Master's Thesis

Is Gamification a Blessing or a Curse? Teacher and Student Perspectives About the Use of Blooket in a High School Classroom

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Abstract

The action research study was conducted to understand how the use of Blooket in high school science classrooms impacts the learning environment. After implementing the specific software into my classroom, I have questioned the value of the integration of such a program as a result of student behavior. In other words, I was looking to investigate whether this gamification detracts from the lesson objective or supports it. This was completed among seventeen, ninth-grade Earth Science students at a suburban New York high school. A total of five science teachers participated in the study as well. After collecting data, three themes were established with the research questions in mind. These themes focused on the various opinions derived from perspectives of both the students and the teachers. Based on the findings and developed themes, I have come to the recommendation of avoiding certain game modes that instigate competitive nature and are found to lead to negative behavior that further disrupts the learning environment.

Is Gamification a Blessing or a Curse? Teacher and Student Perspectives About the Use of Blooket in a High School Classroom

Introduction

Have you ever experienced anger and aggression in the classroom among your students during what is supposed to be a fun review game? Unfortunately, I often do during the use of Blooket in my 9th grade Earth Science classroom. The purpose of this qualitative action research study was to understand how the use of Blooket in high school science classrooms impacts the learning environment in a positive or negative manner due to its feature of allowing one student to sabotage another to get ahead. After implementing the Blooket into my classroom lessons, I examined how the integration of such a program could result in positive or negative student behavior. In other words, I am looking to investigate whether this gamification detracts from the lesson objective or supports it. The problem is the disruption that many digital gamifications cause when used in high school classrooms.

Background of the Problem: Disadvantages of Gamification

Today, gamification is becoming more popular as technology is evolving. As a result of the quickly developing gamification, it is often requested by students for the integration to occur as they will receive the opportunity to play games in school. The issue with this is that gamification can distract learners from the learning objectives ("The Advantages and Disadvantages of Gamification in the Classroom," n.d., para. 9). In other words, students can

easily get caught up in the competition and focus on winning the game rather than reviewing the material for the upcoming exam. Reviews state that "The gameplay, however, can be so absorbing (and distracting), that the learning feels secondary. Of course, the speed and competitiveness of play do incentivize students to answer questions over and over, and this ends up effectively drilling facts" (Powers, 2020). This further emphasizes that gamification can lead to steering away from the lesson objective. Although the students may be engaged, they are not taking in the necessary information that will further support them in further learning events.

There are plenty of studies that discuss the positives how gamification in the classroom, however, few explain the downfall of the usage. Those who did conduct research found that gamified environments can have harmful outcomes on the students (Almedia et al., 2023). The harmful outcomes stem from the human nature of competition. While there is constructive competition, which builds relationships, gamification in education leads to destructive competition, which is when competitors are harmful to each other (Hanus & Fox, 2015). Through further research, Hanus and Fox determined that students that start at the same level of intrinsic motivation tend to decrease in motivation and satisfaction with the integration of gamification in the classroom (2015). Not only do these harmful outcomes affect the students but they also have adverse effects on teachers as well. Teachers are now required to conduct more classroom management in response to the consequences of gamification. And yet, isn't gamification supposed to make the classroom environment easier to handle for the teacher?

Context of the Local Problem

This study has taken place at Daisy School on Long Island (name changed), New York. It is a large, diverse 1:1 school (one Chromebook for every student). As their science teacher, my responsibility is to ensure that each one of my students is successful. Thus, when they have the excitement to learn and request to do so in specific ways, I try my best to meet those requests. Fortunately, every student is given their own personal Chromebook which they bring with them to every class and can take home to use for their homework. By having this resource, Chromebooks are often integrated into my science classroom, especially when Blooket is being implemented.

What is Blooket?

Blooket is a program designed for trivia and review with a twist. Typically, in a review game, we see students joining into one room where they answer questions together based on the content area of the teacher's choice. The winner is determined by who gets the most correct answers the quickest (Blooket, n.d.). While Blooket allows for joining an online room to compete, it is slightly different from the typical review game. Rather than solely having your typical question and answer format, Blooket has game modes. These various game modes range from mining for gold to protecting one’s territory. The game modes also could include racing cars, smoothly operating a factory, and fishing the seas. The game mode is chosen by the teacher before receiving a game code for an online room. Once students have logged into the room, they have the opportunity to customize their character with the options of various animals and accessories (Blooket, n.d.). When every student is ready, the teacher begins the game, and the

students compete. The game modes are typically formatted in a way of prompting the student with a question written by the teacher. However, the program only allows for multiple choice questions to be asked (Blooket review for teachers, n.d.). If the question is answered correctly, the student gains points and different advantages depending on the game mode. If the student does not answer the question correctly, they do not gain anything and are given the next question. The advantages often include sabotaging peers of their choice, whether that is taking away gold or splattering paint on their screen causing a delay in answering the questions. This sabotage allows for anger and conflict to occur. Students are putting in the effort to gain points, coins, etc. by answering the content-specific questions correctly. This is possible by the student putting in prior effort such as studying the night before and deeply thinking about the prompts. And yet, after all that, their hard work can be taken away from them in the blink of an eye from their peers due to the game mode selected. (Blooket, n.d.) Finally, after the allotted time assigned by the teacher is up, the winner is presented based on who has the highest amount of points.

Throughout my teaching experience, gamification has been implemented in my classroom in many ways. This includes playing Kahoot to review for an exam, using Plickers to check for understanding of a new concept, or utilizing Blooket to evaluate prior knowledge. The gamification program that is most often requested by my students is called Blooket. To increase student engagement, Blooket was implemented into science lessons. However, after experiencing conflict among students during the implementation, I was unsure if this gamification had merit. The conflicts began when students had the opportunity to sabotage their peers. Blooket allows for many opportunities to do so. For example, in the Gold Rush mode, students gain gold coins

when answering questions right. After a few rounds, they are then given the option to steal coins from any peer they would like or gain their own and not negatively impact anyone. More specifically, they are given the option to steal 10% of someone else's gold, gain 25 gold tokens (The Blended Bandroom, 2021). This option of stealing is not able to be turned off when creating a Blooket.

A teacher left a review stating that "this game [Blooket] teaches children incorrect ideas and encourages cheating, lying, and other bad acts... the game teaches children that robbery is the only form of success" ("Teaches Children That the Way to the Top is Cheating and Stealing," 2021, para. 1). While this is a tool for reviewing and checking for student understanding, it often leads to social and emotional issues. Blooket causes problems in the classroom as it provides students with the opportunity to be hurtful. Although gamification applies a creative approach to review in the classroom, it can also have disruptive effects which challenge conventional learning (AlSaad & Durugbo, 2021). This sparked my interest to further investigate the effect that Blooket can cause in a high school science classroom setting.

Purpose

The purpose of this qualitative action research study is to understand the perspectives of those who use of Blooket in a high school science classroom and their experience in the learning environment. The issue being studied is whether or not there is true value in the integration of the Blooket gamification tool into the classroom. Since one of the major rewards for winning is the ability to rob or sabotage a peer in the Blooket game, educators and researchers have not

sufficiently evaluated if this behavior helps or hinders the learning activity. This study's focus is to determine if the competitiveness of Blooket outweighs the educational benefits. There exists a significant gap in the research that critically examines how some types of gamification tools may cause more classroom management problems or leave students with a sense of low self-efficacy for scoring low on the game, especially among Blooket.

Significance

I would like to research the merit of Blooket in the classroom because it often leaves me questioning the success of a lesson. When finished with a learning activity that implements Blooket, my students leave feeling conflicted with emotions. This common reaction left me with many moments of pondering whether it was the classroom management occurring or the technology causing such results. Conducting this research study allows for my teaching to improve as I have a deeper understanding of the influence of Blooket upon a classroom setting. Professional educators have the important responsibility of delivering learning using effective teaching and technology strategies. If a teaching method results in creating an unsupportive classroom environment and leaving students upset, it is worth considering the true effectiveness of the tool. Any educator who has uses gamification can benefit from this study to help better evaluate the pros and cons with these digital tools.

Research Question

The problem is the disruption that many digital gamifications cause when used in high school classrooms. The purpose of this qualitative action research study is to understand how the

use of Blooket in a high school science classroom impacts the learning environment. Therefore, my research questions are:

What are the students' perspectives on the use of Blooket in the high school classroom environment based on their experiences?

What are the teachers' perspectives on the use of Blooket in the high school classroom based on their experiences?

Literature Review

After conducting a large amount of research, it was evident that Blooket has not been further investigated in terms of its downfalls. The research discovered was primarily on the purpose and implementation of Blooket in the classroom. The framework used for developing this study was game-based learning theory. This theory focuses on the integration of games into the classroom to meet objective. Themes were developed to support this framework. The first theme is gamification in education which focuses on how the classroom can specifically be transformed through the usage of gamification. The second theme is classroom management and the learning environment. The two have a direct relationship either positive or negative. This means, it is essential to develop good classroom management skills in order to have a successful classroom environment. The final theme to support the framework is the role of student engagement. The role of student engagement is essential for a successful classroom, especially one that is integrating technology.

Game-based Learning Theory

The framework of this proposal is based on game-based learning theory. Game-based learning theory outlines the vivid use of serious games in the classroom to meet learning objectives (Theory, n.d.) The attraction of games bonds students to engage in the content. The game-based learning theory has plenty of attributes from motivation enhancement to competition to collaboration and teamwork. (Theory, n.d.) Therefore, it is essential for teachers to become aware of how to implement such a theory successfully in the classroom.

This framework relates to the research question as game-based learning theory involves the completion of full games (Zhang & Yu, 2022). The term gamification means to learn through games however, those games do not have to be completed. In this study, data is being collected based on the completion of the game, Blooket, thus requiring such a framework. If the game of Blooket was not completed the problem would not be addressed. In other words, to understand how Blooket is affecting the classroom setting, a full serious game must be completed to get the true value.

Gamification in Education

Gamification can transform the classroom in a variety of ways. The main way is through the use of playing digital games such as Kahoot and Gimkit (Haiken, 2021). Most of these platforms are free services that teachers can use to create and share classroom content. It is most used for the review of exams but can also be used to check for prior knowledge. These digital games have proven that students are more likely to remember content through digital games rather than solely studying from worksheets and notebooks (Haiken, 2021). They have also been

shown to develop student collaboration and creativity skills. Clark and Qian mention that "game design and play require people to be familiar with media and technology, and it also requires people to be creative and critical thinkers, so it has great potential to facilitate students' 21st century skill development" (2016).

Gamification can also transform the classroom as an alternative learning style. So rather than traditional learning where students must wait for feedback on assignments, they can receive instant feedback from the programs. Stott and Neustaedter (2016) mention that frequent targeted feedback is the most essential of all. This feedback also allows students to complete tasks multiple times as they explore the consequences of different actions (Theory, n.d.). The repetition of the content further leads to a deeper understanding of the content as well.
As students age and mature, they lose a sense of natural curiosity. Thus, we as teachers must allow opportunities for students to interact with multimedia lessons and not solely with presentations and notes. Rather, allow the students to take charge of their learning. As mentioned by Bastean (n.d.), curiosity and exploration are vital for student success. So, in order increase their academic engagement, provide opportunities of curiosity as seen in gamification.

However, it is important to keep in mind that as the students age, they begin to lack motivation in school. This is due to the content becoming more challenging and the engagement levels often decreasing. When students do not feel like the class has meaning or enjoyment for them, they easily become disengaged (Bastean, n.d.). This is also an extremely stressful time for students as their bodies change as they undergo puberty. As a result, students are developmentally diverse, both physically and mentally, which can make gamification in the

classroom challenging (Bastean, n.d.). This is because gamification often results in competition and the competition can become out of hand. As maturity levels vary and reputations are on the line, the digital games integrated into the classroom tend to cause tension both during and after the activity. Therefore, disengaging the students from the content and defeating the purpose of the game-based theory.

Classroom Management and the Learning Environment

In order to have a positive learning environment within the classroom, classroom management must be established first. Typically, the teacher's classroom management style is set from the first day of school. While these styles can often vary, it is seen that the most successful classrooms are the ones where the students feel safe and are aware of the expectations (Franklin & Harrington, 2019). It is almost human nature to raise our voice when students are not following directions. Thus, as teachers, we must recognize this natural reaction and try to avoid such occurrences. Rather, teachers should be sure that noise in the classroom is constructive and not interfering with learning (Franklin & Harrington, 2019).

The success of classroom management is primarily based on the teacher's self-efficacy. A teacher's self-efficacy in the classroom can be described as "teacher's judgements of their capability to successfully perform classroom management tasks in the face of difficulties" (Lazarides et al., 2020). In other words, if a teacher is not confident in their classroom management skills, they are not going to successfully have a managed learning environment. The students will sense the teacher's doubt and therefore not have the confidence to complete such actions themselves. To achieve this feeling of self-efficacy others must further develop their own

skills; specifically, their digital competence (Moltudal et al., 2019). Once the teachers are confident in what they are teaching, they can then focus on how they would like their classroom structured as well as maintain that structure.

A key factor to having a positive learning environment is through teachers building positive relationships with students. It is proven that when a teacher values a student's time, the student is more likely to engage in the classroom (Keyes, 2019). Keyes also shows through her study that students enjoy being in classroom environments where they know the teacher is aware of their developmental stage and consistently provides support (2019). She further explains how student-teacher trust can be built by developing meaningful relationships, listening to and incorporating student ideas, and showing the students the respect they all deserve (Keyes, 2019). While this may seem as a daunting task on top of all of the teacher's other responsibilities, it is quite simpler than it appears to be. It can be done so by starting off class with asking the students how their weekend was or individually asking how a sports game went. With this in mind, not only will the learning environment prosper, but the classroom management will not have to feel as rigorous as the respect is set and the relationships are being built.

Role of Student Engagement

Before understanding the role of student engagement in the classroom, it is essential to understand the difference between motivation and engagement. These terms are often mixed together, therefore providing false ideas of what student engagement should look like in a classroom. Motivation is "the inclination to act a certain way to satisfy certain conditions" (Barkley & Major, 2020). Student engagement is most commonly described to include an

affective; cognitive and behavioral dimension (Buntins et al., 2021). In other words, student engagement is primarily one factor but a combination of factions. Thus, in order to have student engagement in the classroom, there must be a combination of both motivation and active learning (Barkley & Major, 2020).

The role of student engagement has drastically changed since the integration of digital technology. Melissa Bond et al., state that in order to have a meaningful engagement of students in the classroom, we must incorporate the evolving digital age upon us (2020). For students growing up in the 21st century, they primarily use technology outside of their classroom. Therefore, the use of technology in the classroom as increased with the intention of increasing student engagement. Not only does student engagement increase, but a study by Melissa Bond and Svenja Bedenlier shows that there are short-term and long-term effects of integrating technology into the classroom (2019). For example, a short-term effect could be an improvement in attitude and a long-term effect could be greater involvement in the classroom (Bond & Bedenlier. 2019).

Prior research has been conducted on the various platforms but nothing specifically on Blooket. For example, a study was conducted to determine secondary teacher perspectives on free online programs to promote student engagement (Junkin, 2022). Throughout this study, they had various focus questions that were asked and applied to a list of programs, including Blooket. And yet, in every category, Blooket came in as the least effective in comparison to other game-based technologies such as Pear Deck (Junkin, 2022). The most shocking discovery Junkin had made was that Blooket was voted number one for the platform that was the least helpful to

students. By the end of the study, it was determined that Kahoot was the most favorable by teachers as it appeared to be the most effective.

The study conducted by Junkin (2022) provided results in a few cases of where Blooket is not as effective as we may think. And yet, it is always the top requested program by my students when it comes time to review. The gamification of Blooket is more focused on the quality of digital gaming and less focused on academic content. Thus, students request such a program more often as it is proven that they have the opportunity to play more and not learn as much. They are also given the opportunity to challenge each other's maturity and apply it to their social lives rather than their academic needs.

While the integration of games can increase student engagement, there are also various downfalls of using games in the classroom. A major connotation of games in the classroom is that students do not play the games as intended ("8 Problems With Using Games," n.d.). A game of Blooket is used to review or analyze prior knowledge of students. However, students can use the opportunity to sabotage their friends and bully others by targeting specific students. While this is having students engage in the classroom, this is being done negatively. Another connotation is students do not always stay on task ("8 Problems With Using Games," n.d.). For example, say a student is being targeted and becomes discouraged while playing Blooket, they can simply leave the website and disengage from the lesson.

Methodology

This qualitative action research study was chosen to better understand the experiences and perspectives of the student participants (Mills, 2018). Data was gathered using online

questionnaires and focus groups among teachers and students. Qualitative data is quite beneficial as it encourages discussion and explores behaviors and attitudes in-depth ("Pros and Cons of Qualitative Research," n.d.). This design aligns with the problem and purpose of the study as it obtained data on student experience and teacher perspective with their participation and integration of Blooket in the classroom. What this means is that rather than collecting statistical or numerical data, information regarding the thoughts and opinions of the participants was collected which provided an opportunity for the answer to the research question to be more truthfully evaluated. Therefore, I have collected qualitative data through online questionnaires as well as teacher and student focus groups.

Participants

The Earth Science class consists of seventeen total ninth-grade students. A purposeful sample of students from this class was invited to participate. According to Creswell (2012), participants should be determined through purposeful sampling in a qualitative data setting (2012). In other words, all students were given the opportunity to participate in the study as they all can effectively contribute to the study by providing a purpose when collecting the qualitative data. For the students to participate in the study, they were required to sign a form of assent and have their parents sign a consent form due to the students being under the age of eighteen. Throughout the recruitment process, it was emphasized that all information used in the study will remain confidential and no information will be held against them. Also, the students were made aware that if they chose not to participate in the study, they could still participate in the Blooket to review for the upcoming exam and their class grade would not be negatively impacted as a

result. After providing time for a purposeful sample to be formed, a total of thirteen students participated in the student survey and five students in the focus group. Data was collected once the students completed a Blooket, as they were now able to provide their personal opinions as well as various perspectives about the pros and cons of the tool.

A purposeful sample of teachers was invited to participate through a department-wide email that was sent to all science teachers asking to participate in the study if they have used Blooket in the classroom. Confidentiality was explained, coercion was avoided, and consent was requested. By asking the teachers who have integrated Blooket into their classroom to participate, saturation was achieved as the data was concentrated with their perspectives. Of the entire science department, a total of five teachers participated in the survey and focus group.

Procedures

Before data gathering began, I received IRB approval (see Appendix A). It is important to recognize that in order to receive IRB approval, students were sent home with consent forms for parents to sign for approval of participation. Then, subsequent child assent was obtained in the classroom with another adult present to witness the assent process. Once the approval was confirmed, qualitative data was collected through online questionnaires (see Appendix B) and a recorded focus group (see Appendix C). The first step began with integrating a Blooket into a classroom lesson that seamlessly fit the content at the time. This was done to prevent any confusion or sense of disconnect from the class with the integration of the study. After the Blooket was conducted in the Astronomy Unit, a survey was provided to the students via Google Forms, asking them about their experiences and perspective of Blooket in the game mode of

"Gold Quest.” After the questionnaire, I conducted a second Blooket in a different game mode called “Battle Royale.” Following this second Blooket, I invited any of the thirteen students to participate in a focus group. The confidentiality of the participation was once again emphasized and coercion was avoided.

A different survey was conducted with five science teachers via Google Forms, which required their consent before the completion. Of those five teachers, three chose to participate in a focus group. All focus groups were recorded with adequate equipment and notes were taken throughout. Once again, a purposeful sample was requested by asking all and avoiding none who meet the criteria without the inclusion of coercion. All forms of participation and data collection for teachers required the prerequisite of integrating Blooket into the classroom prior to the survey and focus group. If not done so, saturation would not be established, and the purpose of the study would have been avoided. With all the data collected from both surveys and focus groups, I was able to collect various perspectives through open-ended questions as well as further develop saturation for the study. It is important to note that all collected data remained confidential by being anonymous as well as only being exposed to myself.

Instruments

The instruments that were used included an online questionnaire with open-ended questions (see Appendix B) that remained unbiased and did not imply a specific perspective. The data was then put on two separate spreadsheets, one from teachers and one from students. The data was then further coded based on the similarity of answers such as those who enjoyed the game and those who did not. Other codes included feelings or sights of sabotage. The focus

group discussions with both teachers and students were guided by a protocol (see Appendix C) and recorded then transcribed. The transcriptions were then uploaded into a spreadsheet and coded similarly to the surveys collected from teachers and students. The combination of the questionnaires and focus group data provided sufficient data to the point of saturation to determine the effectiveness of Blooket. This is because after filtering through the various forms of data and establishing codes, the data obtained was consistent with an overall answer of the problem initially stated. Although, researchers bias may be included in the study based on the consistency of answers from the teachers' surveys and focus groups.

Data Analysis

After surveys and focus groups were conducted among students and teachers who have used Blooket in the science classroom, the data further analyzed and broken down into various codes. Different codes were established for the student response and the teacher responses as they provided different perspectives of the topic. All information obtained from Google Forms was transferred into a Google Sheet. Again, one sheet was established for the student responses and one sheet was established for the teacher responses. From there, the answers were analyzed, and color coded into similar ideas. For example, student answers that had a positive opinion about Blooket was color coded blue and student answers that had a negative opinion were color coded pink. A similar system was established for the teacher Google Sheet. This code processing is essential during qualitative data analysis because it helps make sense of the data by dividing it into smaller categories that contain similarities (Creswell, 2012). The transcripts for the student and teacher focus groups were coded in similar ways. While the positive and negative opinions

were noted, the specific portions of Blooket that are effective were coded as well. In both the focus groups and surveys, codes were also developed based on the mention of competition in the class.

Data Results

Once codes were established after analyzing the collected qualitative data, three themes were determined from the various codes. The first theme is that gamification is a helpful tool from a student perspective. The second theme is that competition in the classroom is important. The third theme is that only certain aspects of Blooket are fully effective in the classroom. Also, it is important to recognize that all participants were given equal opportunities to participate in the study.

Students' Perception of Gamification in the Classroom

The first research question inquired student opinion on the use of gamification in the classroom, specifically Blooket. When asking the thirteen students if they found Blooket to be helpful in preparation for upcoming exams, all thirteen students stated that they do find it to be helpful. A few students further elaborated, including student #5 who said, "Yes, because it encourages you to work." Student #5 later mentioned that it is effective because students will not become bored as you are learning. When the students were asked how they felt after playing a game of Blooket, in terms of preparedness for the upcoming exam, all thirteen students answered in a positive manner. Some students, such as student #2 and student #4, stated that they feel more confident for the exam after the integration of Blooket into a science review lesson. A final portion of the coding that really contributed to this theme was when the students were asked in

the focus group to describe the overall feeling of the classroom once the Blooket is complete. The answers had a stronger variation in this question in comparison to the other questions. Rather than a unanimous answer like the previous questions, eight students answered negatively. The answers varied from emotions of disappointment, anger, and anxiousness while other five students claimed to be happy and feel energized.

The Importance of Competition in the Classroom

This theme developed from a code of competitive nature driven throughout games of Blooket as seen in the answers of both students and teachers. For example, when students were asked if restrictions should be put in place to reduce the amount of sabotaging during Blooket, nine students said there should not be any. Student #1 specifically stated "I do not wish that because it helps encourage students to work harder to gain back their points." When teachers were asked if they witness their students obtaining joy from sabotaging their peers, teachers #1 and #2 explain that they do see the students enjoying the review game as a friendly competition among their peers. This theme aligns with the research questions by retrieving answers directed towards the question.

Only portions of Blooket are Fully Effective in the Classroom

Based on the research conducted among students and teachers, an additional theme was established through consistent codes of uncertainty and variations. During the focus group among students, the question was asked to describe their reactions to being sabotaged, nine of the students stated they felt angry and upset. Yet, in the beginning of the focus group all students expressed positive interest in playing the game during science class. Looking at it from a

different perspective, teachers were asked during the focus group if they feel that Blooket is effective. Four of the six teachers explained that not all portions of Blooket are effective. For example, teacher #1 stated "When there are no competitive stakes, the students focus on the review material more and less on sabotaging their peers." In the survey among teachers, there were more variations in answers about behaviors noticed among students during Blooket. Four teachers stated they witnessed negative behavior that included actions such as "trash talking." Two other teachers mentioned the students are engaged and communicating during Blooket.

Discussion

After conducting the surveys and focus groups, developing codes, and determining the themes, the answers to the research questions became more prominent. There was a definitive difference in student and teacher opinions when it came to the integration of Blooket in the classroom. This difference could be to the large variation in maturity and overall intention of integration.

Students' Perspective on the use of Blooket in the High School Science Classroom

Beginning with the first theme of students' perception of gamification in the classroom, students had an overall positive perception of using Blooket based on the data collected. For example, student #5 stated that they really enjoy using Blooket in the classroom as it keeps them engaged when reviewing the material. This connects to the game-based learning theory as students are more likely to be bonded to the material through the engagement of the game (Theory, n.d.). As the surveys and focus groups continued on, about eight of the fifteen questions asked in the separate occasions had an overall positive connotation. The data became saturated as

the answers among the 13 students consistently provided positive connotations such as when expressing their opinions on Blooket, their motivations with Blooket, and their perception of how effective Blooket is for them in the classroom as they are the ones we are trying to directly benefit.

And yet, when I asked the students how they feel after they were attacked or sabotaged, ten of the thirteen students replied with a negative perception. This coding of uncertainty goes into the third theme of only certain aspects of Blooket being effective in the classroom. Student #12 stated in the survey that they were "annoyed because I was close to winning and then someone took that away." Student #7 had a similar answer as to being upset because they earned their points fairly, however a student who did not earn nearly as much stole those points in an unfair manner. As a result, students will become disengaged as they feel the game no longer has meaning (Bastean, n.d.).

Teachers' Perspectives on the use of Blooket in the High School Classroom

Teacher's more specifically voice their opinion on Blooket through the survey conducted in comparison to the focus group. When asked about the likeliness of competition and poor behaviors in the classroom, there was an overall code determined that while Blooket produces competition, and it also produces motivation in the course. As the second theme discusses, there is an importance of competition as it motivates the students to remain engaged in the classroom. Melissa Bond et al. reiterate this phenomenon as they emphasized that the main way to have a meaningful engagement of students in the classroom is by incorporating the evolving digital age upon us (2020). This can be seen with teacher #2 as they discuss that their students often request

to play Blooket “because it is fun for them. They are competitive and enjoy that aspect of it.” However, it is only effective when the competition is healthy. In some cases, teachers mention that this form of competition can lead to trash talking and discouragement. Yet, teacher #5 explains that they have witnessed sabotage occurring among friends, so while the energy may be higher in the classroom, it is only for a moment and does not have a foul intent.

This positive end result can only be created as a result of initially creating a positive learning environment. As Keyes mentions, a student will be more likely to positively engage in a classroom when the students are aware that the teacher is valuing their time and education (2019). If these actions are not taken, the classroom is more likely to lead to a negative environment that does not lead to positive outcomes. Resulting in Blooket being one of the least effective review technology games as not all teachers take into consideration the students' social emotional abilities (Junkin, 2022).

When speaking with all teachers, another great point is brought up again as they question the effectiveness of the various game modes as they usually result in students memorizing the answers without truly understanding their scientific meanings. In other words, the students are not necessarily engaged but motivated to complete the game as they receive satisfaction from winning and sabotaging, not actually learning the content (Barkley &Major, 2020). With this data saturation, the research questions of teacher and student perspective of the effectiveness of Blooket in the classroom are further answered through the developing themes. Thus, both teachers and students find only portions to be effective.

Action Plan

While a majority of the teachers find Blooket to be effective, they all state that it is effective only in a controlled environment. Thus, it is up to the teacher to control that competitive environment into a healthy one. To do so, we must first recognize which game mode causes the most negative behaviors. When asked which game modes typically provoke the most negative behaviors, teacher #1 states that “any of the game modes that are not classic mode. "Tower Defense" always gets chaotic, "Battle Royale" always gets personal. The classic mode at least lets me control the pace and teach as we go.” Knowing this information, I would recommend using a game mode that either does not include sabotaging or using classic mode for those classes that are not mature enough for the competitive nature of the popular game modes. I would also ask the teacher to reflect upon their classroom management. If they tend to raise their voice in response to negative behaviors, which is human nature, recognize this and avoid such occurences. Rather, use the built-up relationships to calmly de-escalate the chaotic classroom (Franklin & Harrington, 2019). As determined from the literature review, I would also suggest integrating a different form of gamification such as Kahoot, as teachers have found that platform to be the most effective (Junkin, 2022). Overall, this was the most common suggestion made by teachers when asked to give recommendations to teachers who may be experiencing consistent negative behaviors when integrating Blooket into the classroom.

This study affects students by allowing teachers to learn how to effectively prepare them in their educational careers and whether or not that includes Blooket. Teachers are now more

aware of student and teacher perspectives through the implementation of Blooket, as well as the surveys and focus groups conducted. This difference in perspective is important as we learned from various levels of education ranging from ninth grade students' opinions to professional collegiate opinions. With this collected data, I plan on suggesting the implementation of Blooket in mature classrooms. This is because it is seen that both students and teachers enjoy the program when there is healthy competition and no malicious behavior. As shown in both the collected data and literature review, healthy competition can be motivating and engaging for the students. Blooket is also intended to be friendly review gaming and less targeted attacks. Unfortunately, malicious behavior may include but is not limited to trash talking and physical altercations, as seen by some teachers in this study. For the classes that are not mature enough to play Blooket games modes such as “Gold Quest,” I plan on suggesting either using only classic mode or a different review game overall.

Conclusion

Gamification is becoming more popular in the classroom as technology is rapidly developing. One of the most requested forms of online games by students is called Blooket which includes various modes of answering questions, collecting points, and sabotaging others. With these variables, I questioned the effectiveness of Blooket. To determine so, my driving research questions were to further understand student and teacher perspectives on the effectiveness of Blooket in the science classroom as they both experience Blooket firsthand but from different viewpoints. After collecting data through student and teacher surveys and focus groups, it can be concluded that students and teachers find Blooket to be effective in a controlled

environment that promotes learning and healthy competition. Most importantly, teachers must closely monitor the classroom environments by not only evaluating the maturity level of their students but their own classroom management skills as well. While we are all humans that are naturally driven by competition, both teachers and students must recognize to what extent gamification can be beneficial in the classroom and when it can cross the line of bringing negative connotations to the environment.

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Appendix A

Notification of Approval

To: Olivia Nappe

Link: STUDY00004282

P.I.: Olivia Nappe

Title: Is Gamification a Blessing or a Curse?

Description: This submission has been approved. You can access the correspondence letter using the following link:

Correspondence_for_STUDY00004282.pdf(0.02)

To review additional details, click the link above to access the project workspace.

Appendix B

Student Online Questionnaire

1. What is your opinion of Blooket?
2. Is Blooket a helpful study guide for upcoming exams? Why or why not?
3. Have you ever been sabotaged by a class member? If so, please explain how that made you feel.
4. Have you ever sabotaged a class member? Why or why not?
5. Do you ever feel that Blooket is a social game more than a learning game? Why or why not?
6. How do you feel after playing a game of Blooket?
7. Please explain how you feel when you have earned the game's rewards and have placed in the top three positions.
8. Do you feel that Blooket is an effective class activity to review for a test? Why or why not?
9. Please describe the classroom environment while the class is playing Blooket.
10. Please describe the overall feeling of the class after they finish Blooket.
11. Overall, does playing Blooket affect the classroom environment, especially for students who were sabotaged?
12. When you have been attacked or sabotaged while playing Blooket, what are your reactions and why?
13. Typically, during what game mode do you see the most sabotaging? Please explain.
14. What is your motivation to sabotage or not to sabotage your peer?

15. Do you wish there were restrictions put in place to reduce the amount of sabotaging during Blooket? Why or why not?

Teacher Online Questionnaire

1. What is your professional opinion on the effectiveness of Blooket as a review game?
2. Do you feel that Blooket is an effective review game for students? Why or why not?
3. How often do you integrate Blooket into your classroom?
4. Do you like or dislike integrating Blooket into your classroom? Please explain.
5. Do your students request to play Blooket? Why or why not?
6. Do your students ever become angry or upset throughout the competition? Please explain.
7. Do you see value in the Blooket program? Why or why not?
8. Have you experienced any negative behaviors among students while playing Blooket or after you finish? Please explain.
9. What types of behaviors have you noticed when your students are playing Blooket?
10. Have you experienced students sabotaging their peers? If so, how does this affect your classroom environment?
11. Have you experienced any negative behaviors or problems while playing Blooket in your class? Please describe them.
12. What recommendations do you have for teachers who may be experiencing negative student behaviors while playing Blooket?

13. Do you witness students experiencing joy through sabotaging their peers? Please explain.
14. Have you ever had a student become discouraged during a game or refuse to play the game due to these targeting features that Blooket offers?
15. During which game mode do you witness the most negative behaviors? Please explain.

Appendix C

Teacher Focus Group Questionnaire

1. What are your opinions on Blooket?
2. 2. When do you choose to implement Blooket?
3. When you announce Blooket is going to be conducted, how do the students typically react?
4. Explain what the classroom environment is like during the duration of Blooket.
5. How do you react when the students seem to become upset with each other during sabotage?
6. Are there specific game modes you do not allow your students to do? Why or why not?
7. What classroom management tips do you have for those who have students with negative competitive behaviors?
8. Have you ever had to end a game short due to negative behaviors? Please explain.
9. Overall, how does the game of Blooket affect your classroom environment?
10. After the game has ended and the top three students have been announced, what is the classroom environment like? Please explain.
11. How do you encourage the students who don't want to participate to join the game?
12. Do you ever propose incentives to motivate the students such as bonus points or candy? If so, how does the classroom environment change?

Student Focus Group Questionnaire

1. What are your opinions on Blooket?
2. When the teacher announces in the beginning of the class that you are playing a Blooket that day, what are the thoughts that immediately go through your head?
3. Do you look forward to sabotaging your peers? Please explain.
4. Do you try to avoid sabotaging your peers? Please explain.
5. Explain what the classroom environment looks like when a game of Blooket is being played.
6. What are your favorite game modes and why?
7. When someone sabotages your game, how does that make you feel?
8. After you have completed a game, do you feel like you have learned information or successfully reviewed for an exam? Please explain.
9. Have you ever left the class upset as a result of an occurrence that has happened during the use of Blooket? Please explain.
10. Is there ever a time where you do not want to play Blooket or decide to quit the game? Please explain.
11. Would you recommend teachers to use Blooket in their classroom? Why or why not?
12. If you were to give advice to students who are new to Blooket, what would you tell them?