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Community College Students' Perspectives on the Use of Gamification in Online Learning

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Abstract

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MA, Capella University, 2012

MS, Roosevelt University, 2009

BGS, North Park University, 2007

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Abstract

Educators are striving to use instructional methods that engage and motivate students in online coursework. Recent studies have not addressed whether the use of games as an instructional strategy is associated with improving students' motivation and engagement to learn at the community college level. The purpose of this qualitative phenomenological study was to explore the lived experiences of community college students regarding motivation and engagement when taking gamified courses online. Davis's technology acceptance model and Blumer's interactionist model framed the study. The research questions explored a description of the lived experiences of community college students taking an online course that included gamification. Data collection was drawn from a purposive sample of 7 community college students via in-depth interviews and journal entries. Data analysis included content analysis and grounded coding to categorize information into themes. Findings showed that community college students accept gamification as an instructional strategy to learn curricular content at the community college level. Findings related to motivation and engagement will contribute to the body of knowledge to empower educators to integrate instructional strategies such as gamification as best practices in online instruction for community college students.

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Chapter 1: Introduction to the Study

Educators are looking for instructional strategies to use in online learning to motivate and engage students in the learning process. As technology continues to evolve, learners need to know what captures their attention to learn within an online course. Being competent in taking an online course is necessary to understand how course creation can become more engaging for the learner experience. Langbeheim and Rez (2017) reported that educational institutions are encouraging the use of gamification in online courses. In the world of online education, there is an increased need for instructional activities that include gamification.

I explored the lived experiences of participants to describe the benefit of taking sociology courses in an online format. Langbeheim and Rez (2017) stated there should be guidelines for educators in creating online courses for learners and revealed that there are three core components of this type of course. There should be content delivered on the connection between social life, social causes, and consequences of human behavior. Langbeheim and Rez (2017) stated that the course organization of its content should be a way to motivate and engage students to meet course goals. Chapter 1 provides an overview of the background of the study, problem, purpose, research questions, conceptual framework, nature of the study, definitions, assumptions, scope and delimitations, limitations, significance, and summary.

Background

Researchers have examined student motivation, engagement, online learning, and gamification. Alabbasi (2017) reported that course content organization should engage and motivate learners, and the implementation of instructional strategies such as gamification should capture the attention of learners. Alabbasi's study showed a positive perception of the use of gamification among graduate students in higher education. However, desired is more investigation on students' perspectives from a community college environment. The focus of the current study was to understand the perspectives of community college students using gamification in online sociology courses and the connection to student engagement and motivation.

Problem Statement

Educators have the option to use games as an instructional strategy to make the course diversified beyond traditional methods (Badea, 2015). Although educational researchers have explored positive and negative perceptions of implementing single-player educational games into an online curriculum, researchers have not explored whether the use of games as instructional strategies is associated with improving the affective states of engagement and motivation to learn curricular content at the undergraduate level. Lo and Hew (2020) indicated in a recent review that only 4 out of 60 empirical studies conducted compared other instructional strategies such as gamification to traditional learning and that

there is a need for more research. It is unclear which game features students perceive as most useful for their self-perception of success (Ros et al., 2020). The current study addressed this gap in the literature. I endeavored to add to the body of literature by revealing the perspectives of community college students regarding the use of gamification in online learning.

Purpose of the Study

The purpose of this qualitative phenomenological study was to explore the perceptions and lived experiences of community college students regarding motivation and engagement when taking gamified courses online. Through in-depth interviews and journal entries, I explored whether games motivated and engaged students to learn course content in an online setting centered on sociology courses.

Research Questions

RQ1: What are the lived experiences of community college students regarding motivation and engagement when taking a course that includes gamification as one of the instructional strategies in an online environment?

RQ2: How do community college students describe their overall lived experiences with the use of gamification as an instructional strategy in their online learning?

Conceptual Framework

Davis's (1989) technology acceptance model (TAM) and Blumer's interactionist model was the conceptual framework for this study. Davis's TAM defines how learners accept and use technology. This model states that when learners are aware of new technology, some factors can influence their decision to use it. For the current study, technology learners would accept in assisting with student motivation and engagement is gamification. The conceptual framework for accepting innovative technology align with online learning and gamification for describing how implementing new technologies such as games can assist with student motivation and engagement in an online course.

Davis's (1989) TAM related to this qualitative study because it helped me identify the factors that influence a student's decision to become motivated and engaged in an online course. I designed the research questions to address students' perspectives on the new technology in the course, such as gamification. The TAM was appropriate because it allowed me to construct research questions based on the framework.

Another conceptual framework that aligned with this study was Blumer's (1969) interactionist model, which describes how individuals interact with one another to impact behavior. Unlike Davis's TAM, which focuses on learner technology acceptance, the focus of Blumer's model is student and object interactions that may occur in online learning. Blumer argued that most human

activity is the result of people talking to one another. When people talk to one another, there is a social exchange that can affect behavior (Blumer, 1969). In the world of gamification, learners may interact socially with one another when playing a game in an online course, which influences their behavior. Olasina (2014) reported that gaming environments such as virtual worlds depict real-life scenarios and that symbolic interaction occurs in this type of gaming environment. Becoming competitive, engaged, or motivated in learning because of symbolic interaction, the learner's behavior changed. Olasina stated that social meanings of objects in virtual worlds, such as avatars and places, influence gamers' behavior.

Some assumptions made from the social interactionist theory are that individuals construct meaning through communicating. The social interactionist theory aligned with the gamification of online courses because the theory revealed that interaction occurs between an object and individuals. Because of an interaction between objects and individual actions, concepts are learned and behaviors change. Blumer (1969) defined a symbolic interaction framework as the reciprocal actions of two or more actors within a context. Blumer argued that interaction is the actors engaged in action. There must be two reciprocal actions occurring for symbolic interaction to occur. There is reciprocity in the sense that each actor must indicate, interpret, and act upon objects, such as in gamification.

Nature of the Study

This qualitative study included a phenomenological design to explore the lived experiences of community college students regarding student motivation and engagement for online courses that include the use of gamification as an instructional strategy. The purpose of the study was to explore the students' lived experiences and phenomenological design was the best selection. The data collection method included conducting interviews and examining journal entries. The data analysis occurred from analyzing the transcribed interviews and journal entries followed by coding of the data. I used a qualitative method because it allowed me to explore the perceptions of the participants.

Creswell (2009) reported that qualitative data analysis focuses on understanding the phenomenon and exploring questions. In the current study, I explored why gamification is effective in online courses and what is the outcome of implementing gamification in online courses. Creswell noted that the primary purpose of qualitative methodology is to understand the phenomenon. The choice of the participants is purposive to ensure that data are relevant to the research question. The data should also ensure quality representing authenticity and trustworthiness (Creswell, 2009). The qualitative method was appropriate for the current study because it allowed me to capture the perceptions of participants related to the interaction between technology and the learner.

In contrast to earlier studies that relied on quantitative data related to game users (Cheong, Filippou, & Cheong, 2015), this qualitative study addressed the perceptions and lived experiences of community college students who had taken online courses that included the use of gamification as an instructional strategy . The qualitative design was phenomenological. The purpose of phenomenology is to describe lived experiences (Moustakas, 1994). The phenomenological approach includes participants who are willing to express their feelings and lived experiences by providing specific descriptions by writing or recording their lived experiences (Moustakas, 1994). Moustakas noted that when providing analysis, it is important to evaluate and examine the experiences given by the participants. I was able to identify themes that emerged regarding student motivation and engagement based on the analysis of the data. Insights from this study may assist course developers and instructors in determining whether games are an effective instructional tool to promote students' learning. This study may add to the scholarly literature and improve understanding of the connection between gamification and student engagement and motivation in online sociology courses.

Definitions

Affective state: A sentimental condition in which feelings control consciousness (Nugent, 2015).

Engagement: The act of keeping someone involved, interested, and enthused about a specific process. A person can choose to apply their talent, energy, and care toward an effort (Tear, 2015).

Gamification: The application of elements of playing a game, such as creating rules, scoring points, and competing against others. Gamification's purpose is to amplify the effect of a current game that may exist by adding gaming elements to the gaming experience. As a result, gamifying content can improve user engagement and motivation (Hall, 2014).

Gaming elements: Items found in games, including rewards, incentives, points, achievements, leaderboards, conflict, cooperation, and competition, to motivate and engage users to grasp the concepts (Kapp, 2015).

Motivation: The desire for someone to do something. *Drive*, *ambition*, and *determination* are similar terms (Tear, 2015).

Online course: A web-based or web-delivered course that is a form of distance education in which learners can take the course from anywhere they have access to the World Wide Web (Urman, 2017).

Assumptions

I assumed that the students would be truthful in their responses to the interview questions and journal entries. Students documented their lived experiences of a course that included the instructional strategy of gamification. I also assumed that I would be unbiased in setting aside personal feelings and allow

the perspectives of the students. I expected that students would provide detailed descriptions of their course experiences. The assumption that students would be honest was important because it influenced the credibility and reliability of this study.

Scope and Delimitations

The scope of this study was the lived experiences of community college students who take an online course in sustainable energy that includes the use of gamification as an instructional strategy. The students indicated whether they felt the use of gamification engaged or motivated them in learning the content of the course. I did not include K-12 or 4-year university students.

Theories that were appropriate for this study were the Davis's (1989) TAM and Blumer's (1969) interactionist model. Other theories reviewed but not included were game theory and Kolb's experiential learning theory. This study was narrow in its scope because there are very few online sociology courses that include gamification as an instructional strategy. Findings from the study may assist course designers in creating instructional strategies such as gamification in online courses to increase student motivation and engagement.

Limitations

This study was qualitative and had limitations. Chenail (2011) reported that researcher bias occurs by asking questions that influence answers to subsequent questions. Another example of researcher bias is making assumptions

about influences based on culture (Chenail, 2011). Asking leading questions can be a form of researcher bias (Chenail, 2011). Reasonable measures to address limitations included asking open-ended questions during the interview process that would allow the participants to report their perspectives on gamification in online sociology courses.

Significance of Study

This study filled a gap in the literature by focusing on the affective states of motivation and engagement in community college students who have taken courses online that include the use of gamification as an instructional strategy. Potential contributions of the study that may advance practice include support for instructional strategies outside of the traditional methods of PowerPoint lecture notes, video lectures, tests, and quizzes. Students can give feedback to instructors on the instructional strategy identified in the course. For the current study, the instructional strategy was gamification. Other potential implications for positive social change could be that student motivation and engagement could increase in online study, which could result in a decrease in the dropout rate of community college students. Jaijairam (2015) reported that increasing persistence, retention, and graduation rates has overwhelmed many community college leaders and educators. Community college leaders have the task of shifting to a curriculum that is more motivating and engaging students (Jaijairam, 2015). The goal of the

current study was to provide more information to community college leaders regarding ways to increase students' motivation and engagement.

Summary

Because there was minimal research on the use of gamification as an instructional strategy in online classes in a community college setting, the current study addressed this gap in the literature. This study included research questions on how students described their experiences about the use of games in online learning. Davis's TAM and Blumer's interactionist model was conceptual frameworks for the study. Chapter 1 presented the nature of the study, scope, delimitations, limitations, assumptions, and significance. Chapter 2 provides a review of literature related to sociology courses, online learning, gamification, engagement and motivation, integration of gamification, and online learning.

Chapter 2: Literature Review

The purpose of this phenomenological qualitative study was to understand and explore the perspectives and lived experiences of community college students and the use of single-player games in online learning courses in sociology and to capture the student experiences of motivation and engagement. Research on games has revealed game characteristics in elementary and secondary education but has not addressed affective states in higher education and online learning. There has been a dramatic increase in enrollment in online higher education courses due to the flexibility that online learning offers (Czerkawski &Lyman, 2016). Although the Association for Educational Communication concluded that web-based learning impact learning in higher education, evidence also revealed that online learning match or exceed expectations of a traditional learning environment (Czerkawski &Lyman, 2016). Although student success in online learning comes from many factors, the construction of courses can include activities that promote motivation and engagement.

Shute et al. (2015) suggested that there is evidence of indirect paths of engaged concentration and frustration in learning. Shute et al. found that there is a need to strategize an instructional method for effectiveness in game environments to alleviate frustration and to increase student motivation and engagement. Although some educational games are assisting and supporting students to a direct path to learning, there is a lack of perspectives in higher education on how games

influences the affective states of motivation and engagement (Shute et al., 2015).

Evidence suggested that the goal of educational games to engage and motivate

learners need some understanding of the perspectives of learners' characteristics

and cognitive-affective states. Educators may use student perspectives to enhance

learning and use the information to improve student learning without disrupting

the flow, which can sometimes occur in a gaming environment (Czerkawski &

Lyman, 2016).

Although understanding of the perspectives of community college

students' affective states of motivation and engagement is underdeveloped,

educational technology topics continue to appear in understanding how

gamification also influences self-paced learning. Han (2015) suggested that

gamification incorporates gaming elements into a course of learning and students

should be able to learn at their own pace. Gamification allows students to become

self-motivated learners (Han, 2015). When using gamification for online courses,

instructors set clear goals and provide a learning space for students (Han, 2015).

Although gamification continues to be an emerging topic in online education,

evaluation of student perspectives on this phenomenon should continue. The goal

of the current study was to address the gap in the literature by examining the

experiences of gamification in online coursework from the perspectives of

community college students taking courses in sociology.

The literature review provides insight into sociology courses, online learning, gamification, engagement, and motivation. This chapter also includes the literature search strategy that to identify literature related to the study. The study addressed the characteristics of community college students along with the elements of self-directed learning. The literature review includes the topic of educational games and game characteristics. The goal of the literature review was to identify the scholarly research available on the topics and to use the research as evidence in the study.

Literature Search Strategy

Throughout the literature review process, several research databases and journals provided evidence for this study. Databases and journals included the *International Journal of Computer Games Research*, Academic Search Premier, ERIC, and *Journal for Computer Game Culture*. Search strategies took place within the educational databases with the keywords *affective states*, *individual-self paced learning*, *online community college instruction*, *educational games*, *gamification*, *phenomenology*, *motivation*, *engagement*, and *online education*. I conducted searches in educational databases outside the field of education, such as Psych Info and Sage Full-Text. There was a review of phenomenological research to obtain examples of what a phenomenological study would reveal.

The iterative search process began by typing keywords into one of the Walden educational databases by performing an advanced search and using

Boolean operators with terms such as online learning and gamification. I also used those terms in Thoreau, which is a multidisciplinary database. Throughout the search process, if I discovered there were articles that did not meet the research guidelines; I continued the search by using similar keywords or synonyms of the search term. For example, to substitute online learning, I searched e-learning or self-paced learning. I reached saturation of the literature when no new themes occurred and there was no other new insight given from other scholars in the field.

Conceptual Framework

A conceptual framework analyzes concepts and ideas (Urh, Vukovic, Jereb, & Pintar, 2015). Urh et al. (2015) revealed that capturing concepts and ideas could allow a learner to grasp the concepts and apply them to the real world. Within a conceptual framework, the inclusion of a demographic profile could occur. The application of this demographic profile under different groups or themes such as motivation or engagement may occur. There are also some characteristics to these themes such as what types of motivation and engagement are existing. Categorizing themes into a framework and generating an overall theme from the subthemes provided in the framework builds the conceptual framework (Urh et al., 2015).

Conceptual understanding in the use of games in an online learning environment develops into themes and an overall concept formulates. There could

be different levels of understanding of a concept within a framework. According to Urh et al. (2015), there could be barriers or obstacles within online learning. When thinking about gamification, the characteristics of games as an instructional aid in e-learning courses could be a barrier or it could also provide a great learning experience. Placing the advantages and disadvantages along with learning demographics and their perspectives within a conceptual framework can provide some form of an overall concept idea that is new or existing in the world of research.

When applying a model for gamification and online learning, the creation of subcomponents is necessary. Some categories within the model may be the management of learning or the elements of gamification and e learning. Urh et al. (2015) reported that game mechanics and game dynamics might be other concepts provided in the framework. Because of the topics provided in the framework, the outcomes will address the effects or perspectives of students on gamification and online learning in the areas of motivation and engagement.

Course developers and instructional designers develop their courses by using a conceptual framework before progressing to the use of gamification in the online curriculum. The current study frames two theories: Davis's (1989) TAM and Blumer's interactionist model. These two conceptual frameworks aligned with instructional psychology and technology.

Technology Acceptance Model

When researching how gamification and online learning impacts the affective states of motivation and engagement in community college students, Sanchez-Mena, Parreno, and Aldas-Manzano (2017) found that gamification and online learning represents a great opportunity to increase student motivation and engagement. Elements of the TAM applies to online learning and student motivation and engagement because it predicts the student's likelihood of accepting a technological innovation (Sanchez-Mena et al., 2017).

Gamification is technological innovation. Course designers can use TAM as a framework to develop a course curriculum. Since the start of the TAM model, there has been acceptance by the student population with different technological innovations such as email systems, internet banking, mobile commerce, and mobile internet (Sanchez-Mena et al., 2017). Gamification is another technological innovation that needs acceptance. Sanchez-Mena et al. (2017) reported that major elements of TAM are perceived usefulness, perceived ease of use, attitudes, and behaviors. One of the goals of TAM is to address motivating factors between the technological system and the actual use.

Perceived usefulness occurs when an individual believes that a system would enhance performance (Davis, 1989). The student learns the material while adopting the technology. Because of the technology, either the student learns faster, or it can deter the learning process. Davis (1989) stated that

conceptualization of the perceived usefulness of games occurs when students believe that using games help them to learn.

Along with perceived usefulness is the element of perceived ease of use. Perceived ease of use is the degree to which the student believes that using the system will not take a lot of physical and mental effort (Sanchez-Mena et al., 2017). Sanchez-Mena et al. (2017) revealed that students expect to interact with the system, and there will be a sense of efficiency and control.

Another element of TAM is the idea of attitudes and behaviors. Sanchez-Mena et al. (2017) suggested that behaviors of motivation and engagement could result in a positive attitude. If there is a positive attitude in accepting technologies and games to learn, then students can become motivated and engaged in their learning.

Bollinger, Mills, White, and Kohyama (2015) revealed that most students viewed the integration of games as a positive experience, but some students expressed concern that the use of games may not be an effective and efficient way to learn. Bollinger et al. used a survey based on the constructs of ease of use, learning opportunities, experience, and actual use. The students who expressed concern about the integration of games reported that perceived usefulness was not a motivating factor but that there was a direct correlation with the attitude of the user. Students expressed that there was concern that the focus was on playing games and having fun rather than learning the content of the course (Bollinger et

al., 2015). Students may not understand the purpose of playing the games, and the learning experience may devolve into playing and not learning. Distraction and lack of technological experience were some of the other students' major concerns (Bollinger et al., 2015). Other issues were playing games and being in front of the computer screen for prolonged periods. Prolonged use is not a healthy result and can result in eyesight problems or game addiction. Students also noted that games might turn into a solitary event and take away from study time on learning the content. There was also the issue of a decrease in communication between faculty and peers and that the use of games would take up the bulk of the time (Bollinger et al., 2015). The elements of TAM provided a conceptual framework for the current study of games, online learning, and student affective states of motivation and engagement.

Blumer's Interactionist Theory

Blumer's (1969) interactionist theory supported the current study by revealing that individuals create a social reality through collaborative and individual actions. Blumer also suggested that actions from individuals produce meanings for individuals. Meaning, language, and thought are core principles of Blumer's interactionist theory. Blumer revealed that the first core principle is that humans act toward people and things and, as a result, a certain behavior occurs. Concerning the current study, a human can interact with a game in an online course to determine whether they have learned something. The second principle is

language. Language allows humans to communicate based on the interactions that occur (Blumer, 1969). An individual can play a game and, as a result, can communicate what they learned from the game. It is by engaging with language that humans can respond to one another. Thought is the third core principle. Thought allows humans to interpret symbols (Blumer, 1969). In an online gaming experience, each action an individual takes requires them to think before proceeding to the next action.

<p style="text-align:center">Literature Review Related to Key Variables and Concepts</p>

To explore the use of gamification in online learning, it is important to understand concepts related to this topic such as student affective states around motivation and engagement and online learning within community colleges. These topics informed educators on data surrounding the topic. This section of Chapter 2 includes a literature review on these topics.

Student Affective States

One of the key topics in this study was to understand student affective states. Cheong et al. (2015) revealed the exhibition of motivation by a group of undergraduate students taking a course that included gaming elements. The game elements presented in the course were highly rated, and Cheong et al. found that the students had a positive perception of learning systems that included gaming elements. Students liked that there was social interaction, engagement, and feedback. Cheong et al. stated that by increasing

learner motivation and engagement, learning changes. Cheong et al. found using game elements within an online course, student perceptions were positive.

Cheong et al. (2015) approached the problem of the lack of motivation and engagement in a learning environment by looking beyond traditional approaches. A strength of their approach was that students had a positive perception of game elements within a course. A weakness to the researchers' approach revealed game elements within a course offer positive perceptions. More research will develop a gamified educational system that can provide constructive feedback to students about their learning progress. Alshammari and Qtasih (2019) found that effective e-learning systems should incorporate student affective states such as motivation and engagement to provide a more personalized and adaptive learning experience. However, there is a need for more research on how to provide an adaptive learning experience based on student affective states.

Studies related to the gaming concepts prove that games are engaging and motivating as an instructional strategy for student learning. The controversial piece about integrating games into online courses is the goal of gamification is to promote human motivation. Sailer, Hense, Mayr, and Mandl (2017) reported that gamification is not effective in online education but specific game design elements have certain psychological effects. The expectation is that the outcome of gamification can start goal-directed behavior such as motivation (Sailer et al., 2017). In another study conducted by Shute et al. (2015), the authors discovered that games cha the affective states of

motivation and engagement and student performance significantly predicted learning outcomes. Also revealed in the study were two indirect paths to frustration and concentration in learning. The interactions of students while playing a game using the Baker-Rodrigo-Ocumpaugh Monitoring Protocol (BROMP) was a way to identify student affective states. In BROMP, observers annotate student behavior by observation using a round-robin technique. By peripheral vision and a holistic judgment based on facial expressions, speech, and body posture, the observations were conducted (Shute et al., 2015). The importance of these findings resulted in the next steps to look for effective learning supports within game environments to assist with student motivation and engagement.

Sérgio, Florentino, and Manuel (2015) explored that e-learning platforms are more common in educational settings. The study revealed it is difficult for teachers to get insight into how students learn and interact in the classroom in an online format. Affective states and learning styles are deciding factors in student performance (Sérgio et al., 2015). The use of technological tools between teacher and student will aide in the student learning progression. Student separation from the instructor may be at risk, therefore students' affective states of motivation and engagement play a role in diminishing or adding to the risks (Sérgio et al., 2015). Affective states are determinants in student's performance and can influence student learning. As a teacher's role diminishes in an e-learning environment, student's affective states will need monitoring. Technology guided by software will assist in measuring student motivation and

engagement. The rationale for the choice of affective states relates to online learning as the literature discussed. This approach determined affective states play a key role in whether a student is learning the content in an online environment due to technology.

Motivation

Although most of the research points to gamification increasing motivation, the general use of gamification on motivation is lacking (Sailer et al., 2017). For example, many studies treat gamification as a concept and does not examine its general use as the primary focus that may affect motivation.

While the use of gamification should be the center of focus, an understanding of what motivates students to stay in an online course that includes gamification and achieve successful outcomes is an area that needs examination. Beluce and Olivera (2015) suggested that specific characteristics of online education require engagement, and autonomy is necessary for the motivation for learning. In virtual learning environments, a student has a greater responsibility of self-directed learning because of the geographical distance between the instructor and themselves and the requirement to be technically proficient to assist in their learning processes (Beluce & Olivera, 2015). The strategies that students use to take on greater responsibility relates to motivation. In an online educational environment, Beluce and Olivera (2015) revealed motivation is an important factor for a student's performance outcomes.

Strategies that include attention, effort, interest, commitment, and satisfaction all relate to a student becoming motivated (Beluce and Olivera, 2015). Motivating students

to learn can be a challenge. Students who seem uninterested in their studies but show

concern in grades and certifications will have a hard time with motivation to learn the

content (Beluce and Olivera, 2015). An online learning environment that can integrate

technology, and allows for a learning space for students to explore, can be a strategy for

educators to use in increasing motivation in students. A variety of instructional strategies

such as gamification can be building blocks in an online learning environment to capture

the student motivation that is required for a student to become successful.

While online learning environments and gamification can be a positive outcome

for student motivation, Beluce and Olivera (2015) reported that although many online

learning environments have the capacity for interactive tools, there is not a guarantee of

quality. There is a potential for students to have undesirable results, dropping out, and a

loss of motivation (Beluce & Olivera, 2015). Examples of what may cause a lack of

quality are instructional activities that are complicated and not explained appropriately,

gaming elements that appear complicated to achieve at certain levels, and lack of support

from technical staff or instructor. Sailer et al. (2017) addressed how gamification relates

to motivation. The study revealed that the main goal of gamification is to foster human

motivation. Previous research supported this concept, but not conclusively and more

research is necessary. Beluce and Oliveira (2015) reported that there are specific

characteristics of online education that require motivation. The authors conducted a study

and used the *Teaching and Learning Strategy and Motivation to Learn Scale* in virtual

learning environments. The scale measured the variables of autonomous motivation, controlled motivation, and a loss of motivation.

The results revealed significant rates for motivational behavior. The results of this study have the capacity to contribute to educators who work in virtual learning environments and can lead to future studies. Student motivation can occur when there is a perception that the results can produce satisfaction to one of the basic human needs of security, acceptance, achievement, and self-esteem (Neagu, 2016). Although motivation can occur based on perception, games can be more effective in learning but not necessarily more motivating than traditional instructional methods.

Internal and external motivation. Deci, Ryan, and ERIC Clearinghouse (1981) report that self-determination theory identifies the differences between internal and external motivation. Internal motivation is doing something for pleasure while external motivation is doing something with a purpose to gain something desired or avoid something that may not necessarily be desired (Butz & Stupnisky, 2017). For example, if a student is taking a course to earn a satisfactory grade so that they will not receive a failing grade, then the result is internal motivation. However, if the student is taking the course to learn the content because they are passionate about the subject and want to incorporate what they have learned in a current career then the result is external motivation. Butz & Stupinksky (2017) suggested the lack of persistence and motivation is a factor that causes attrition among students. The factors that may contribute to a lack of motivation are a decrease in family support, college status, and graduation requirements,

meaning students who are closer to graduation may be motivated to complete the course (Butz & Stupinksky, 2017). Students who like the idea of flexibility, an asynchronous format, and time management can be motivated to stay in a course (Butz & Stupinksky, 2017). Concerning gamification and online learning, no evidence presents that gamification will allow students to be motivated to complete a course; however, it can motivate the student to complete learning activities within a course. Loima and Vibulphol (2015) suggested without support, internal motivation decreases. Providing encouragement and the option of being innovative is given, student motivation increases.

Rewards. Rewards identifies receiving recognition for achievement (Diamond, Da Fonte & Boesch, 2016). A student's actions can receive recognition for an accomplishment. Garaus, Furtmuller, and Guttel (2016) stated that rewarding students to enhance motivation to learn is a heavily debated topic in educational studies.

While rewards are for those that have accomplished tasks, it is not appropriate to give awards for those that have not reached an accomplishment. The opposite of a reward is a punishment and implies that there is a consequence given for improper actions (Garaus et al., 2016). For example, an individual may receive an award for perfect attendance in a course or by completing tasks on time. An individual that does not complete their assignments in a course may receive a consequence or a failing grade. The research suggested that there are motivational factors that lead to gaining rewards. Monetary rewards, benefits, titles, or recognition motivate people. Rewards of this nature

are external rewards (Diamond et al., 2016). Although external rewards are positive, they do not meet basic human needs (Diamond et al., 2016).

Diamond et al. (2016) found that it is important to create a flexible and efficient learning environment able to meet the basic human needs of individuals. Internal rewards such as security, acceptance, achievement, and self-esteem can fulfill basic human needs. A motivating environment requires that there are conditions that adults feel motivated to make an effort. If adults feel that results will bring satisfaction to supply their needs then they will be motivated to complete their tasks (Diamond et al., 2016). Internal and external rewards may result in behavioral changes.

Engagement

Research by Meyer (2015) categorized engagement into several different approaches including participation, resources, variety, faculty, and relevance. These concepts can be a part of encouraging engagement for online students. For example, assessing points for participation in the course will increase student engagement in a course. The author revealed that also providing variety in a course such as the use of audio, video, and interactive games increase engagement. Faculty members should adhere to the learning styles of learners and find a variety of ways to learn such as providing a transcript of a lecture as well as an audio of the lecture. Having a course that is diverse in learning strategies gains student attention. Faculty can create instructional methods to gain student engagement and provide an avenue of resources to assist the student. This study will add to the body of knowledge to report the student perceptions

and acceptance of the general use of technology and if gamification can be one of the instructional strategies used to capture motivation and engagement for the online student.

Since the concepts to increase, engagement may assist the student, this leads to determining if there is effectiveness in online courses to produce engagement. Ryan, Kaufmann, Greenhouse, She, and Shi (2016) reported that colleges and universities across the nation are using online platforms to deliver instruction, but there are a limited amount of studies conducted on online learning in community colleges and the relationship to engagement. As a result, the implication is that online learning continues to emerge with technological advances, needing more research conducted to improve student learning by engagement.

Meyer (2015) stated that professional development is necessary for faculty members to move students from what they currently know to an achievement. For example, faculty need to engage themselves in emerging technologies and put aside their negative opinions on distance education. Faculty immersion in the student-learning environment can increase engagement. Some of the common themes that Meyer (2015) discussed surrounding engagement were increasing student access to content, changing the role of faculty, increasing interactivity with students, and emphasizing the effort that students do contribute.

Khan, Egbue, Palkie, and Madden (2017) report that student engagement is the key to successful teaching and learning. Content and delivery of instruction are also important (Khan et al., 2017). Some challenges occur when engaging students in an

online environment. Online learning presents a challenge because there is a lack of social

presence between the instructor and student (Khan et al., 2017). There are pedagogies

such as gamification that can assist with student engagement if there is acceptance of this

form of technology. The adoption of new technologies is important because without

adoption students may not engage. Alabbassi (2017) revealed that educational institutions

are trying to find strategies to engage students in their learning process. Educational

institutions are encouraging the use of gamification in education to improve engagement

(Alabassi, 2017). However, student perspectives are under-investigated when it comes to

accepting the technology of gamification and its use.

In a study conducted by Marklund and Taylor (2016), the authors reported that

educational games in practice become a challenge. The actual task of integrating games

into a learning management system may require course designers and instructors to go

through a complex of resources in organizing the data to produce results (Marklund &

Taylor, 2016). The significant amount of time that it would take to conduct game-based

activities in an online course may present a challenge when engaging students to take the

course if the instructions are not clear. It is important to become aware of the constraints

and challenges of gamification in an online course to determine if there will be student

engagement.

Persistence. The definition of persistence is continuing to pursue a goal even if

there are obstacles or difficulties (Israel-Fishelson & Hershkovitz, 2020). An online

learner may show persistence in an online course room if they are trying to meet a certain

goal. For example, an online student may have difficulty the first week of class with learning the technology related to the learning management system and become frustrated. The student can persist if the technical instructions given are easy to follow. Another example would be if the student is having difficulty with the content and the instructor provides tools to help with understanding the content. Some themes that Israel-Fishelson & Herskovitz (2020) discussed about engagement align with persistence. Increasing student interactivity within a course may be one method for the online student to continue to persist in a course.

Mareno-Marcos, Munoz-Merion, Alario-Hoyos, and Delgado Kloos (2020) suggested that interactivity plays a major role in persistence for online learners and that interactivity can vary depending on the characteristics of the learner. Mareno-Marcos, Munoz-Merion, Alario-Hoyos, Delgado Kloos (2020) reported that despite the growth of enrollment in online courses, persistence is much lower than in traditional face to face courses. Students who do not complete their courses are in the range of 10-50 percent (Mareno-Marcos et al., 2020). The high attrition rates can be costly to higher education colleges and universities and the educational leadership and course designers should identify ways to reduce the attrition rates.

Interactivity in online courses between the student and instructor is one way to decrease the attrition rate (Mareno-Marcos et al., 2020). Educational leaders can work to develop a framework that promotes interactivity, which includes elements of gamification and course design that encompasses deep and meaningful learning (Mareno-

Marcos et al., 2020). Creating meaningful learning can increase the likelihood of creating an environment that is satisfying and as a result, will allow the student to persist in the course.

Because of creating an environment that is rewarding for online students, faculty members can become more proactive in teaching online courses. Imbellone, Medaglia, & Marinensi (2015) reported that faculty affect curriculum development and as a result significantly change student's persistence in online courses. Not only do faculty need to become more experienced in creating a rewarding online environment, students must persist in the course so they meet their learning outcomes (Imbellone, Medaglia, & Marinensi, 2015). Persistence should be present in students until the end of the course because if students are not successful it will be difficult to retain them.(Imbellone, Medaglia, & Marinensi, 2015).

Many believe that persistence in an online course can be difficult to achieve. The reason for the difficulty of achieving persistence in an online course could be due to a lack of teacher presence and a lack of community of inquiry. To create teacher presence, there has to be a triggering presence, exploration, integration, and resolution. Imbellone, Medaglia, & Marinensi (2015)revealed it is important not to rely on technology in itself in an online course, but the teacher presence can be developed by making use of discussion boards, videos, demonstrations, and gamification. Imbellone, Medaglia, & Marinensi (2015) reported that teacher presence relates to involvement in the course.

Teachers should be moderating discussions, using introduction videos to the course or topic, and creating a curriculum that allows the students to explore.

A community of inquiry by teacher presence will promote persistence. Attention is required on how dimensions of learning relate to the curriculum (Imbellone, Medaglia, & Marinensi, 2015). Some pedagogical examples would include the teachers leading by example and providing guidance. Students should be encouraged to respond in the online community with videos, and pictures to share their experiences (Imbellone, Medagalia & Marinensi, 2015). Students can apply their learning to real-life situations by having problem-based scenarios created by the instructor. Role-play assignments, the use of virtual worlds, or gamification are other examples (Imbellone, Medaglia, & Marinensi, 2015). Imbellone, Medaglia, & Marinensi, (2015) reported that outside of the online environment, other factors such as understanding the impacts of advising, academics, and technical support may play a role in student persistence as well.

Completion of tasks. The definition of completion is the action or process of finishing a task or goal. A student may enroll in a course and complete it by the end of the semester. The opposite of completing a course would be for the student to receive an incomplete or withdraw from it. For example, a student may enroll in a course and then become frustrated with the learning materials of the course and may decide to not complete the course and withdraw. There many reasons that an online student may not complete a course.

Online courses allow for flexibility and can meet the needs of many online learners. There has been a need for educators to understand why students may not complete a course (Lim, 2016). There has been some concern about students procrastinating in online courses. More research is required to understand this delay in the learning of online students to resolve the issue of a decrease in completion rates and retention.

Lim (2016) found that the average length of time it took for students to turn in assignments determined if they would withdraw or the type of final grade they would receive. Instructors can suggest ways to promote consistency and complete assignment deliverables in online courses. For example, a gamifying course curriculum could allow a student to complete the course if they will receive a badge or award for course completion. Lim (2016) suggested that because online courses are becoming more self-regulated, academic procrastination is occurring because students are not adapting to having the freedom to submit assignments at their leisure, and more will be required of them to have a higher level of responsibility to complete tasks. There are many ways that educators can measure students that are not completing requirements, but it is important to understand how the student begins the assignment, progress through the assignment, and how they complete it.

While completion rates are important to a student's success, more research is necessary on how academic performance and completion rates play a role in online education. Grades and completion can measure academic performance. Warnock and

Gantz (2017) reported that student and teacher interaction in online courses is a key

factor in determining completion rates. Imbellone, Medaglia, & Marinensi, (2015) found

that online course design elements are factors for completion rates. Some online course

design elements are online learning activities, self-directed learning activity,

collaboration, and assessment and reference materials. Imbellone, Medaglia, &

Marinensi, (2015) stated that as a result of these particular elements, completion rates can

increase if the elements are of sound quality. Completion rates can decrease if the course

design elements lack in any area.

   Not only does course design elements and teacher-student interactivity can

determine completion rates, but gamification can also have an impact on completion rates

in online courses. Warnock and Gantz (2017) reveal that gamification is one concept that

could potentially prove the estimation of gains and losses in not completing a course.

Gamification is the process of applying mechanics to tasks to encourage completion and

participation (Warnock & Gantz, 2017). For example, students want to complete a course

because of earning something such as a passing grade to move to the next course. If

adding gamification to the course, the students may view it as an opportunity to assess

their value. A more enjoyable course experience with competition, feedback, challenges,

and rewards can remove the emotional costs of boredom, frustration and add some

benefit of meeting a challenge and connecting with others (Warnock & Gantz, 2017).

   Gamification may be a great tool to use to help with increasing completion rates,

however, it does not go without some criticism. Warnock and Gantz (2017) reported that

gamification remains vague. For example, gamification may have a potential for some data quality issues, but it does offer engagement and psychological impact. Testing gamification in online courses before using it is key in helping with student completion rates.

      Attention. Students take online courses to learn about information on a specific subject area. Course designers need to ensure that they are capturing the attention of learners. Just like with the need to have completion and persistence, attention is the ability to take notice of something or someone. The skills to concentrate are learner requirements and necessary for capturing attention.

      Lewin (2016) reviewed and assessed that community college students can benefit from a new form of hybrid learning due to instruction and edX content. Instruction can capture the attention of learners if there are a variety of ways to instruct learners (Lewin, 2016). A type of content delivered from the best professors and leading industry experts is edX content. EdX is a massive open online course that hosts online university-level content in a variety of disciplines. Some examples of edX content would be colleges taping alumni as teaching volunteers and having labs reinvented in the style of online video games. Course designers and collaborators that work with edX content are studying ways to understand how people lose attention and forget (Lewin, 2016).

      Alumi participation in would be beneficial in creating courses into an edX format such as featuring video snippets and creating interactive exercises, this will allow for the capture of students' attention. Lewin (2016) discovered that gamifying labs are part of a

simulation strategy that shows a fresh teaching approach. An example gamifying a lab can produce attention when a student takes a course about gardening and they can garden with an online experience with interaction techniques such as dragging and dropping distinct types of tools and equipment within the learning environment to produce the garden. In a traditional format, it may become very expensive to treat a live garden and the costs to run it thousands of dollars. Lewin (2016) reported that creating such an online experience such as gamifying labs would capture the attention of students along with the support of alumni using this type of format.

While Lewin (2016) suggested ways to capture attention from online students, Harizan, Hilmi, and Atan (2016) explored the acceptance of online education and reported that more attention overall in online courses is necessary. In a sustainability course offered in Malaysia, there was a review of online education and triggered as a need for finding ways that the course could capture the attention of students. Harizan et al. (2016) stated that online students expressed their acceptance by cognitive and affective aspects by completing a survey that addressed their acceptance of online education. The open-ended survey showed the students underlying opinions and analysis of the data captured used NVIVO 11 Software. Words repeatedly used by respondents' denoted components of acceptance towards online education categorized as major themes. Harizan et al. (2016) concluded that the concept of acceptance toward online education and all its components are capturing the attention of online community college students.

Milman and Wessmiller (2016) referred to Keller's Arc Model, a model of motivation and performance that is the conceptual foundation of attention. Educational technology professionals in academia suggested that technology in education gains the attention of students. There are some risks to attention in online education and modern technology (Lewin, 2016). Educational thinking concerning digital pedagogy can be a poison and a cure (Lewin, 2016). Virtual education is part of an ongoing process and not necessarily meant to capture the attention of learners (Lewin, 2016). Being online or including learning activities such as gamification is not any different from a face-to-face format. The acceptance of using gaming to increase student attention in online environments needs more research to decide its value. With this gap in the literature, this proposed study using Lewin's approach will be the next link in the chain of knowledge.

Student engagement is an affective state captured in online learning. There are ways to engage students within an online course. Some key characteristics that students should have to become engaged in a course are persistence, the ability to complete tasks, and attention. Even though there may be barriers and obstacles within a course, if a student persists, engagement happens. When students decide to complete an assignment within a course, they have completed a learning goal. Completion of tasks can also allow students to become engaged in a course. It is necessary to capture the attention span of online students. Faculty and course developers can aide in this process by providing a variety of ways for learners to learn. Overall, using persistence, completion of tasks, and

attention are essential for capturing students' engagement in an online learning environment.

Community College Instruction

Community college instruction takes place when students enroll in a course. Instruction delivery comes in a variety of formats which may consist of face to face, fully online, or hybrid blended courses. Community colleges are the gateway to a student population that is transitioning from post-secondary education into adult or continuing education. McFadden (2016) proposed that first-generation college students are an at-risk population for not completing community college due to socio-economic factors.

Community College Student Characteristics

Levin, Viggiano, Lopez Damian, Morales, and Vasquez (2017) revealed that community college students have many different characteristics. Since the 1970s, students of color mostly populated community colleges because of their socio-economic status and could not afford a 4- year college education (Lysne, Miller, & Eitel, 2013). Since the 1990's, there has been more emphasis on inclusion and diversifying the student body to consist of students from various socio-economic backgrounds (Lysne, Miller, & Eitel, 2013). The transposition of the term traditional student to non-traditional student broadened and classified community college students. Levin et al. (2017) discussed other ways to classify community college students using terms such as disabled students, single parents, transfer students, remedial or developmental course takers, and students of low-income. Levin et al. (2017) looked at how faculty and administrators recognize the

identities of community college students and how they describe and conceptualize

community college students. While the qualitative study revealed the different

perspectives of faculty and administrators, a review of the interviews showed the

categorizing of community college students using discursive identities.

Student characteristics could be useful to predict the persistence of community

college students in online courses and technology acceptance of gamification in courses.

The characteristics of GPA and credit hours earned could also predict graduation rates.

Johnson and King (2016) explored how community college students' characteristics

influence graduation rates. The researcher also found that success in online courses was a

characteristic that kept the student in the course. Windham, Rehfuss, Williams, Pugh, and

Tincher-Ladner (2015) found that campus activities outside of the classroom and

participating in a student success course were key factors in students' technology

acceptance of remaining on online courses.

Motivating and Engaging Community College Students

Motivating and engaging community college students can be a challenging

endeavor (McFadden, 2016). Community college students may have a variety of reasons

for being distracted during their course studies (McFadden, 2016). Emerging research

suggests that traditional delivery models are not as engaging for students due to non-

relatedness to lived experiences of students and relevancy to course content (McFadden,

2016). There is a need for educators to collaborate more with community college students

to find a solution to increase engagement and motivation. McFadden (2016) revealed

students' frustration about the way that instructors teach and would like to see more implementation of creating relatable content and reflect lived experiences.

Hoops et al. (2015) address developing content and instructor pedagogy, McFadden (2016) have found that creating student success courses or programs can motivate and engage students. Hoops et al. (2015) stated that student success courses assist in increasing motivation and engagement for community college students. Community college institutions must address ways that they can progress their students from matriculation to graduation by evaluating Student Success Courses and Programs (Windham et al., 2015). Although the results of these types of Student Success Courses and Programs vary, overall there are some positive outcomes in increasing student motivation and engagement in community college students.

Along with changing teaching pedagogies and creating student success programs, Imbellone, Medaglia, & Marinensi, (2015) explored using summer bridge programs for community college students to increase motivation in areas such as STEM. Imbellone, Medaglia, & Marinensi, (2015) found that student motivation and engagement resulted from STEM bridge programs and because of these programs, students are valuable and transformed in their academic successes.

Self-Directed Learning in Higher Education

Using gamification in self-directed learning promotes student responsibility, gives an understanding of student learning styles, and the creation of game frameworks and pedagogies (Schoenenberger, Korkut, Jaeger & Dornberger, 2016). Self-Directed

learning is an option that many students take advantage of, so it is important to understand what drives the success of becoming a self-directed learner.

Student responsibility. Self-directed learning is a process of learners taking initiative in diagnosing their learning needs. When students can diagnose their learning needs they have the opportunity to set learning goals for themselves (Schoenenberger, Korkut, Jaeger & Dornberger, 2016). Students can also research the resources that are available to assist them in meeting their self-directed learning goals. If students identify their learning resources, then educators can implement learning strategies and will be able to evaluate student learning.

It is the student's responsibility to decide if they want to become a self-directed learner. There are a few online courses for students to be self-directed learners (Cho & Heron, 2015). For example, there are courses in the online environment that allow students to take and complete the course work in a self-paced format. Self-paced formats allow the student more flexibility in completing coursework and become a self-directed learner (Cho & Heron, 2015). An example of a self-paced course would be developmental or remedial courses. Traditionally developmental education allows for tutoring, learning labs, and diverse types of individualized instruction (Han, 2015). Han (2015) revealed that students take responsibility for their learning in developmental courses so that they can prepare to move on to traditional courses. Han (2015) reported that there is a message to send to community colleges to keep student learning diverse, which needs different classroom experiences and integrates self-directed learning.

Knowles (1975) described that adult learners are taking more responsibility for their learning. The author's message focused on encouraging students to work faster and to become their advocates for learning.

Han (2015) interviewed with Christine McPhail a former college president of a community college and referenced that Christine believed educators can do more to assist their students in taking ownership of their learning. For example, educators can empower students to collaborate with the instructor to plan, assess, and evaluate their learning. The author reported that it is the instructor's responsibility to give strategies to students to become active in their learning and to state how they would prefer to learn. Learners should assume responsibility for their own choices.

Han (2015) conducted an empirical study that addressed a self-motivated learning environment for an online course in 3-D animation. Student motivation and engagement increased, and student fears decreased because of an online learning professional 3-D software provided in a course. The author discovered that with gamified pedagogy students are self-motivated learners interested in learning from the course and from other students within the course.

Cho and Heron (2015) reported that many students are interested in gaming and therefore it is important for educators to address this when students are taking on self-directed learning. The authors concluded that engagement and motivation in self-directed learning include challenge, interest, and purpose. These are some of the factors of gamification.

Learning styles. Assessment by the instructor of the learner learning style can assist the learner to understand how best they learn. Schoenenberger et al. (2016) reported that educational computer games are one strategy to assist with learning based on students' learning styles. In past years, researchers have been engaged in games and implementing them into the online learning environment to incorporate self-directed learning (Özdemir, 2016). However, some studies have indicated that without support identifying the learning needs or difficulties of students there may only be temporary interest (Cela, Sicilia & Sanchez-Alonso, 2016). Due to the temporary interest in the gaming strategy for self-directed learning, student performance may not be as good as expected (Doyle & Jacobs, 2015). Doyle and Jacobs (2015) concluded that different learning systems benefit students who want to become self-directed learners.

Games have been a driving force in creating situated learning environments for students. Students can apply the knowledge gained from playing games in a self-directed format to real-world scenarios (Thanyaphongphat & Panjaburee, 2017). When comparing games to traditional teaching methods, the researchers discussed a more enriching and interesting learning environment (Cheng & Chau, 2016). When students take responsibility for learning games, it allows them to become interactive and this interactivity can trigger motivation. For example, children have better social interactions when using games in learning than receiving traditional feedback. Cheng and Chau (2016) reported that a web-based instructional game used in a decision science course found a relationship between students' backgrounds and their experiences with games.

Other researchers such as Cho and Heron (2015) showed that gaming does not necessarily transfer from entertainment to educational environments for several reasons such as being more engaging than reality. Intrinsic motivation and focused attention are necessary for motivational engagement (Cho & Heron, 2015).

The results of games for entertainment versus education may not have a profound effect on self-directed learning. However, Ozdemir (2016) found that in comparison with traditional learning methods, games are more effective in self-directed learning. Ozdemir (2016) concluded that students who learned with the self-directed game personalized to their learning styles benefited more than students that were not learning according to personalized learning styles. Because of this study, more research was necessary to determine if self-directed learning and games play a role in student achievement.

Independent learning game frameworks. Schoenenberger, Korkut, Jaeger, and Dornberger (2016) found that gamifying a biology course using a digital learning platform with a game named Tourney had positive and negative effects for its learners. The game was equipped with a biology-related curriculum and implemented as a self-learning assessment tool. The goal of the game in the digital format was to provide an e-learning game environment for self-paced learning based on the learner's ability to overcome difficult levels of the curriculum. Learners achieved the different game levels and earned rewards.

Another role of the Tourney in this self-directed learning format was to enhance learning outcomes and knowledge transfer. Schoenenberger et al. (2016) revealed that

with this type of independent learning structure, instructors could create custom challenges for students. The findings of this study revealed that there was moderate enjoyment in playing the Tourney game within the course and most of the students found that they did learn something. The results of this experiment suggested that Tourney is an example where gamification made a positive and measurable impact on personalized learning.

The results of the study also produced meaning to other important gaming concepts to improve learning including that failure does not result in consequences and that users can replay games over and learn at their own pace. Schoenenberger et al. (2016) revealed that in the traditional classroom, repetition of exams are mostly one attempt, but in online gamification, learners can retry several times until they have learned the concept. It is common that in the classroom students are bored or frustrated, while with games, students can work to achieve various levels and become motivated to move to the next level. Though the Tourney game design increased the learning outcome of students, it also gave an independent framework for implementation in various learning environments.

Although there are some positive aspects to the Tourney game for independent self-directed learning, there are some negatives to the implementation in a digital format and common pitfalls. Technology is one of the common pitfalls when implementing games in an online environment. In the example of the Tourney game, the school blocked access to the game that caused a delay in deploying it in the learning environment. As a

result, students and teachers became frustrated with the technology dilemmas and this pitfall negatively influenced the launch of the game and student's attitudes.

Gamified pedagogy. Creating a self-motivated learning environment is possible when implementing games in an online environment such as with the Tourney Game. Han (2015) performed an empirical research study using gamified pedagogy in a 3-D animation course for a Communication Class. A theory of gamified pedagogy resulted from the study. Han (2015) revealed that using gamification as pedagogy would require a curriculum that includes basic skills, goal setting, rewards, and creating a learning space for students for practice and exploration. Gamified pedagogy in this format will allow learners to become self-motivated learners as they learn not only from the content delivered but also from others in the learning community as well.

Educators have called for gamified pedagogy and have often made use of it in online education as a tool for student motivation and engagement (Han, 2015). In a self-paced learning environment, implementing gamified pedagogy will reveal what causes student motivation and engagement, the amount of time students spends on games in an online course, and if gamifying pedagogy inspires students.

Han (2015) reported that learners are not afraid to face challenges in gamified pedagogy and as a self-directed learner, engagement factors exist such as challenge, control, immersion, interest, and purpose. This allows the learners to explore the game in their way and continue to become self-directed.

While Han (2015) discussed that gamified pedagogy helps on the path to self-direction, Cho, and Heron (2015) also described that it takes practice from the individual learner before they will tend to compete with others. Once the learner is comfortable, they can choose to compete with others if they feel they have mastered the game themselves. This may not be a benefit to instructors if you want to see how students interact with others in a learning environment, sometimes the competition can get tough and learners will only want to play themselves and will only be self-directed learners. With implementing gamified pedagogy, students may become self-directed learners interested in learning more from the course and others.

Games and Learning

Due to a need for student motivation to increase, games have become a part of the teaching and learning process. In the past, leisure came from games; however, educational research has found that games are becoming key to educating learners during the process of learning (Cheong, Filippou, & Cheong, 2015). Games are becoming stimulating to motivate learners. Games are a part of education for the K-12 population since the beginning of the 1980s. Courses such as math and history have implemented games. Games evolved and laid a foundation for educational games in higher education. As time evolved, games changed and educators are becoming adopters of gamification in learning. Games can prove that education can be fun and promote a love of learning. Sailer et al., (2017) reported by computers providing access to information, they improved communication, and continues to assist with automating human thinking.

Including games into the same category as computers, allows for automating human thinking by problem solving and achieving a certain task or goal (Sailer et al., 2017). Khasianov, Shakhova, and Gainey (2016) found that games provide a good environment to explore ideas of computational thinking. Computers have added new dimensions to gaming and have provided more opportunities to offset learners that may have an addictive dependency on games (Khasianov, Shakhova, and Gainey (2016).

To demonstrate the potential of games and to provide some background history on the use of games in learning, Khasianov, Shakhova, and Gainey (2016) found that not only children and young adults play games, but there is also another audience of game players. The average age of gamers is 37-years old and have been playing for 12 or more years (Khasianov, Shakhova, and Gainey (2016). Game purchasers are 41 years of age (Khasianov, Shakhova, and Gainey, 2016). The percentage of youth playing computer and video games is 97%. The percentage of gamers older than fifty is 29% due to the increase of incorporating games into activities in nursing homes and senior homes across the U.S. (Erenli, 2016). Along with a population outside of children and young adults who play games, Erenli (2016) reported that games have become a part of people's lifestyles. Seventy-seven percent of American households own games, 68% of parents feel that games provide mental stimulation and education and 42% are female gamers (Erenli, 2016).

Not only have households included games in their way of life, technology gadgets have implemented games. Erenli (2016) reported that 55% of gamers play games on their

phones or mobile devices and 2,600,000 games download each year in Germany and game revenue increases by 40% in 2012 and continues to rise. China has the largest number of games and the time spent on games is in the billions. (Erenli, 2015). The U.S. has an active population of 42% of gamers. (Erenli, 2016).

Erneli (2016) states games have value in many ways and now they are becoming prevalent in the workplace and higher education institutions of learning. Of German employees, 46.6 percent surveyed play games during work hours, and 61% of CEO and CFO's surveyed play games during work hours (Erenli, 2016). As for U.S. employees, Erenli (2016) did not disclose percentages of game use during work hours. These facts show the important steps taken to make the case for gamification in education on a global level. Erenli (2016) revealed that nevertheless, these facts also reveal that games can be hazardous to people by increasing addiction and social isolation. All of these factors need consideration when using gamification in education (Wilson, Calongne, & Henderson, 2016).

Wilson et al. (2015) researched that games can model real-life situations and now educational institutions and organizations can build upon real-life situations by using games. Wilson et al. (2015) stated that to use games in real-life situations, an instructional designer of an online course must create gaming scenarios. Evaluating some gaming scenarios in online course work may use leaderboards, badges, level systems, achievements, and rewards.

International Business Machines (IBM) has already noted that gamification is an enabler for learners and collaborated with gaming organizations to train some of their employees (Erenli, 2016). One example of how IBM uses gamification to train their employees is by using a game called Smarter Traffic. The goal of the game is that players must evaluate traffic patterns and re-route the traffic based on employee metrics.

While there are many ways to create games to apply to real-life situations, people view games as an obstacle to real-life situations. Erenli (2016) stated that games are addictive and students can become inattentive from the educational purpose of content and the use of games can become more of a distraction. On the other hand, if learners are distracted, gamification could build a bridge and bring students back to the real-life scenario of the learning content (Galbis-Cordova, Martin-Parreno, & Currás-Perez, 2017). While the gaming industry has a significant impact on society, gamification can allow students to become open-minded and have a fun learning experience in educational scenarios. If more students request gamification to become a part of their learning process, educators should respond properly even if they do not integrate gamification in their teaching (Erenli, 2016).

Erenli (2016) introduced a brief history of gamification and the importance of implementing it into real-life learning scenarios in teaching. Further research needs to occur on educators being able to make teaching more enjoyable and steps on how to get there. More research is necessary on how to include gamification when teachers and students do not have the skills to take part in a gamified education course. Technology

can be difficult to learn, and it will take some skills from both teachers and students to participate in a gamified curriculum.

Characteristics of Digital Games Versus Analog Games

Game studies had the consideration as a field that studied the evolution of games and its characteristics and the cultures surrounding them. Understanding the characteristics of games will capture the perspectives of students in online courses and help them in determining if games implemented in online learning provide some insight into their student motivation and engagement. Trammel, Torner, and Waldron (2016) reported that from the days of the Nintendo console system to games displayed on the internet, game research is present in the world of academia. Game studies need further evaluation as time evolves (Trammel et al., 2016). No one will go against the fact that games are prevalent today (Trammel et al., 2016). However, games do form a field of its own and it is the characteristics of games and the results they produce that have inquiring minds wanting to learn more. Trammel et al. (2016) revealed that digital games have elements of high-quality imaging, social media distribution, and the ability to display them on many technology platforms. Hybrid games can form and detach from cultural attitudes that are different from those in the digital gaming industry (Trammel et al., 2016).

In the world of business, gamification is the new trend. The characteristics of gamification include badges, points, leaderboards, and achievements with a connection to social media (Trammel et al., 2016). Examples of gaming applications that transform

everyday activities may include gaming features that center on entertainment, dining, shopping, and dating. Other characteristics of games may include self-help characteristics that promote exercise, health, and productivity (Trammel et al., 2016). While games are a part of the social society, more research is necessary on how digital games can have meaningful characteristics such as in analog games. Trammel et al. (2016) have not revealed that analog games are more important but research in game studies and characteristics has had less focus.

Digital games sometimes produce barriers because of the technical ability that is required to create lines of code that bring digital games to life (Wouters et al., 2015). Whereas analog games do not require hours of coding but a different set of voice into design processes (Trammel et al., 2016). While analog games may take on a safer form, these types of games have issues with documentation about its practices. Once noting the differences between analog and digital games, educators can determine the best ones to use for their courses and how to implement them. Certain traits such as the number of players, rules, skills needed, length of playtime, and rewards are all necessary to compare and analyze on which method to implement into a course and the ease of use (Galbis-Cordova et al., 2017).

Examples of games. Trammel et al. (2016) revealed there are many different genres of games. Party, War Role Playing Games (RPG's), Single Player, Classic Cards, Monopoly, and Sports are all types of games. The idea is to align a gaming scenario with the type of learning that is required for the course. A party game, for example, would be

like charades where the players are not up against time but just want to accomplish the objective of the game and the players can decide on when is the right time to declare a winner. An example of a war game is that it tends to belong in nature and goes for a long length of time usually more than one session. An RPG game such as Dungeons and Dragons would consist of a round of combat and the focus is on the game session. Single-player games such as the game Diablo does have an ending. Classic card games allow for multiple sessions and the object is to get the most hands to determine a winner. A monopoly game can follow in the party game category to obtain the most money or property. Sporting games are similar in length to any other type of game and are more casual with different achievement levels.

      Features instructional designers find valuable. While there are many types of games, it is important for a course developer that would like to include gamification or games in a course to select games that have the characteristics of problem solving and decision-making. Student perceptions about using a game in the course will relate to whether or not there was the ease of use based on the characteristics of the game. Trammel et al. (2016) identify the goal of using a game in education is to have students learn how to play the game and apply what they have learned in the game to a concept or take away from the course. Solving problems, completing tasks, and making decisions is important in any type of game. Hess and Gunter (2015) stated it was determined that the human brain functions by identifying patterns and then taking action upon patterns. Students that learn multiplication facts by using worksheets, flashcards, and memory

drills take an extended period to grasp the concepts. Games can be useful as a substitution for worksheets, flashcards, and memory drills.

Along with selecting games that include problem solving and decision making, instructional designers want to include in every e-learning course clear learning goals and objectives, hence the games would need to align with those of the course (Badea, 2015). If utilizing games in the course, the navigation of the game must be simple and user friendly. Online learners should be able to get through the course with ease. Icons should be visible, and links should be active and relevant. If utilizing games and graphics, the color scheme should align with the brand message (Trammel et al., 2016). Multimedia content should also be engaging and motivating for the learners. Multimedia elements that include interactive elements such as drag and drop interactions or game mechanics should be functioning properly within the course. Trammel et al. (2016) concluded that implementing gamification into a course is successful when course developers ensure that all elements are working properly. Instructional designers want to create courses with features that will allow for engagement and motivation of student learners (Trammel et al., 2016).

Digital badges. The use of digital badges as learning incentives in an online learning environment continues to be an essential element in online coursework (Hurst, 2015). Learning incentives such as earning a badge can motivate and engage learners and allow for the acceptance of the technology. Hurst (2015) reported that understanding the learners' needs ensures the implementation of badges in the online curriculum and that

course designers should implement this form of achievement when developing courses. Educators, higher education, business, government agencies, and students accept digital badges. The concept of earning or displaying a badge to recognize skill development is similar to the merit badges earned by Boy and Girl Scout Organizations (Hurst, 2015).

When students earn a badge in a course this can lead to student motivation and engagement. The online community adopted the term digital badge but it has the same concept as traditional badges. Another term outside of digital badges is micro credentialing which is a synonym for digital badges.

Within course and game design, badges are digital tokens that can appear as icons or logos within the online course page. Awarding badges can occur for significant accomplishments such as completion of a project and proficiency in a skill. Digital badges can also be a form of assessing the learner to see if they have achieved the desired learning outcome. Hurst (2015) reported that badges are tools used to better track learners and prove competence both inside and outside of traditional settings as well as online course environments. The belief is that digital badges will gain acceptance from student learners.

Educators and instructional designers are most likely in the future to use badges in online curriculum design and gamification than ever before (Hurst, 2015). Hurst (2015) has concluded that instructional designers must understand what motivates learners when deciding which badges to use for their online course content. To decrease non-motivational factors, it is important to provide learners with instruction on how to earn

badges so that there is an understanding that the badges support the learning outcomes and learned skills for each learner.

Internal competition—Avatars. While achievement badges are a form of gamification that is useful to increase learner engagement in learning management systems, it has no practical value. There is also internal competition outside of earning badges such as avatars and digital certificates. Over the years, different types of gamification have gained the attention of educators. Hakulinen, Auvinen, and Korhonen (2015) reported that the goal of gamification is to utilize elements from games to non-game systems to encourage motivation and engagement for learners.

Along with badges are other elements to note achievement that include leaderboards, points, and levels. Hakulinen et al. (2015) reported that gamification is providing a service of achievement in a system that is not an actual game. Research is still lacking on the effectiveness of the game design elements of leaderboards, points, levels, and avatars.

Leaderboards are scoreboards showing the names and scores of the users within an online course that has a gaming component. The purpose of a leaderboard is to show the ranking of learners within a gamified system according to their peers (Waldron et al., 2017). Points are elements within the leaderboard that will show a score with value. Leaderboards encourage learners to stay in the game and work towards getting to the top.

Along with leaderboards are avatars. Avatars are an icon or figure representing the learner in a game or online learning format. The use of avatars is common in gaming,

online communities, and web forums. Hakulinen et al. (2015) found that avatars change a learner's real-life perception in an online course with a gamification module.

Learners that selected themselves as an avatar that was like their characteristics motivated and engaged them to partake in the game and play along with other participants. Watching an avatar that resembles the learner in appearance influences the learner's behavior. Hakulinen et al. (2015) found that learners watched an avatar that looked like them losing weight by exercising and eating healthy, because of the avatar, the learner was able to lose weight in real life.

Overall, digital badges, leaderboards, and avatars are all gaming elements for online course design that engage and motivate learners. Even though it seems that gamification can increase motivation and engagement, some educators have criticized it for focusing too much on external rewards instead of intrinsic motivation (Hakulinen et al., 2015). However, gamification can improve intrinsic motivation if the game elements such as leaderboards, avatars, and badges are meaningful to users.

Integration of Games into the Course Room

Over the years, there have been many ways to describe curriculum integration. When integrating the curriculum, there is a connection and relationship between the instructional materials by both the students and teachers. With the increase of games in education, educators must now analyze ways to integrate games into the classroom. Galbis-Cordova et al. (2017) reported that there are two perspectives to review when looking at integrating games into the curriculum. The teacher should connect the content

to the game and the learning outcomes, and the educational researcher should see the connection between pedagogy and the game. The student perception will have its basis on the connection from the game to learning the concepts.

When the teacher connects the content of the game to the learning outcomes, a positive learning experience occurs for the student. The student perception of motivation and engagement is key in determining if the technology integration of gamification is beneficial. For example, in the game Quest Atlantis, the participants develop problem-solving and decision-making skills. If correctly designed the curriculum can match the components of the game. When instructional designers build courses that include games, a decision must be made on whether to build a game from scratch based on the objectives of the course or to use an off the shelf game that is related and already built. Hakulinen et al. (2015) reported that while using games off the shelf and taking them as they are, it does not necessarily mean they are a learning game or designed to teach.

There is a possibility that within the game the common points may be unequal to the content. It is also important to note that also building games from scratch to address curriculum might not be effective as well because once the game is developed the curriculum may have experienced changes (Hakulinen et al., 2015). Overall, the game and instructional designers of the course must do a careful analysis to match the contents of the game before its implementation.

Summary and Conclusions

Several themes emerged from this literature review. The first is that community college students have affective states that are motivation and engagement when deciding to enroll in an online course. The second theme is that community college instruction is changing over time. There is a state of community college students and online learning when there are instructional activities that include gamification within the content of the online course.

Community college students who take a course online can give their perspectives on their lived experiences when taking courses that include the use of gamification as an instructional strategy. Out of the perspectives of the community college students, themes can give description and detail on the perspectives that they may have regarding taking courses with gamification included as part of the instruction process.

While researching this topic, there was a gap in the literature on the community college student population perspectives on the use of games in online learning and the connection with the affective states of student motivation and engagement. Understanding the literature on the outcome of gamification and the connection to motivation and engagement will provide an opportunity for researchers to get insights into the perspectives of community college students. In this chapter, the researcher described the literature search strategy, discussed the conceptual framework for the study, and provided detailed literature on the topics of student affective states, community college instruction, self-directed learning, games and learning, and Phenomenology.

Chapter 3 will include a discussion of the research methods for this study including the type of methodology used in this study, design, and rationale, the role of the researcher, issues of trustworthiness, and ethical procedures.

Chapter 3: Research Method

The purpose of this qualitative phenomenological study was to understand and explore the perspectives of community college students and the use of single-player games in online learning courses in sustainable energy and to capture the students' lived experiences of motivation and engagement. A phenomenological qualitative method of inquiry was the best choice because the goal was to capture the lived experiences of students who took online courses that included gamification as part of their instructional delivery. In qualitative research, it is important to understand the student learning experience of learning content that includes gamification as an instructional strategy (Cooper, Fleischer, & Cotton, 2015). The importance of understanding a student learning experience will assist in the goal of enhancing curricular content and improving instructional strategies to understand student motivation and engagement (Cooper et al., 2015).

In the current study, the phenomenological approach was useful to provide experiences of participants' identities, values, and beliefs. The presentation of these identities was in a self-reflective analysis of their personal experiences. Participants provided a self-reflective analysis of the use of technology in an online course to determine whether their engagement or motivation changed. Moustakas (1994) described phenomenological research as a paradigm, which started with the Duquesne studies from phenomenological research in psychology. When using the phenomenological approach, the concept of understanding the participants' lived experiences set expectations for the

current study. The phenomenological approach was the proper selection of qualitative inquiry to capture the students' perspectives because the goal was to collect data on rich, descriptive lived experiences. As part of the qualitative process, interview sessions with the participants captured the lived experiences of online learners who had taken courses that included gamification around sustainable energy. The students described their lived experiences concerning motivation and engagement.

This chapter includes a description of the study's design, research questions, interview setting, and participants. I also address the role of the researcher and the method of data collection and analysis. To conclude this chapter, I address issues of trustworthiness and ethical considerations related to this study.

Research Design and Rationale

The phenomenological approach was the appropriate design for this study. As outlined by Moustakas (1994), using a phenomenology design is the key to providing a rich, thick description of lived participant experiences. The goal of this qualitative study was to provide information to educators and instructional designers on how community college students experienced the use of gamification in online learning and how gamification impact their affective states of motivation and engagement. The research questions of this study were the following:

RQ1: What are the lived experiences of community college students regarding motivation and engagement when taking a course that includes gamification as one of the instructional strategies in an online environment?

RQ2: How do community college students describe their overall lived experiences with the use of gamification as an instructional strategy in their online learning?

To answer these questions, I identified the right interview questions to ask to gain insight into the perspective of the study's participants. The central phenomenon of this study was the use of gamification in an online learning format for community college students and their affective states of motivation and engagement. Learning management systems that include games as an instructional strategy continue to become a part of the educational environment. More research is required on the phenomenon of technology acceptance by community college students (Tabak & Nguyen, 2013). What determines engagement and motivation in online environments has not been fully explained (Tabak & Nguyen, 2015). Kang and Shin (2015) revealed the acceptance of online learning in a technology platform needs to be evaluated in future research and effective strategies such as gamification requires investigation to determine whether there is an impact on the affective states of student motivation and engagement. To meet this purpose, I conducted interviews with students enrolled in a community college sustainable energy program that uses gamification as an instructional strategy.

The qualitative approach was more appropriate than the quantitative approach because there was no need to provide statistics or measures of the use of games in online learning. I did not intend to compare courses that included games and those that did not as a quantitative measure; instead, I focused on the students' lived experiences of gamification as an instructional strategy. I identified whether those experiences provided

evidence of engagement or motivation. This study allowed students to describe their experiences of motivation and engagement; however, these variables were not measurable.

There are other types of qualitative inquiry such as ethnography, case study, grounded theory, and narrative; however, phenomenology was the best approach to answer the research questions. Phenomenology describes how individuals experience a certain phenomenon (Moustakas, 1994). A phenomenological study allowed me to describe gamification through the lens of the learner's experiences. In a case study analysis, there is a limited number of events, participants, and time, which may leave room for bias to occur. The decision not to use this method was because of the desire to provide rich, meaningful, and descriptive experiences from the student with no limitations. I also decided not to use a grounded theory approach because I was not looking to develop a theory but to take my research and integrate it into an already known theory. I also decided against a narrative analysis because there was no need to discuss a story from the student experience.

Role of the Researcher

I am currently an instructional designer at a health care organization and assist employee trainers in the education department so that they may train and educate employees on the organization's products and services. Earlier in my career as an instructional designer, I worked for a local community college that collaborated with other community colleges throughout Illinois on a statewide grant initiative. The purpose

of the grant initiative was to create and build several courses on the topic of sustainable

energy and the green economy for the Department of Energy. I was passionate about this

topic because I was interested in learning more about how to use resources to save the

earth. During this part of my career, I became interested in this topic and collaborated

with many faculty members on creating and developing courses for their students for the

sociology program. As an instructional designer, I was often asked what instructional

strategies faculty could provide in their online courses to engage and motivate students.

In the current study, I decided to find out by performing a qualitative study and exploring

the students' perspectives on this topic.

I did not have any personal relationships with the participants. I had no power

over the participants because I was not the instructor, instructional designer, or course

developer. The plan was to conduct the interviews face-to-face for all student

participants. Researcher bias or power relationships were not an issue. The intention was

not to have any influence over the results. There were no ethical issues present and there

were no previous relationships between the researcher, instructor, and participants.

Methodology

The method for this study was a phenomenological qualitative approach. The goal

was to conduct qualitative face-to-face interviews. I recorded each interview. The goal of

the interview was to capture the lived experiences of student participants in an online

course that included the instructional strategy of gamification.

The qualitative approach consisted of capturing the participant responses and summarizing my findings based on the participants' responses from the interview session. Also, I asked the participants to complete journal entries by responding to 4-5 open-ended questions over 2 weeks. The journal entries were a second data source and were used along with the interviews. My goal was to elicit truthful answers to the questions about online learning and the use of gamification.

Participant Selection Logic

I selected seven students in a sociology course at a community college because there was a small number of students enrolled in the course. Generally, the enrollments in these types of courses are small; therefore, interviewing seven students was either half of the class or a third of the class. The participants were online students at a community college enrolled in the sociology program. I obtained permission to conduct the study by following an institutional review board process (IRB#05-21-19-0512345) and sending a letter to the dean of the academic program. The rationale for selecting the participants came from student enrollment data. Van RijnSoever (2017) reported that data collection and sample size should continue until no more new codes or themes appear and the data has reached saturation. The sampling procedure for this study was purposive. There are several types of purposive samples such as heterogeneous, homogenous, case sampling, population sampling, and expert sampling. Purposive sampling techniques are useful when the researcher selects specific targets for the desired information (Mahsood, Jamil, Mehboob, Kibria, & Rehman Khalil, 2018). For the current study, I used case sampling

as the process of selecting a small number of cases that are likely to yield the most data and have the greatest impact. There was a known issue with students having a lack of motivation and engagement in this program, and the goal was to retain students and increase motivation and engagement (Langbeheim & Rez, 2017).

Moustakas (1994) suggested that qualitative studies that include a phenomenological approach should display the descriptive lived experiences of the participants. The criteria for selecting the students for the current study were community college students enrolled in an online course that included gamification as an instructional strategy. After contacting the dean of the sociology program for permission (see Appendix C) and completing the IRB process, I contacted the students via email. The students met with me for a face-to-face interview session that included journal entries. The interview was supported with the interview guide supported the interview (see Appendix A).

Instrumentation

The most common sources of data collection in qualitative research are interviews, journal entries, and documents (Creswell, 2009). Interview questions from an interview guide and journal entries supported the interview process.

The interviews were the primary source of data collection. I also asked participants to complete a journal by responding to five open-ended questions. Geuens and De Pelsmacker (2017) found that data collection using a journal as an instrument is increasing with the use of a computer and online research. Geuens and De Pelsmacker

reported that online studies have the advantage of being less expensive and can include a more representative sample.

Interviews

The face-to-face interview consisted of 10 open-ended questions from a researcher-developed interview guide. I also included five journal questions in the interview guide (see Appendix A). The interview time was for 1.5 hours. The research questions were addressed by summarizing the participants' responses to Questions 3, 5, 6, 7, 9, 14, and 15 due to the questions covering areas such as engagement, motivation, and retaining information. Identifying topics addressed the research questions generated the interview questions. The interview questions provided elicit data on student experiences so I could classify responses into themes. Some participants elaborated more in writing than in a face-to-face format. Providing the writing journal as part of the interview process allowed the interviewee to write down points they may not have covered in the face-to-face setting, and the journal allowed them to be more open and honest with their answers.

Geuens and De Pelsmacker (2017) indicated that using a researcher-developed instrument such as an open-ended questionnaire interview guide was appropriate to collect data from the participants in qualitative research. Geuens and De Pelsmacker (2017) found that open-ended questionnaire guides also provide a quick and efficient way of obtaining data from a sample of participants. The researcher created open-ended questions for the face-to-face interview and journal entries. When creating a researcher-

developed instrument such as an open-ended questionnaire interview guide, the interviewer may ask the same questions of all participants, however, the order of the questions, wording, and follow-up questions can vary (Geuens & De Pelsmacker, 2017). The basis for this instrument was to be able to ask questions that allowed the participant to express their experiences. To establish validity, the instrument addressed the research questions and addressed the goals of the research. The instrument also established validity because the questions order was from the least to the most sensitive, from factual and behavioral to cognitive and from more general to specific. Importantly, the first question did not influence the subsequent questions. For the journal entries, unlike in a multiple-choice or either/or questionnaire, there was an open writing space in the journal to allow students to describe in writing how playing games in the course aligned with their motivation and engagement within the course. By allowing an open writing space in the journal, participants were able to provide a more rich description of their experiences instead of selecting a pre-defined answer. In regards to the development of the interview questions for this study, the researcher reviewed the questions giving validation.

Table 1 is an interview matrix to describe how each interview question aligned with the research questions and conceptual framework.

Table 1

Interview Questions Decisions Matrix

Interview questions	Research questions	Relationship to conceptual framework
What is the name of the course that you are taking that includes gamification?	RQ1	
What type of learner are you?	RQ1	Blumer Interactionists
Please describe some of the games you have taken in the course?	RQ2	Blumer Interactionists
Please explain how the games you played within the course assisted you with learning the content	RQ2	Blumer Interactionists
Compared to the courses you have had in the past that does not contain gamification, what is the difference?	RQ1	Blumer Interactionists Davis (TAM)
Describe how you have applied what you have learned from taking gamified courses?	RQ2	Blumer Interactionists
Describe what interaction is like when playing a game in a course?	RQ1	Blumer Interactionists
Can you describe what type of instructional strategies motivate or engage you to stay enrolled in an online course?	RQ2	Davis (TAM)
After you have completed a course that included gamification and you are given an award or certificate for your accomplishments how do you feel?	RQ2	Blumer Interactionists
Please explain what is most difficult about taking a course online that includes gamification.	RQ2	Davis (TAM)

Gough, DeJong, Grundmeyer, and Baron (2017) conducted a study on flipped classrooms and student perceptions, using an open-ended questionnaire interview guide to indicate student preferences. The researcher developed instrument established validity by aligning the instrument with the review of related literature and research. The instruments for this study were researcher-developed so that the questions we ordered from factual to behavioral form and relate those answers to engagement and motivation.

Journal Entries

Students were able to enter journal entries and answer five questions in an open space within the journal pages. Journal entries can allow for insight into lived experiences and allow for the researcher-participant power dynamic to change (Yildiz, 2015). Interviews and focus groups can sometimes be overwhelming and using journal entries can allow participants to have more autonomy on what they would like to share. Yildiz (2015) reports that journals allow students to examine their beliefs, values, experiences, and assumptions about the subject. As a result, journals can contribute to student problem-solving, critical thinking, and reflective learning skills (Yildiz, 2015). Using journal writing as a data source in qualitative research can enhance student learning and allow connection theory and practice and by engaging in higher-order ideas. Participants were able to write in the journal entries before, during, and after the course and submitted the journal notes via email. Table 2 indicates the interview questions that student participants were able to elaborate on in their journal writing sessions.

Table 2

Journal Entry Matrix

Journal Questions	Relationship to Conceptual Framework	
Describe your experience when you are playing a game within an online course	RQ1	Blumer Interactionists
Have you taken online courses in the past that does not include gamification and if so describe your experiences about the course's instructional strategies that were used	RQ2	Davis(TAM)
Explain your level of interest in taking a course that includes games online.	RQ2	Davis (TAM)
Summarize your overall experience on using games in an online course to learn content	RQ2	Blumer Interactionists Davis (TAM)
Summarize acceptance of gamification as an instructional method in your online courses and if you expect any technological challenges?	RQ2	Davis (TAM)

Procedure for Recruitment, Participation, and Data Collection

  The researcher contacted the faculty member by email of the Sociology program at a local community college to provide the instructions for the students in regards to the interview session. The researcher obtained permission to gain access to the participants by contacting the Dean of the Program for Sociology with an introductory letter as shown in Appendix C.

  The recruitment process was for students currently enrolled in a Sociology course. The researcher retrieved the enrollment list from the Dean of the program and then

conducted individual interviews as shown in Appendix A with an introductory participant

letter as shown in Appendix D. The interview occurred and the researcher followed up

with the instructor of the course to allow time for the students to have journal writing

time in regards to their experiences with taking the course that included gamification. The

frequency of the data collection events was once during the interview session and

sometime during the course to collect the journal entries. The duration of the data

collection events was no longer than two weeks to conduct the interview and collect the

journal entries. The goal was to capture the student experience of using gamification to

learn within the course. In the initial phase of the interview process, specific questions

addressed participants' affective states of motivation and engagement while they

participated in the course. During the interview process, the participants shared their

experiences and identified what was different for them in the areas of engagement and

motivation when taking an online course that included gamification. After the

participants interviewed and submitted their journal entries, transcription and coding of

the data took place. Assignment of a participant ID was for confidentiality. The storing of

the transcripts and analysis was on a password-protected computer.

Data Analysis Plan

For this research study, the open-ended question interview guide provided for the

participants response in a descriptive format during the face to the face interview process

and did not respond to the questions by a one-word statement but by expounding on their

experience.

Content analysis was the type of data analysis selected for this study. Content analysis is useful as a way to analyze data when categorizing information for classification and summarization. When planning the presentation of qualitative data, the data should be subjective, interpretive, and descriptive. Categories, themes, and patterns should emerge from the data collected from the interview session and journal entries. As a part of the content analysis process, the researcher looked for certain words and content from the data collected, identified any patterns, and interpreted the meaning of those patterns by using a textual display such as a table or matrix.

After the collection of the data was complete, the researcher began to transcribe, analyze, and code the data. The type of data analysis featured descriptive data analysis. The descriptive analysis described the main idea of the data. For example, how well each student expressed motivation and engagement due to gamification in online courses. The next step was to code the data. Coding is the process of categorizing the data to begin the analysis process and transferring the data into a computer software program. The researcher used grounded coding. Grounded coding looked for themes and patterns that emerged from the data. Next, the researcher proceeded to use axial coding by selecting categories to discover patterns and relationships. Terms and phrases that collected from the participants applied in the coding process to allow the participants to have a voice in the research and this is where the researcher made use of NVIVO software. The themes that occurred from the interviews and journal entries then addressed the community

college students' perspectives on student motivation and engagement when taking courses online that included gamification.

Treatment of discrepant cases and contrasts views that do not align with the common themes that emerge from the research were identified and presented in the research because they strengthened theory and supported arguments (St. Pierre & Jackson, 2015). Antin, Constantine, and Hunt (2015) revealed that negative cases are often a valuable strategy for assessing credibility. Participants may offer differing viewpoints during the process from the main theme generated. The main theme or category of the research strengthens when a discrepant case is identified (Dening et al., 2016).

Issues of Trustworthiness

In qualitative research, the researcher must address issues of trustworthiness. There are strategies to show credibility, transferability, dependability, and confirmability. The strategies must be included when reviewing trustworthiness because this will provide support for the qualitative study.

Credibility and Transferability

Credibility shows that the results of the study are believable (Cope, 2015). For example, the results should have a richness of the data collected rather than the amount of the data collected. Cope (2015) reported that some techniques determine credibility as strategies such as a thick description of the phenomenon and member checks, which this researcher intends to use. Thick description of the phenomenon will be for the

participants to provide their specific experiences as it relates to the use of games in online learning, motivation and engagement.

Member checks occur by asking participants to review what they have written in the journals and verbalized in the interviews if what they indicated match what they intend. Credibility should reveal that the results of the study are believable. For example, the results should have a richness of the data collected rather than the amount of the data collected. As for transferability, it refers to the data having the ability to transfer to other contexts. The definition of transferability is by the readers of the research and generally, they are the audience that can take the concepts of the data and compare them to a familiar or a similar situation (Cope, 2015). If the reader determines that the data is comparable then the research appears to be more credible (Cope, 2015).

Dependability and Confirmability

The research data collected from participants also exhibited dependability and confirmability by ensuring the findings are consistent and repeated. This means that if another researcher were to conduct a similar study, the findings would also be similar to this study.

Strategies to establish dependability will be to develop an audit trail of events and actions of the researcher (Merriam, Sharan, & Tisdell, 2016). In this research study, the readers were able to identify the audit trail that the researcher used along with the events and actions used to conduct the study. A detailed account of all research decisions and activities throughout this study occurred by keeping a log of all activities, memos,

journals, and documenting all data collection and analysis procedures. Once noting

dependability, the reader of the study confirmed that the case is trustworthy (Merriam,

Sharan, & Tisdell, 2016).

By collecting the participant data with interview session, it allowed the researcher

to capture the student experience and be able to generalize the student experience of

taking courses online that include gamification. Although there could be a risk of bias in

collecting data from the interview, it was determined that the responses are trustworthy

based on experiences and rich description.

The interpretations of what the participant's voice had some form of

trustworthiness. To uncover the deeper meaning of the data, the research included rich

descriptions by looking at all of the different multiple perspectives to ensure that there is

consistency. If there are inconsistencies during the data analysis process, those

inconsistencies are an opportunity to reveal a deeper meaning of the data.

A potential threat to the study was that some participants are not truthful or honest

in their answers because they did not want to appear as if they were not learning the

content of the course as a result of gamification but they were using other methods within

the course to learn the materials. This threat provided gamification as the technique to

learn and no other instructional strategies were present in the course.

Ethical Procedures

For my research study, I applied to Walden University Institutional Review Board

to request approval to collect data for my study. Before the approval, I reached out to the

Director of the sociology program at a local community college to collect data at their

academic institution. I did not collect the data until after the IRB had approved my study.

The students in the online sociology course were the participants for my research study.

Student privacy protection included assigning each student a participant ID number.

Before the data collection efforts, the participants received an email providing the

introduction of the study that included the purpose, informed consent information, a

description of confidentiality protections, and how the data collection process would

occur. I kept the names of the participants confidential. I used private application

accounts to conduct and record interviews. I protected students email addresses using a

password protected email system. I saved all interview recordings and transcripts using a

laptop with password protection. After conclusion of the study, all records will be stored

for 5 years.

Conducting a study within my own work environment would present an ethical

issue. Although I have never worked for the community college that participated in the

study, I have completed two instructional design projects that the college's energy

program participated in for a state grant initiative. Because a prior working relationship

existed between the researcher and the college, excluded from participation in the study

were all state grant staff and reviewed was another program.

Summary and Conclusions

This chapter included a description of the research method for this study. The

researcher addressed the research design and rationale, the role of the researcher, the

methodology, issues of trustworthiness, and ethical procedures. The researcher provided

information about participant selection, data collection instruments, and the data analysis

plan as well as discussion about issues of trustworthiness and ethical procedures. Chapter

4 of this study will provide the results of the data collection and analysis process.

Chapter 4: Results

The purpose of this qualitative study was to explore the lived experiences of community college students regarding motivation and engagement when taking gamified courses online and to describe their overall experiences. Research Question 1 asked the following: What are the lived experiences of community college students regarding motivation and engagement when taking a course that includes gamification as one of the instructional strategies in an online environment? Research Question 2 asked the following: How do community college students describe their overall lived experiences with the use of gamification as an instructional strategy in their online learning?

Organization

In this chapter, I report the results of my study. I begin by describing the setting, participant demographics, data collection process, data analysis process, and evidence of trustworthiness. I then present the results and organize my findings according to the two research questions. I conclude with a summary.

Setting

The setting for this study included community college students who took sociology courses in an online learning environment. The sociology class included a gamification component that included an interactive game to simulate living in poverty. The students enrolled in the sociology course as part of a general education requirement. During the spring semester, the students participated in the online course that included the gamification components during Week 5. The type of game that was in the online

sociology course was a simulation game on how to live in poverty for a month. The participant had to select an occupation and choose where they would like to live. Provided was one month's salary. There were usually two choices, and the participant had to pick one. For example, they had to decide whether to purchase their child one pair of new shoes or a used pair of shoes based on the amount of money provided for expenses for that month. The goal of the game was to stay within the monthly budget and to take care of all of the expenses without going into the negatives. The purpose was to figure out how to live on the income provided for 30 days. In this phenomenological qualitative study, all participants completed individual interview sessions. I conducted interviews with seven participants individually, and they completed a written journal.

Demographics

Participants were community college students who were taking credit and noncredit courses and had an average age of 22. All of the participants were community college students enrolled in an online course that included gamification as an instructional strategy. Each participant had taken online courses in the past. A few participants experienced gamification for the first time in an online course. I recruited the participants, and the sociology professor provided contact information for the students. Four participants were male and three were female. In Table 3 are the participant demographics.

Table 3

Study Participant Demographics

Demographic Characteristics	Participant A	Participant B	Participant C	Participant D	Participant E	Participant F	Participant G
Credit	X	X	X	X	X	X	
Non-Credit							X
Age 21-24	X	X	X	X	X	X	X
First Generation	X	X	X	X	X	X	X

Data Collection

I collected data from seven participants through a 90-minute interview process using an interview guide (see Appendix A). Emailed to the participants was the writing journal, and they were able to complete the journal entries after the session and email their answers to me within 24 hours after the interview session. The interview location was face-to-face and conducted via a WebEx online meeting using a camera to see the participants face-to-face. I interviewed each participant by using a WebEx online meeting that lasted 90 minutes.

The WebEx online meeting recorded the interviews. There were no technical difficulties during the recording sessions, and the audio was clear. I uploaded the interview recordings and journal entries to NVIVO for storing, transcription, and data analysis.

I edited each transcript to correct grammatical errors and used alphabetic lettering to replace the participants' names to Participant A, B, C, D, E, F, and G. No transcript corrections or follow-up questions were required. There were no variations from the plan for data collection. There were no issues identified in the data collection process.

Data Analysis

The data analysis process consisted of analyzing the collected data, which were the interview transcripts and journal entries. Annotations and notes were included in the interview transcripts. Content and descriptive analysis was the form of analysis that I used. Grounded coding was the method of coding during the data analysis process to identify themes and patterns, and axial coding to discover patterns and relationships. I performed this data analysis by importing my transcribed interviews and journal entries into the NVIVO software and performing the following steps:

1. First, I reviewed each interview transcript and journal entries and made notes and annotations in the annotations section of the software.

2. Second, I created notes or themes related to the content after I reviewed the transcripts.

3. Next, I turned on the coding stripes in the software to categorize each node while highlighting each section of the content and categorizing it into the node that showed relevance.

4. I was able to code all interviews and journal entries for Participants A-G

5. My next stage was to identify the themes from the coding and to explore the patterns and meanings.

6. The next step after identifying the themes from coding was to organize and categorize the nodes into a structure that exhibited patterns and meaning.

Once I organized my nodes into a hierarchical structure, I was able to respond to Research Question 1: What are the lived experiences of community college students regarding motivation and engagement when taking a course that includes gamification as one of the instructional strategies in an online environment? The themes included the dimensions of motivation and engagement, as defined as motivation, engagement, and rewards. Three themes emerged from Research Question 2: How do community college students describe their overall lived experiences with the use of gamification as an instructional strategy in their online learning? These themes included the dimensions of student perspectives with games. The themes were experiences with gamification in online learning, retainment of knowledge, and technology acceptance. Table 4 shows the themes, codes, and categories.

Table 4

Themes, Codes, and Categories

Themes	Codes	Categories
Motivation	Time management skills, attentiveness, change	Rewards, real life scenarios and challenge
Engagement	Interactivity, critical thinking skills and level of interest	Smaller assignments, attentiveness and gaming dynamics
Student Perspectives	Experiences, knowledge retention, technology acceptance	Interactive learning with gaming scenarios, strategic and decision based learning

Although the themes that emerged aligned with the conceptual framework, the participants compared to others emphasized some areas of gamification and online learning, and this provided opportunities for new dimensions of gamification and online learning to emerge. The codes listed in Table 4 outlined the new dimensions. For example, the codes of time management skills, attentiveness, and change played a role in the participant's motivation. The categories of rewards, real-life scenarios, and challenge also emerged and aligned with the theme of motivation. Concerning the theme of engagement, codes were interactivity, critical thinking, and level of interest, which resulted in other categories such as smaller assignments, attentiveness, and gaming dynamics. As for the theme of student perspectives, the codes were experiences,

knowledge retention, and technology acceptance, which resulted in other categories such as interactive learning with gaming scenarios and strategic and decision-based learning. Additionally, participants shared the same viewpoints; grouped under the same codes and categories were the themes. The codes used neutral language and encompassed all viewpoints.

The themes that emerged aligned with the conceptual framework and provided an opportunity for me to identify the components of student affective states. The emergent themes of motivation, engagement, and student perspectives shown in Figures 2, 3, and 4 and are broken down into smaller components. Figures 2 and 3 show the components of the student affective states of motivation and engagement, and Figure 4 shows student experiences and perspectives. Engagement consists of the component of interactivity and a reward earned, such as a badge, certificate, or leaderboard status. The participants described their motivation and engagement levels, which resulted in their perspectives emerging in the areas of experiences, knowledge retention, and the acceptance of technology.

In Figure 1, Research Question 1 addressed the affective states of motivation and engagement. Because of the themes of motivation and engagement, the category of rewards emerged from the participants' lived experiences. In Research Question 2, the theme of student perspectives addressed experiences; knowledge retention and technology acceptance emerged as the codes and were in smaller categories as shown in Table 4.
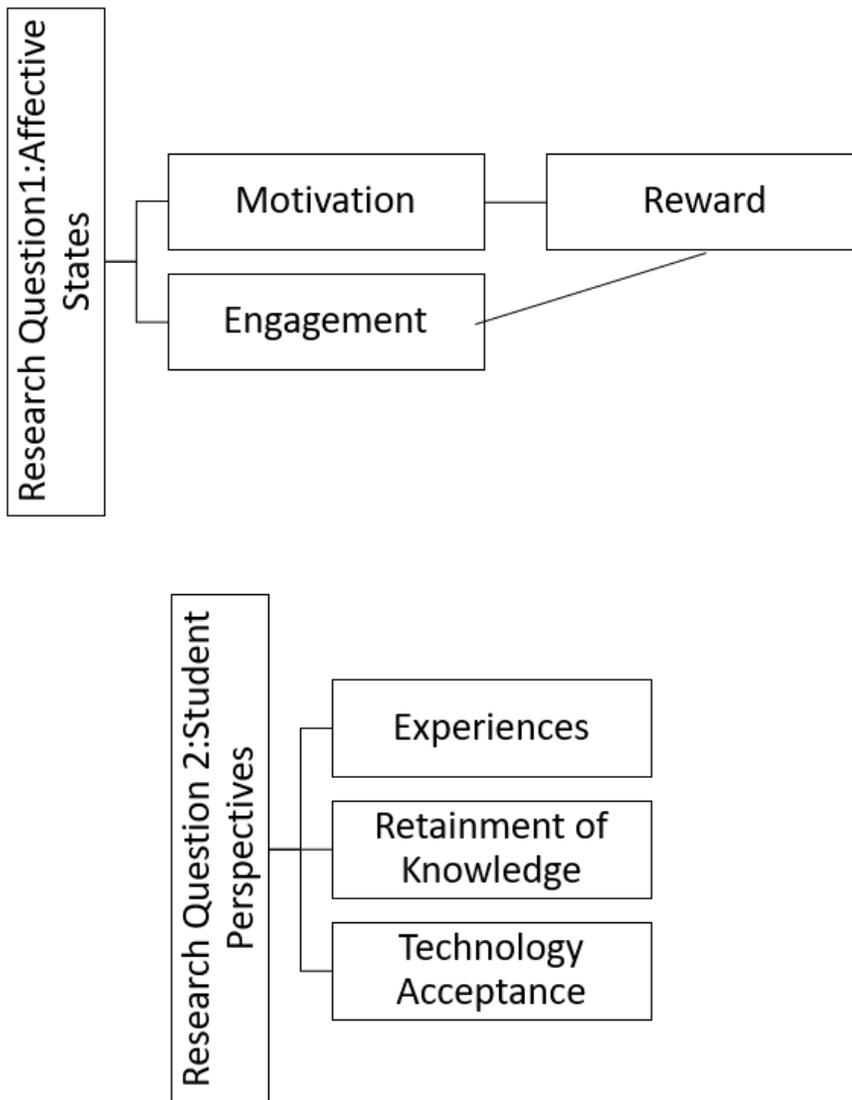
Figure 1. Main research questions and emergent themes.

Evidence of Trustworthiness

I addressed credibility by conducting accuracy checks of the interview transcripts with participants and collecting rich data until I reached data saturation. I also did member checks by emailing the transcripts and journal entries to the participants to ensure that I was accurate in citing their response. Transferability takes the concepts of the data and compare them to what was a familiar or similar experience or situation. I was able to perform word, text, and coding queries to identify patterns, find emerging themes, and explore the language of my participants.

Strategies that I used to establish dependability consisted of developing an audit trail of my research and noting the events and actions I took to conduct the study. I was able to keep a log of all memos and journals in my notes section of the NVIVO software while reviewing and organizing interview transcripts. I was able to create nodes, code my data, and create a codebook. The study exhibited dependability because of the audit trail provided by me as the researcher. I was able to provide triangulation while minimizing biases due to the process of collecting data from individual interviews.

The reflective journaling process, memo notes, audit trail, and triangulation addressed confirmability. Throughout the data collection process, I recorded my memo notes in the memo note section of NVIVO. The audit trail displayed all of the steps I took in the data collection and analysis phase. I provided methodological triangulation by collecting data in my individual interviews and journal entries to minimize bias.

Results

In this section, I will provide the research results by question. The responses from the interview questions were according to patterns and themes found after the data analysis process. The participant responses were from the questions given from the interview guide and journal questions listed in the appendix. In parentheses next to the statement appeared the journal entry. Throughout the data analysis process, I was able to use NVIVO Software to conduct my analysis of the data from the interview transcripts according to the conceptual framework for this study. I organized the participant's responses to interpret the patterns and meanings that emerged.

Research Question 1

Research Question 1 explored, what are the lived experiences of community college students regarding motivation and engagement when taking a course that includes gamification as one of the instructional strategies in an online environment. There were themes that emerged in review of the participants experiences such as motivation and engagement (Figures 2 and 3). The findings from the interview data was from the questions from the interview guide and the journal questions listed in the appendix.

Motivation. Three types of experiences that promoted motivation at the community college level emerged such as time management skills, attentiveness, and change. (Figure 2). Each experience involved detailed perspectives.
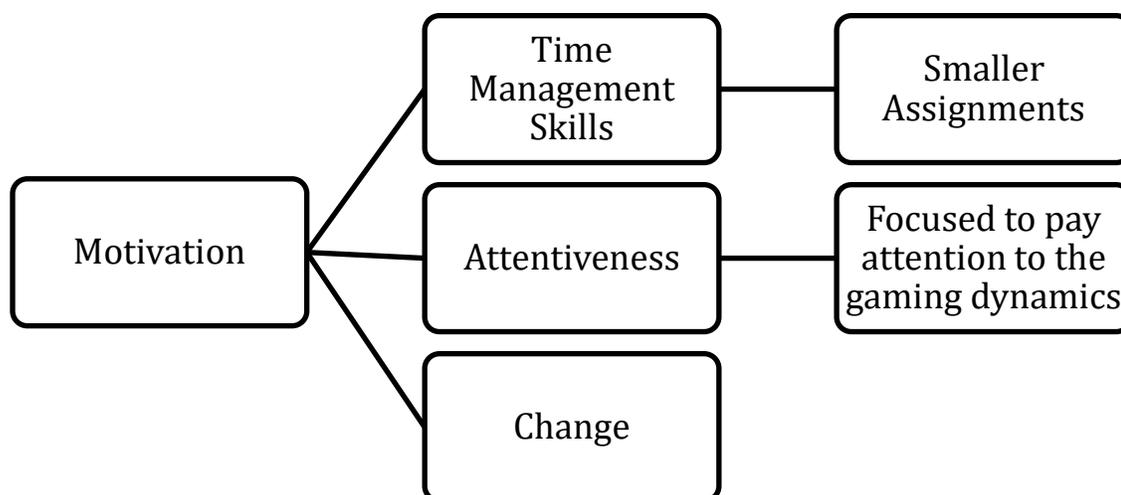
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                    ┌──────────────┐      ┌──────────────┐
                    │     Time     │      │   Smaller    │
          ┌─────────│  Management  │──────│ Assignments  │
          │         │    Skills    │      │              │
┌─────────┴───┐     └──────────────┘      └──────────────┘
│             │     ┌──────────────┐      ┌──────────────┐
│  Motivation │─────│Attentiveness │──────│Focused to pay│
│             │     │              │      │attention to the│
└─────────┬───┘     └──────────────┘      │gaming dynamics│
          │         ┌──────────────┐      └──────────────┘
          └─────────│    Change    │
                    │              │
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Figure 2. Research Question 1: Theme 1 (motivation) with subthemes.

Time management skills: Smaller assignments. Time management skills was a practice

that resulted in motivation as identified by multiple participants. Having the ability to

receive smaller assignments and the ability to work ahead in online coursework saved a

lot of time in the course in comparison with a traditional classroom setting. Smaller

assignments and the ability to work ahead, as described by Participant A, involved time

management skills:

More frequent, smaller assignments keeps me honest and helps me feel more motivated

to finish the course. To have the option and ability to move ahead within the online

course assisted with time management skills which increased motivation.

　　　　Participant B also described having smaller assignments and the ability to work

ahead assisted with time management skills in the course:

Retaining the knowledge in the course was quicker than the traditional method, which also assisted with time management skills and the ability to work ahead. (Journal Entry)

Participant C also identified that having smaller assignments and the ability to work promoted motivation and time management skills:

By using time management skills, motivation to stay enrolled in the course because of the ability to work ahead on assignments and not having to wait for instructions on the next steps was a key factor. When taking a course that included games online, the interest level was higher than a traditional online course that does not include games.

Learners described their experiences stating that playing the game and having the ability to move ahead in the different gaming scenarios was motivation to manage their learning time more wisely.

Attentiveness: Focused to pay attention to the gaming dynamics. In the online learning environment, participants took a course that included gamification. The games allowed participants to pay attention to the instructions of the games within the online course. Participant C indicated:

When I am playing a game in a course, I take detailed notes of what I am doing so I can reference later for my assignment that follows. I pay attention to what the questions are and really focus on what my answers are. When I am taking a course that includes games online, my interest level is definitely higher than if there was not a game. By including the games, I feel more inclined to pay attention and take notes because I know what I am learning is important.

Participant E also gave a motivation perspective focused on attentiveness and being attentive: Since I am an auditory learner, it was important for me to understand and pay attention to the dynamics of the game so that I can meet the objective of the game. Participant G based her experience on motivation and attentiveness due to being able to pay attention and follow instructions prior to starting the game:

Because the instructions were clear in the beginning, my attention was on the goal

of the game and trying to understand how I could reach it. It was easy to follow

and I liked playing a role in the interaction piece. (Journal Entry)

Attentiveness by the participants of the course allowed them to become motivated to learn.

Change: A new way to learn from traditional learning. Participants appeared to adapt to change from the traditional ways of learning and the findings indicated that participants were motivated due to the option of a new way to learn outside of traditional instructional strategies. Participant A shared the following perspective:

I think the game was good for giving an interactive way to learn about poverty

rather than just reading about it in a book. I feel like I am more likely to

remember a game that I play than reading an article. I think a course that includes

games make the topic to seem more "real" or applicable. I think the traditional

ways of learning such as reading from a book, taking a quiz on what you read,

and/or writing a response to what you read for many people can be boring. I think

games overall help me to retain information better and actually having to problem

solve during a game helps me learn a lot better than reading straight from a book

or article.

Participant B also shared a perspective that change in traditional instructional strategies is

good and stated the following:

I am a visual learner so having games in the course was a quicker means and a

change to learning to retain content quicker than the traditional method.

Participant C explained:

Hands on educational experience on what living in poverty meant happened due

to this game. It was helpful to see examples of what people struggle with, rather

than just reading about examples of poverty. That was a huge change in learning

for me, however I felt fully adapted. The difference between this course that

included gamification and ones that have not was the ability to understand the

concepts and the hands on experience. I have taken two online courses not

including the current one. The two courses did not include gamification. These

courses were quite boring and just consisted of reading articles and answering

questions. It was not a very engaging course and I got bored very quickly due to

the lack of involvement from the instructor. All he had us do every week was read

PowerPoints he had created and then have us respond to a few questions he had

posted on the online learning board. I did not enjoy this at all. I like having a

game in my online course because it was a fun way to learn new content. (Journal

Entry)

Participant D indicated a perspective of boring as well and that she appreciated a new way to learn:

Other courses are boring; you read something and then take a quiz or test on content. The experience and change is good. I like to see other diverse options as instructional strategies in an online course.

Participant E indicated that compared to other traditional courses she had taken in the past that does not include gamification:

> The difference is I actually felt like I was participating in the learning process and it was not all instructor-led. The change allowed me to use what I have learned in real life scenarios when it comes to making decisions and thinking logically.

Participant F shared the experience as follows:

> Compared to other courses, this one was fun and interactive. Adapting to change in learning is good, courses do not have to be cut and dry and there are strategies out there that can make learning fun. Due to this change in learning, I felt like I had more of a part and some control.

> Participant G indicated a perspective of in comparison to other courses:

> This course was fun! Easy to follow and I enjoyed the interactive piece. It was definitely a new way to learn and an increase in motivation. I am motivated to learn more now because I feel like I am keeping on top of technological advancements.

The gamification component of the sociology course allowed participants a new way to learn.

   Engagement. Participant perspectives addressed in the research study included Engagement. Interactivity, critical thinking skills and level of interest were components of Engagement.
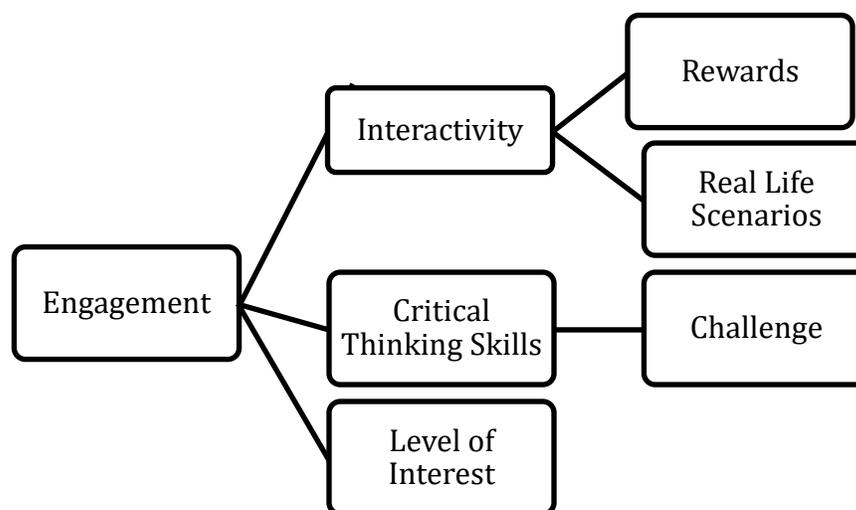

Figure 3. Research Question 1: Theme 2 (increased engagement) with subthemes.

   Interactivity: Rewards. The participants enrolled in the gamification course engaged due to the type of interactivity in the course. Tools for monitoring engagement were rewards and the ability to apply the game scenario to a real- life scenario. Participant A explained:

The course was very engaging due to the interactivity of having the option to select different scenarios and match them with the amount of money that was available in the budget account. Being able to drag and drop items on the screen in the course to the most appropriate solution assisted in being a part of the interaction and experience.

Participant F indicated:

> The course was fun and interactive, which I loved. There were parts of the course where I was able to select a character and then decide which path I wanted the character to go. If I selected that I wanted to purchase a new pair of shoes instead of a used pair, then my next interactive step would be to put the cookies that were in my grocery cart back on the shelf since I really wanted to purchase the new pair of shoes in order to stay within the monthly budget. The interactivity piece was key in playing the game. (Journal Entry)

Participant N shared the perspective:

> The experience was rewarding. The reward was a trophy, a certificate, and the title of fabulous budgetnista, which accompanied your customized avatar. Your title would then advance on the leaderboard at the end of the game. The reward system was very enlightening. Having a reward system in place made me feel accomplished in the course.
>
> The use of rewards and real-life scenarios were strategies used to promote participant interaction in the course.

Critical thinking skills. Participants noted that the course provided a challenge given in each scenario. Different challenges were presented that prompted the participants to use their critical thinking skills to make a decision on what their next move would be in order to stay within the budget guidelines. Participant G reported: The game allowed me to think through a challenge compared to the courses that I have had in the past that did not include gamification.

Participant A indicated however that:

> Each scenario within the game presented the opportunity for me to use my critical thinking skills. For me this did not work with my critical thinking skills because I did not feel like I had to think deeply about what decision I was going to make. The scenario was common sense and I would think most people would do the right thing by their children no matter what. It does not take critical thinking skills to resolve that particular scenario.

For this study, the researcher noted that a challenge presented in a gamification component of the course may not be related to critical thinking skills but it may allow participants to make a decision on if they need to use their critical thinking skills or not.

Level of interest. Participants that took the sociology course that included the gamification component found that the level of interest was associated with engagement in the course. Participant F indicated:

> My level of interest on a scale of 10 would be a five because gaming is not for everyone. While I am a kinesthetic learner and I like many hands on activities, I

think it is important to learn concepts in a different learning strategy outside of

games. Some example of alternate learning strategies would be lecture, role

playing, group activities, videos, demonstrations and field experiences.
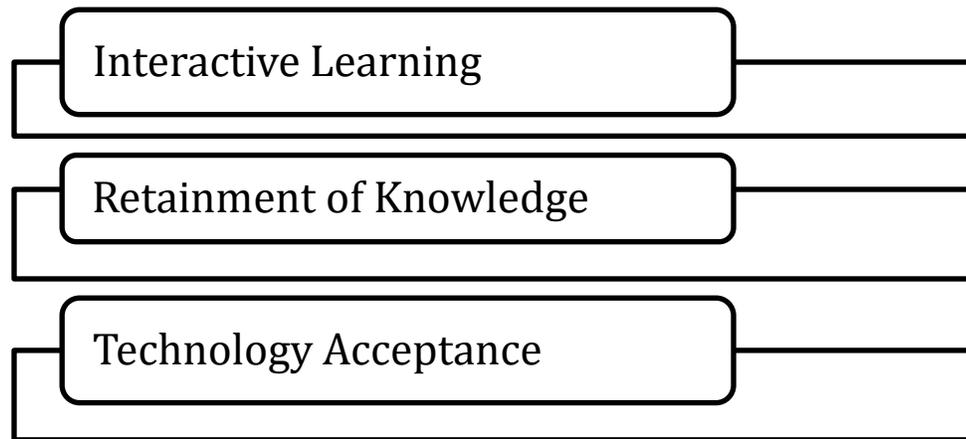
Participant G referred to a level of interest as high. Participant C stated:

When I am taking a course that includes games online, my interest level is

definitely higher than if there was not a gaming component. By including games,

I feel more inclined to pay attention and take notes because I know what I am

learning is more important. It also helps my interest level because it is a different

type of learning and it is nice to have a change of pace in the classroom rather

than just reading articles or from a textbook.

Although some of the participants level of interest varied, the perspectives of the

participants were noted and identified that level of interest is associated with engagement

but may not necessarily be high or low level and is based on each individual perspective.

Research Question 2

Research Question 2 explored, how do community college students describe their

overall experiences with the use of gamification as an instructional strategy in their

online learning. The three themes that emerged in response to this question were

experiences on interactive learning, retainment of knowledge-strategic and decision based

learning, and technology acceptance (Figure 4).

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│  │  Retainment of Knowledge            │     │
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│  │  Technology Acceptance              │     │
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Figure 4. Research Question 2: Theme 1, 2, 3 (experiences, retainment of knowledge, and technology acceptance) with subthemes.

Interactive Learning. Participants noted that interactive learning occurred because of the game scenarios, the ability to perform drag and drop interactions to go to the next scene of the game and the ability to play a role in the game as an avatar and participate on a leaderboard to earn a reward.

Participant A indicated:

I think the game was good for giving an interactive way to learn about poverty rather just reading about it in a book. It is a good way to make the topic seem more real or applicable. I liked the idea of having a part in the interaction piece. I am a visual learner so I liked seeing the games acted in different role based scenarios. Overall, I really enjoyed the option to have an interactive game included in the course because it assisted me in really understanding what I was learning. I have taken courses online in the past that does not include gamification

and it was a different experience because I felt like for this course, I had the

opportunity to immerse myself in the learning process.

The participant also liked the idea of being a part of the interactive process because of

activities that included active participation. Participant D described the experience:

In the course, I especially liked the course interaction and that it was easy to

follow the instructions. I really liked the drag, drop interaction for quizzes, there

was a matching game, and I was able to select the correct answer and place the

matching avatar character to another character to go to the next scene of the game.

There was a poverty simulation where we would choose an occupation and

selecting an avatar and then had to choose where we wanted to live. In the

scenario, you had to figure out how to manage a monthly salary for the entire

month. If you were able to accomplish the goal of the game, your avatar earned

points on the leaderboard and the top point earners would win an award. (Journal

Entry)

The importance of the game scenarios, interactivity, avatars, leaderboards and rewards

resulted in providing participants an interactive learning experience and was the answer

to Research Question 2.

Retainment of knowledge. Participants shared their experiences on how strategic and

decision -based learning aligned with interactive learning. Participant C described the

experience:

I have been able to apply what I have learned in real life scenarios. In every scene of the game there was an action that needed to occur based on the decision I made, I was able to complete that action. There were usually two choices. For example, one of the choices was buy your child a new pair of shoes or buy your child a used pair of shoes for cheaper. In making the decision to buy the cheaper shoes, Strategically, I saved more money from the monthly budget. If I selected to go for the more expensive shoes, then I would have made a bad decision because it would have taken me over my monthly budget. Learning the concepts of making decisions and taking action helped me to strategize to meet the end goal, which was staying in budget. Learning the budgeting concept in the course allowed me to apply what I learned in real-life scenarios when it comes to financing and budgeting.

Participant B agreed by sharing,

We had to figure out how to live on a single income for 30 days, which took a lot of strategizing. I had to think through the scenarios. In every scene of the game, there was a conflict. Once I figured out there was a conflict, then I had to make the decision to do the right thing.

Participants both clarified that it takes being able to resolve conflict and make good decisions to practice strategic and decision- based learning.

Technology acceptance. Throughout the study, participants shared their experiences and perspectives on a new way to learn content, which was taking a course

that included the gamification component. The participants explored all of the technology

tools implemented in the game. Participants were able to select their avatars for the role-

play and they were able to participate in the interactive activities of the games. The

participants were also able to adapt to the new technology and the new ways to learn.

Participant A shared:

I have accepted gamification as an instructional method. I think it can be a helpful tool to

keep students engaged. I do not expect any technological changes and overall I have

accepted gamification.

Participant G agreed:

Yes, I have accepted gamification as an instructional strategy and as for technical

challenges. However, in this particular course I did not experience any technical issues.

Participant E stated:

I can accept gamification as an instructional method. However, I would prefer for

it not to be the only option within an online format but just one of the strategies

used to learn. I think a combination of learning strategies within a course would

be ideal. I do expect technological challenges because there are always issues

with technology. (Journal Entry)

Throughout the research study, most participants indicated that they had good

experiences with learning the technology and were therefore able to become

adopters of gamification in an online course. They recognized that gamification

was definitely a new way to learn and practice learning new content and used in real world scenarios.

Discrepant Cases

There were no discrepant cases found in this study. Participant's experiences with gamification and technology elaborated on the frameworks described in this study but it did not modify those frameworks. There were no emergent codes in the study results.

Summary

In Chapter 4, I provided data that answered two research questions. Evidence of the affective states of motivation and engagement were present in the participant experiences. The participants also indicated how rewards played a role in interactivity of the course in regards to Engagement. Experiences with interactive learning features, retainment of knowledge by using critical thinking and decision- based skills to transfer over to real-life learning scenarios and technology acceptance were all critical pieces in answering research question 2. In Chapter 5, I will describe the interpretation of the findings.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this qualitative study was to understand and explore the perceptions of community college students regarding motivation and engagement when taking gamified courses online and to describe their overall lived experiences. The study addressed the perceptions and experiences of community college students who had taken sociology courses online that included the use of gamification as an instructional strategy. The key findings in this study included the affective states of motivation and engagement and rewards. The study also allowed the students to indicate their perspectives on their interactive experiences, retainment of knowledge by the use of critical thinking and strategic learning, and technology acceptance. Gamification as an instructional strategy for an online learning environment confirmed this study.

Interpretation of the Findings

In this section, I discuss the interpretation of the findings. First, I discuss the findings that aligned with the TAM. Second, I discuss the findings that aligned with Blumer's (1969) interactionist model. My interpretations of the findings suggest that instructional strategies such as gamification in online courses contribute to the student experience based on the interview data.

Interpretations of Findings Relevant to Technology Acceptance Model

According to the TAM, factors can influence a student's decision to use technology and make them aware that it is new (Davis, 1989). For the current study, gamification was the new technology identified in the course. The aspects of gamification

that align with the TAM were the student perspectives. The subthemes of experiences

included interactivity, retainment of knowledge due to using critical thinking skills and

strategic learning concepts, and accepting technology (aligned subthemes are shown in

Figure 4). In the peer-reviewed literature reviewed in Chapter 2, studies regarding

gamification and online learning were relevant to the TAM. The major elements of the

TAM are perceived usefulness, perceived ease of use, attitudes, and behaviors. One of the

goals of TAM was to address motivating factors between the technological system and

the actual use.

   Student perception for interactive experiences. Participants in the current study

reported that their perception of interactive experiences focused on gaming scenarios.

Being able to perform interactive cues in the scenario, such as drag and dropping

characters along a path in a scene, assisted in identifying interactions that a task was

completed. The participants were immersed in the interactive experience and exhibited

they played a role. The use of avatars and a leaderboard displayed at the end of the game

identifying a reward assisted in the participant's interactive experience. As identified in

Chapter 2, the characteristics of gamification that include badges, points, leaderboards,

and achievements are components of an interactive experience (Trammel et al., 2016).

My findings extend the knowledge as discussed in Chapter 2 regarding characteristics of

digital games versus analog games.

   Student perception on the retainment of knowledge. Participants reported that

their perspectives on the retainment of knowledge were a result of being able to use

critical thinking skills within the gaming scenarios and the ability to strategize. The students emphasized that the skills they learned from participating in the game could be transferred to real-life scenarios. In the literature review, Schoenenberger et al. (2016) revealed that with this type of independent learning structure, instructors can create custom challenges for students so that they can apply their critical thinking skills. My findings extend the knowledge discussed in Chapter 2 regarding independent learning game frameworks and gamification format that can assist with knowledge transfer. Ros et al. (2020) analyzed students' perceptions of success and learning effectiveness after using gamification in an online course. The results showed that the context of the game and the game design had a notable influence on retainment of knowledge and learning. The results also suggested a high correlation between playing the game and succeeding in the course (Ros et al., 2020).

Student perspectives on technology acceptance. Technology acceptance was identified a part of the students' perspectives. Technology acceptance is also a part of the TAM. Participants reported that their perspectives on accepting technology resulted from adopting and using technology as a method to learn. My findings align with the peer-reviewed literature discussed in Chapter 2 on the elements of the TAM. The perceived usefulness, perceived ease of use, and attitudes and behaviors all played a role in the students' perspectives.

Interpretations of Findings Relevant to Blumer's Interactionist Conceptual

Framework

According to Blumer's (1969) interactionist conceptual framework, learner and object interactions occur in online learning. When learners interact with an object, a behavior change may occur. The learner's behavior change may result in many forms such as engagement and motivation in learning because of symbolic interaction (Olasina, 2015). The aspects of student affective states align with this study regarding motivation, and engagement. My findings extend the knowledge as discussed in the Chapter 2 review of the literature.

Student perspective on affective state of motivation. Participants identified effective time management by having smaller modules within the game versus a traditional course, and the ability to work ahead assisted them with giving their perspective on being motivated in the course. This finding extends the current knowledge identified in the Chapter 2 regarding the influence gamification on self-paced learning (Han, 2015). Teachers and educational institutions are looking for strategies to motivate and engage students in their learning process. Educational institutions appear to encourage the use of gamification for intrinsic motivation as well as engagement (Alabassi, 2017). The results of a study conducted on 47 students enrolled in an instructional technology program in a learning management system supported gamification and indicated that there was a positive perception toward the use of gamification tools in online learning (Alabassi, 2017). Alabassi (2017) reported that

students require effort-demanding, challenging, and sophisticated online courses that increase competency and enhance memory, concentration, commitment, attentiveness and social interaction.

Student perspective on affective state of engagement. Participants stated that attentiveness played a role in how engaged they were in the course. Due to the course including the gamification component, the participants were able to be attentive to the gaming dynamics within the course. Instruction can capture the attention of learners if there are different ways to instruct learners (Lo & Hew, 2020). This finding extends the current scholarly knowledge identified in the Chapter 2 regarding creating interactive exercises to capture attention. Lo and Hew (2020) examined a student's mathematics achievement and cognitive engagement with other instructional strategies such as traditional learning, online flipped learning with gamification, and online independent study. The results indicated that students in a flipped online learning class with gamification significantly outperformed those in a traditional and independent study. Learning with gamification promoted students' cognitive engagement better than the other two approaches (Lo & Hew, 2020).

Participants in the current study identified that rewards played a role in learning the content of the course; however, rewards did not increase or decrease their motivation or engagement. The participants' perspectives were that it was a nice bonus to have a leaderboard with avatars displaying who the top winner was for the game and a trophy given to the winner; however, it made no difference in changing the affective states of

motivation and engagement. The game dynamic was enough for the participants to give their perspectives on motivation and engagement. Han (2015) revealed that using gamification as pedagogy would require a curriculum that includes basic skills, goal setting, rewards, and creating a learning space for students for practice and exploration. My finding extends the current peer-reviewed knowledge regarding rewards and engagement.

Limitations of the Study

There were some minor limitations to this study. I was able to capture the participants' experiences by implementing all of the strategies described in Chapter 1 in regards to credibility, dependability, transferability, and confirmability. During the interview process, I was the data collection tool, and my biases may have influenced the data collection process. Because this study was qualitative, I was able to interview the participants and provide qualitative data. The participants appeared to be truthful in their responses when it came to using the technology in the gamified online course. Participants were able to respond in depth to the open-ended questions. Data collected from the participants were limited to their experiences and their lived experiences of their affective states. Other limitations were that the process was time-consuming and interpretations were limited. When interviewing the participants, I sometimes deviated from the main questions. As a result, some of the participants did not directly answer questions in the journal or interview.

Recommendations

The following recommendations for future research emerged from the analysis of student perspectives on the use of gamification in online learning:

1. Studies exploring gamification for other student populations outside of community college students will perform comparison data analysis provided for both groups to address the gap in the literature.

2. Studies exploring other instructional strategies outside of gamification in an online learning environment provide additional insight into student motivation and student engagement.

3. Participants in the current study reported that gamification was a fun and interactive learning strategy. Future studies may address how educators can continue to become adopters of gamification in online learning and identify how gamification can benefit students in the community college setting.

Implications

In community college settings, educators need effective learning strategies that they can use to assist students with learning content in online courses. Learning strategies that can engage and motivate learners to become successful and can assist with student achievement can increase retention rates, engage and motivate students, and keep online courses interesting and current with technological advances. The findings confirmed the lived experiences of community college student experiences.

This study may contribute to positive social change in the areas of instructional teaching methods and online learning strategies. I was able to explore the perceptions of community college students and their experiences with taking a course online that included gamification and how it aligns with the affective states of motivation and engagement. The findings could play a role in promoting gamification as a successful instructional strategy. Improved instructional strategies in an online course would allow online educators to instruct and teach their students in learning new concepts and applying those concepts in real-life scenarios. Student motivation and engagement in gamified courses has the potential to increase student learning outside of traditional methods. The recommendations for practice would be to share the learning strategy of gamification as an instructional method in online courses to stakeholders to obtain adopters. Recommendations would include the following:

1. Include training on how to gamify courses through an educator workshop as an instructional strategy.

2. Increase professional development opportunities on online learning strategies across the higher education spectrum.

3. Include gamified instructional strategies as a part of an incentive program for professionals in education.

Gamification in online learning may assist in providing a creative and innovative way for students to learn online. Community college leaders may shift program focus on curriculum that is more motivating and engaging for students. Promoting instructional

strategies such as gamification has the potential to support educators by elevating their skills to assist with student motivation and engagement in online learning.

Conclusion

Educators are looking for ways to increase student engagement and motivation in their online courses. Instructional strategies such as the use of gamification have the ability to promote engagement and motivation. The participants described engagement and motivation because of the gamification component built into the course. The students' perceptions were the participants lived experiences, knowledge retainment, and the technology that supported the practice of gamification. This study's intent was to fill a gap in the literature for the community college student population. Students provided authentic, reflective experiences to contribute to the scholarly literature.

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Appendix A: Interview Guide and Questions

Participant Selection

The participants that are being recruited for interviewing are community college students enrolled in a Sociology Program.

Invitation

You are invited to take part in an interview for a research study that I am completing as part of my doctoral program. The purpose of the interview is to capture data in regards to the perspectives of community college students taking courses that include the instructional strategy of gamification.

I am requesting that you permit me to capture the results via a face to face interview session and written journal entries. Your responses will be analyzed as part of my research, therefore it is important to answer the questions honestly and be very descriptive in your answers.

Informed Consent

This interview is voluntary. If you decide to participate, you may still change your mind later.

Being in this interview would not pose any risks beyond those of typical daily life. There is no benefit to you.

Interview responses will be anonymous and will be shared with each interviewee, upon request. Transcripts with identifiers redacted will be shared with my university faculty along with my analysis. The interview responses will be destroyed as soon as I have completed my research.

If you want to talk privately about your rights as the interviewee, you may reach Dr. Leilani Endicott. She is the Walden University representative who can discuss this with you. Her phone number is 612-312-1210.

Please share any questions or concerns you might have at this time. If you agree to be interviewed as described above, please reply to this email with the words, "I consent"

Introductory Statement

Please prepare your responses to the below questions. Be prepared to provide as much
descriptive data for each question as you can while reflecting on your
experiences.

Interview Questions

1. What is the name of the course that you are taking that includes gamification?

2. What type of learner are you?

3. Have you taken online courses before in the past that does not include
   gamification and if so describe your feelings about the course's instructional
   strategies that were used in the course?(**Journal Entry**)

4. Please describe some of the games you have taken in this course?

5. Please explain how the games you played within the course assisted you with
   learning the content.

6. Compared to the courses you have had in the past that does not contain
   gamification, what is the difference?

7. Describe how you have applied what you have learned from taking gamified
   courses?

8. Describe what interaction is like when playing a game in a course.

9. Describe your experience when you are playing a game within an online course**(Journal Entry)**

10. Can you describe what type of instructional strategies motivate or engage you to stay enrolled in an online course?

11. After you have completed a course that includes gamification and you are given an award or certificate for your accomplishments how do you feel?

12. After you have completed a course that includes gamification and you are not given an award or certificate how do you feel?

13. Explain your level of interest in taking a course that includes games online.**(Journal Entry)**

14. Summarize your overall experience on using games in an online course to learn content. **(Journal Entry)**

15. Summarize if you have accepted gamification as an instructional method in your online courses and if you expect any technological challenges **(Journal Entry)**

Concluding and Closing Statement

- Please describe anything else you would like to share in regards to gamification, online learning, student engagement and motivation?

Appendix B: Introductory Letter to Dean of Program

Jan 15, 2019
Mr. Dean of Sociology Program
123 W Parker Lane
Morehouse, IL. 62134

Dear Mr. Dean:

I am writing to request permission to conduct a research study at your institution. I am currently enrolled in a PhD Educational Program with a specialization in Educational Technology at Walden University in Minneapolis, MN and I am in the process of writing my Dissertation. The study is titled: Community College Student Perspectives on the Use of Gamification in Online Learning.

My goal is to obtain permission from your College to recruit seven students that are enrolled in your Sustainability Program that use games in their online coursework. I would like each student participant to meet with me for an interview session that consists of 10 questions and to answer them honestly to the best of their knowledge about their experiences when taking a course that includes gamification.

If approval is granted, the interview guide can be sent via email and time scheduled to meet with the student. I would also like to have the student to have journal entry writing time allowed in the course pertaining to this study. After the students have completed their journal entries they will be able to email their journal notes centered around 5 additional questions.

Your approval to conduct this study would be greatly appreciated and I would be happy to answer any questions you may have. You may contact me at my email address: _____. If you agree, you may sign this letter below as authorization granting me permission to conduct the study.

Thank you for the consideration in allowing me the opportunity to conduct my research at your institution.

Techmicial M Robinson- PhD-Education
Doctoral Candidate at Walden University

Approved By: _____

Appendix C: Participation Invitation Letter

Dear Participant:

My name is Techmicial M Robinson and I am a doctoral student in Walden University PhD Education Program. I am requesting your participation in a doctoral research study that I am conducting on Community College Student Perspectives on the Use of Gamification in Online Learning. My goal is to capture the lived experiences of students who take courses online that include a gamification component and how it has affected the affective states of motivation and engagement.

The study involves completing a face-to-face interview session and participating in a journal writing session before, during or after the course. The study will remain anonymous and you will not provide your name. A participant id will be assigned to you.

If you would like to participate in this study, please review the interview guide that will be emailed to you and the best time to setup the interview session. Your participation in the research study will assist me greatly in the area of social change to make a difference in the Educational Technology field in the future.

Thank you for your time and participation

Sincerely,

Techmicial M Robinson, M.A.T.D, M.S, Doctoral Student, Walden University