for students to study. Extrinsic motivation, such as competition, may motivate students to put more significant effort into their current job. Competitive activities encourage learners to play the game. Similarly, competitions motivate students to study and collaborate (Pareto et al., 2012). Competition in games enhances student motivation and efficiency in the learning process. Cagiltay et al. (2013) state that, as motivation rises, students are more likely to spend more time answering questions and have higher accuracy. A participant shows their interest in gamification through the following statements:

- a. ***Yes, because you really want to win, so you would want to learn more about the topic, and it would really push you to be competitive.*** – Participant B
- b. ***I can measure the knowledge I can give whenever I'm in the games. That is why I prefer competition more.*** – Participant E
- c. ***Even if you win or lose, you feel satisfied because you can have that experience with others, have fun and enjoy what you are doing.*** – Participant A
- d. ***If we win, of course, we feel a bit happy, like we just achieved something, and seeing everybody's efforts rewarded in a fitting way will give you a sense of accomplishment.*** – Participant C
- e. ***It makes it more interesting to learn about; you get the initiative to understand them and actually win because if you understand, you can win the game.*** – Participant F

- f. *When you add leaderboards or point systems, it's like you are adding a bit of seasoning to that since **it's going to fuel your competitive energy because you can actually see results rather than going a bit blindly.*** - Participant C
- g. *If I get to learn this topic from my teachers, **I will be number 1.*** - Participant A
- h. *Leaderboards **fueled my desire to work harder and earn more points to sustain my position on the leaderboard.*** - Participant G
- i. *(Competition) It **makes me focus on my goals and makes me inspired and motivated to do the task.*** - Participant D

Table 1. Summary of Research Findings

Research Questions	Themes	Participants Affected	Central ideas for the Themes	Existing studies supporting the themes
RQ1: Student's attitude towards the use of the gamification approach in teaching TLE exploratory courses.	Connect: Building Relationships	A, B, C, D, E, F, G	Games are a leeway to unity, creating a stronger bond among students. A game is a bridge to connect the students.	SDT (Ryan Deci 2000) Hierarchy of Needs (Maslow 1943)
	Change: Traditional schooling is too formal and Boring	A, B, C, D, G	The traditional way of teaching is formal and dull to the students, making the lesson challenging to understand.	SDT (Ryan Deci 2000) Dichev, Dicheva 2015
R.Q. 2: Changes in students' behavior in the application of gamification techniques	Captivate: Learning is fun when it is linked to a memorable experience.	A, B, C, D, E, F, G	The students are willing to engage even without incentives, and concepts are easier to grasp when gamified learning is used.	SDT (Ryan Deci 2000) Theory of Flow (McGonigal 2011) Kapp 2012
RQ3: Student learning engagement and participation in TLE class.	Compete: To compete and be recognized	A, B, C, D, E,	The students want to compete and be recognized. Game elements fuel the student's desire to work hard.	SDT (Ryan Deci 2000) Dominguez et al., 2013 Lee & Hammer, 2011 Theory of Flow

Research Questions	Themes	Participants Affected	Central ideas for the Themes	Existing studies supporting the themes (McGonigal 2011)
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Relationships among the Themes

After reviewing the classifications of the research participants among the themes, the researcher discovered the following results: (1) connect: 100% or 7 participants believed that gamification in education built relationships among them; (2) change: 71% or 5 participants stated that there is a need for a change in the educational system; (3) captivate: 100% or 7 participants illustrated the enthusiasm to participate in gamified learning; (4) compete: 71% or 5 participants responded that they are motivated if there is a competition and recognized for the efforts. These results indicate that the main reason why the participants want to engage themselves in gamified learning is building relationships through games and are captivated by learning using this approach.

The four themes did not exist independently of one another; rather, there were relationships between the themes, which became apparent to the researcher as he interpreted the data. One significant discovery was that some participants fell under more than one theme because of the interconnections between the themes. For instance, five participants who selected the change and compete theme also believed that the gamification approach builds connection and that it interests them.

Synthesis of Composite Textural-Structural Descriptions

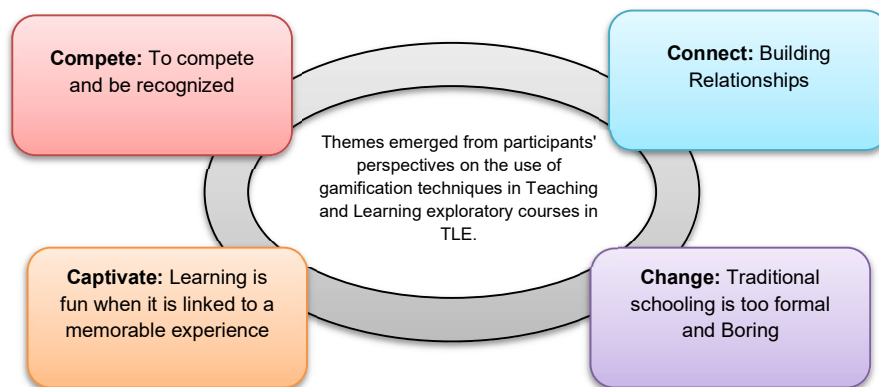


Figure 6. 4Cs in implementing gamification techniques in teaching and learning exploratory courses in Technology and Livelihood Education

The final themes of a study are developed after all individual transcripts have been analyzed and then compared for similarities. The five themes that emerged from this study were presented in Figure 6: 1) **Connect:** Building relationships, 2) **Change:** Traditional way of teaching is too formal

and dull, 3) **Captivate**: Learning is fun when linked to a memorable experience, 4) **Compete**: To compete and be recognized.

The theme “**connect**” reveals that games are leeway to unity, creating a stronger bond among students. A game is a bridge to connect the students. Second, the theme “**change**” explains that the traditional way of teaching is formal and dull to the students, which makes the lesson challenging to understand. Third, the theme “**captivate**” states that students are willing to engage even without incentives, and concepts are easier to grasp when gamified learning is used. Lastly, “**compete**” manifests that the students want to compete and be recognized. Game elements fuel the students' desire to work hard.

Themes revealed that the current generation of students has a wide range of experiences and opinions about the kind of education that will help them the best. Students engage in activities when they feel comfortable and connected to a community of others who share their interests, and it can be achieved through a gamification approach, as supported and cited by Glover (2013). In line with this, students view traditional learning processes as too formal and boring for them, which causes them to feel unmotivated to complete the task that has been given to them. Maslow (1943) defined this in the hierarchy as “the feeling of being loved and accepted.”

Furthermore, competition and leaderboards in games boost motivation and efficiency in the learning process by allowing participants to see their efforts publicly and instantly rewarded. The themes also show how powerfully motivating games can be, employing several strategies to encourage players to play, frequently without any monetary incentive, only for the fun of it and the potential to win, which is consistent with the findings of Kapp's study (2012). The Self-Determination Theory of Deci and Ryan (2000), which claims that a person acts primarily out of interest and enjoyment and that these motivations are linked to and heightened by these demands, is another evidence in favor of this.

These themes can be used as a foundation for incorporating gamification approaches into teaching and learning a particular subject. Educational planners and teachers need a solid understanding of how people react to gamified activities. Understanding perceptions aids in making well-informed decisions based on the actual experiences of the target learner. Researchers and developers can use the study's findings to help them create a more engaging resource.

CONCLUSION

The researcher could identify and examine implications drawn from the study based on the testimonies of the participants. (1) game experiences give students a sense of belonging, allowing them to adapt to an online distance learning environment. Through games, relationships can be formed and grow stronger over time. (2) Traditional teaching methods are formal and dull to students, making lessons challenging to comprehend. On the other hand, with gamification strategies, students can learn while having fun and enjoying themselves. (3) Students increase retention because activities are linked to joyful memories. When everything comes together, and the pupils are entirely focused and engaged in the activity, they are said to be in a flow state. When students love and like what they are doing, they are more motivated to finish the task given to them. (4) Students are willing to engage even without incentives, and concepts are easier to grasp when gamified learning is used. In addition, game experiences improve students' self-confidence and motivate them, students, to do better.

Furthermore, the researcher has the following recommendations based on the study's findings. (1) Based on the results, games did not directly affect learning but increased the students' motivation and engagement in the TLE subject. Educational institutions should consider including gamification techniques in their curriculum to provide students with appropriate learning opportunities; (2) Creating game applications for TLE subjects for the students to enjoy. Researchers and developers can create more engaging resources for students' enjoyment and learning; (3) To provide more engaging content for learners, school administrators should consider enrolling teachers in professional development seminars and training linked to gamification approaches;

LIMITATION & FURTHER RESEARCH

Future scholars can choose to perform a qualitative and quantitative study on their subject areas to add to the knowledge in this understudied field. Future study collaborations on the application of gamification approaches in teaching and learning can be done with educators from other nations.

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