Using Video Game Playing to Increase Student Motivation To Read

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Abstract

“How can I get my students to read?” is a question frequently asked by educators when dealing with 21st century students. In this article, I review current literature based around using video games as a pedagogical tool. Topics looked at include the decline of interest in reading, the rise in student comfort with technology, the ability for video games to increase intrinsic motivation, how the larger fields of reading, motivation, and video games form the reasoning for this research, and benefits from previous research. Primary research is also discussed; 20 students from Ohio Dominican University participated in a study where they played the video game *The Hobbit* (2003) to see whether they would be motivated to read the book *The Hobbit* (1937). Due to lack of subject feedback, quantitative results were limited, but qualitative results were found. None of the subjects were regular gamers, but two of the five subjects to play the game and respond to a survey did read some of the book after playing the game. While this is statistically insignificant, it does provide reason to continue research in this field with a re-designed and larger study.
Using Video Game Playing to Increase Student Motivation To Read

Motivating students to read has long been a concern for English teachers in America. As a future teacher of language arts, I want to be able to engage my students in the content and readings of the class while offering them interest in the material. In my student teaching experience, and surely in many other classrooms, students lacked the motivation to read. There are students who are motivated and will read anyway, but a majority of the students are not in this category. So, again, the question arises, “How can we motivate students to read?” The idea driving this study is based on a desire to create interest in reading by using video games to motivate students to read.

Video games have value as a pedagogical tool, and in fact, video game creators use pedagogy successfully in their games (Kebritchi, 2008). Students who regularly play video games are learning, reading, and making decisions with consequences within the game. The game scaffolds their learning as they move through levels and gain mastery of required skills (Gee, 2005). Certainly, if video games and learning are already so intertwined, perhaps we can use them to further supplement the learning of our students.

Literature Review

In the following section I will discuss how different researchers have presented a grounding space for video games, reading, and methodology to come together. I will show how these fields are already connected.

Lack of Reading Motivation

At present, against reading exists for many. Thomas Newkirk (2009), a former high school teacher for at-risk students and current director for the New Hampshire Literacy Institute, describes the stereotypical reader well in his book *Holding on to Good Ideas in a Time of Bad*
Ones: “Reading is represented as an isolated, asocial, pallid substitute for actual social and physical engagement. It’s hardly praise for lovers of books to be called ‘worms’” (p.113). Students could be averse to reading because of the stereotypes associated with it. With students leading active social lives through Facebook and other social interaction websites, the isolation that reading somewhat requires can reinforce the idea that reading is an unpopular, challenging task.

Nancy Padak (2010), a professor at Kent State University and the Project Administrator for the Ohio Literacy Resource Center, believes that students may simply not enjoy reading. “Students who struggle with reading typically dislike reading. Can you blame them? They associate reading with unpleasant experiences,” Padak explains (p. 2). This struggle is an unfriendly one, whereas James Paul Gee (2005), a leading theorist in the field of Game Studies and an advocate for taking learning principles found in video games and applying them to classrooms, says that schools or learning or classrooms should operate like video games where students are “pleasantly frustrated,” creating a “state which is highly motivating for learners” (p. 36). Because so many articles focus on finding a way to motivate students, it supports, then, the challenge of being assured that students actually read what is assigned. If motivation were not a problem that teachers and students encounter in the classroom, it would not receive so much attention.

Declining Interest in Reading

As students age, their interest in reading is likely to decline. The Scholastic Family Reading Report (2008) shows that thirty percent of children ages five through eight identify themselves as high frequency readers, that is reading books every day. For adolescents, only seventeen percent declared themselves high frequency readers. Also, just the belief that reading
is important drops with age. Where eighty percent of five to eight years olds say that reading is very or extremely important, only fifty-six percent of kids age fifteen to seventeen agree.

_Students need quality reading_

Research and experience show that in order for students to succeed in academics, reading is a necessary habit. “Students who receive high scores on reading tests and succeed in other measures in school present high intrinsic motivation to read and often read on a regular basis outside of school” (Knoester, 2009). Reading is a necessary element in a student's education, no matter the age group or academic level.

_Rise in Student Comfort with Technology_

Not only is there a negative view of reading among youth in our society, technology is favored by today’s adolescents. Because of the 21st century student’s familiarity with technology, video games are already a part of their world in some way. Even though students may not own any video games, it is likely that they will have played them.

Megan Glover Adams (2009), a secondary language arts teacher, sees that students are going to technology for their entertainment. “Many students do not consider 'grabbing a good book' quality entertainment. Students look to technology and pop culture for their entertainment, and most of them revel in competitive games” (p. 56). Adams also claims that students are reading more outside of school than in school. “Telephones, instant messengers, blogs, emails, interfaces, websites, online communities, and a host of other media act as students' playgrounds, and high school students have invented new languages to facilitate using those mediums quickly and effectively” (p. 58). Here we see that students are reading, yes, but they lack the quality reading that is assigned in the language arts classroom.
Video games can create intrinsic motivation

Because of certain elements in video games, it is possible to actually experience intrinsic motivation while playing a game. Michele Dickey, an associate professor of Instructional Designs and Technology at Miami University, explains this phenomenon in his article entitled, “Game design and learning: A conjectural analysis of how massively multiple online role-playing games (MMORPGs) foster intrinsic motivation:”

There are elements within the design of [Massively Multiplayer Online Roleplaying Games, or] MMORPGs which foster intrinsic motivation while requiring players to think, plan, and act critically and strategically. The elements of character development and the narrative environment are already present in varying degrees in various instructional design models, however, what the design of MMORPGs offer is a way to frame different types of learning domains within a compelling, individualized, collaborative environment (Dickey, 2007).

Without this motivation, a player would simply put the game away without finishing, much like a reader would put down a book that he or she finds uninteresting. In an article written about the way games are made, Tim Henderson (2010) explains the problem of creating a game that is consistently fun and not over-challenging:

This may be why it keeps on getting reported that most people don't finish most of the games they start playing. This should hardly be a surprise – depending on the genre, a certain title may attempt to entertain its audience for anywhere from six to sixty hours, but it will only take twenty minutes of tedium to turn some people off, and maintaining and spacing interest over such time-frames is a difficult task. Even Valve acknowledged messing things up a little with [Half Life] Episode 1, wherein data collected from Steam
showed conclusive proof that a number of players had simply given up on the game after one particularly notorious difficulty spike. The beautifully paced adventure they had previously been enraptured by had come to a rude halt, and as fun dissipated into a chore, many gamers simply left Gordon to his fate (p. 2).

In this example from the game *Half Life 2: Episode I* (2006), the players lose their motivation when they encounter a part of the game that is above their own level. The producers, Valve, believe that it is their own fault for not “teaching” the player how to move on. Intrinsic motivation is increasing as the gaming world evolves, an absolute when it comes to designing a game. Why, then, could that motivation experienced while playing a game not be channeled into outside content? It is my hope that the intrinsic motivation built up by the game could “overflow” into the reading of outside media, especially a book.

The Urban League of Greater Pittsburgh Charter Schools is currently trying to build a “learning arcade” for after school programs. The curriculum director, Donna Payne, said that, “My big thing for this is motivation, and students today are motivated by video games” (p. 76).

Larger Field of Reading

Within the field of education is the push for more authentic assignments to engage students. The hope is that students will better understand how the materials, assessments and projects are pertinent to them. Likewise, there is a call now to move the teaching of reading away from the scientific method back to a more artful approach (Rasinski, 2009). The call is for authentic texts. Reading is a skill that must be acquired in context. But this authenticity is not enough on its own; there must also be engagement (Padak, 2010). Reading impacts the choices we make in life; played his first video game, *The New Adventures of the Time Machine*, because of H.G. Wells and his novel *The Time Machine* (p. 33). Similarly, Adams (2009), a language arts
teacher, claims that her most useful tool for motivating students in the classroom is popular culture, especially video games.

Larger Field of Motivation

Motivation, and here especially motivation towards reading and the language arts, is another level of the foundation for this research. Padak (2010) was able to find three keys to success in motivating struggling readers. These are: purposeful, authentic reading programs; time for independent reading; and an authentic and purposeful instructional routine. In Padak's case, the authentic and purposeful instructional routine was peer-led literature discussions.

Padak's three principles for motivation are interesting because they easily relate to some of Gee's findings (2005) about literacy principles found in video games. Perhaps purposeful and authentic reading programs can be found in video games where the game is a “virtually authentic” experience. Adams (2001) says that, “When classroom activities reflect students' lives outside the classroom, they are more likely to want to learn” (p. 1). This can be interpreted in two ways when considering video games. The in-class activities can reflect the fact that students play video games and use technology frequently outside of class, or the classroom can integrate video games which contain a “virtual authenticity.” Gee (2005) says to “keep in mind that a game such as Full Spectrum Warrior is a game when [an individual buys] it off the rack, but it is a serious learning tool when a soldier 'plays' the professional-training version” (p. 34).

Padak finds that part of this first key is to provide for high levels of engagement (p. 2). Adams (2009), when tutoring a student, decided to use Neverwinter Nights (2002) because of its reliance on text and written conversation in-game. The student being tutored, though a struggling reader and increasingly self-isolating when reading higher level texts in class, became highly interested and engaged when playing the game (p. 57). Adams believes that Gee's literacy
principle of identity (2005, p. 34) was at work in her student while playing this game (Adams, 2009, p. 57). It was this virtual identity created by a virtual authenticity which allowed the student to become more motivated to read, as well as take ownership of his learning. This reflects Gee's literacy principle of agency, where the players of a video game have a sense of ownership for their progress, which Gee claims is rare in school (2005, p. 36).

*Larger Field of Video Games*

There currently seems to be a movement among technologically-savvy educators towards using video games as a pedagogical tool. This often comes from the idea of engaging 21st century students (Adams, 2009), or studying games and using their successes to identify how students might learn better in a classroom (Gee, 2005). Video games are gaining more and more attention, and as they become more and more commonplace in the lives of students, educators must find ways of relating to the technologically infused lives of adolescents. Research is going on in many different areas concerning video games and their uses in education. Two key areas are bringing commercial games into the classroom (Charsky & Mims 2008; Adams 2009) and creating purposeful learning environments within an “educational” video game (Rosas et al 2003; Faculty 2010; Kebritchi & Hirumi 2008).

*Key Areas of Research to Inform Study*

In this next section of the literature review, I will explore what successes have already been had within gaming in education and how teachers might help students to gain motivation.

*Finding Motivation to Learn*

Dr. Melissa Gresalfi (Faculty, 2010), an assistant professor at Indiana University, helped to create a mathematics unit for Quest Atlantis, an online multiplayer video game. This game is intended to immerse players (students) in educational experiences. As Gresalfi explains, “One
hypothesis about what students are so disengaged in general is that they are actually asked to make very few choices and mostly just follow a lot of directions” (p. 6). Learning motivation here is heightened by choices and consequences. Gresalfi titled her study, from which the mathematics unit came, “Designing for Consequential Engagement: The Role of ‘Push Back’ on Student Thinking.” Gee (2005), the leader in the field of relating video gaming and education, offers insight to the necessity of motivation within video gaming:

If no one could learn these games, no one would buy them, and yet players will not accept easy, dumbed-down, or short games. At a deeper level, however, challenge and learning are a large part of what makes good video games motivating and entertaining. Humans actually enjoy learning, though sometimes in school you would not know it. (p. 34).

Gee explains that players desire to be motivated. The players wish to be challenged and to play just above their own level of current ability.

Kebritchi and Hirumi (2008) summarize how the way in which educational video games are designed is beneficial to the player-learner.

Modern educational [computer video] games are thought to be effective tools for teaching hard and complex procedures because they (a) use action instead of explanation, (b) create personal motivation and satisfaction, (c) accommodate multiple learning styles and skills, (d) reinforce mastery skills, and (e) provide interactive and decision making context (p. 1729).

Video games are not just entertaining the player, and here educational video games (long considered derelict in the world of commercial video games) are considered beneficial and pleasurable, creating satisfaction and providing learning experiences.
Criticism from the field

Rosas et al (2003) address the concerns that are brought forth by parents and teachers when integrating video games into the classroom. They encountered worries about addictive behavior and social isolation. Their study, however, showed the risks to be unjustified, at least within the results of their study: “A drastic decrease of children's preferences for video games during recess was observed, compared to the class period. Second, teachers reported as one of the most unexpected results, its [positive] impact on peer cooperation and verbal interaction” (p. 90).

Other expected criticisms would be the financial possibility in integrating video games into the classroom and possible violent content of certain video games. However, software is already being purchased to engage students and the teachers can prevent within school time the use of games with violent content.

Proven benefits from previous research

Video games have already been shown to effect student's academic performance and general experience. Newkirk (2009), in his book *Holding on to Good Ideas in a Time of Bad Ones*, explains how popular culture, especially video games, have taken hold of the students.

Almost all of the boys I interviewed were active video game players. Even this who did not have a Playstation 2 or a GameCube at home would play them at a friend's house. In fact, there was such a fluid transition from movies to video games that I was often confused if they were referencing to *Star Wars* or *Lego Star Wars; SpongeBob SquarePants* the movie, the television show, or the video game. Given this immersion in video games, it is not surprising that they would take on features of video games in their
writing and they would produce texts that traditional writing workshop approaches are unprepared to deal with. (p. 99)

Newkirk says the students are “immersed” in video games. But this immersion has spurred the students to write narratives that pull from the narratives in which they are immersed. In this case, video gaming has caused a positive academic impact on the players.

Summary

Video games, motivation, and reading all show that they are interconnected within recent research done concerning how to better engage students. Moving into the 21st century, the classroom environment must somehow reflect the environment of the real world. By using a video game to engage students and hopefully increase the interest in reading a book, students’ activities in a classroom can imitate their at-home activities. It is largely agreed that students benefit from video games when used as a tool in the classroom. The hope of this research is to use the video game as a foundation from which to build up to engaging in a written text, and when the student has already created identity, taken ownership of, and interacted with the video game version of the primary text, the players can then tunnel their motivation and engagement towards reading.

I wanted to test this theory of using a video game to increase student motivation to read. The preponderance of this paper is a discussion of methods, data, findings, and limitations of my study.

Methods

Subjects

For the experiment, a convenience sample of ten undergraduates from Ohio Dominican University was asked to play the game The Hobbit (2003). My advisors and I decided that a
convenient sample would be best due to the time in which the experiment had to be completed. The process of recruiting minors to participate, as well as attaining parental permission, was too time consuming in order for the experiment to be completed. These ten ODU students were the experimental group for the study. Ten other students were part of a control group who did not have exposure to the game. The researcher simply asked fellow students if they would be willing to play a video game and then fill-out a follow-up survey a week later. The students volunteered to play the game.

Apparatus

The game, *The Hobbit* (2003), and game system, Nintendo Gamecube, were put into a relatively isolated room in the library at Ohio Dominican University. The system was connected to a television, and one controller was provided for the player. The game was available for three days; the subjects could play the game on any of those days for 30 consecutive minutes.

The game *The Hobbit* was selected due to it's reliance on narrative, as well as its base in the novel *The Hobbit* (1937) by J.R.R. Tolkien. This book is relatively available at any library and even perhaps on a home bookshelf. With the recent popularity of the *Lord of the Rings* Trilogy, most students have heard of *The Hobbit*.

Stimuli

In the experimental group, each subject played the game *The Hobbit* for 30 consecutive minutes, once, during the three available days.

Procedure

Each subject in the experimental group was asked to sign his or her email and record the time played after completing the 30 minutes of playing. Both the control and experimental group were given questionnaires one week after the research study. The survey was given online, using
Google Docs, in order to assure anonymity. Through Google, I was able to make a form containing the questions below. The answers to these questions were automatically plugged into a spreadsheet so the author might be able to see a layout of the answers. The questions on the survey were as follows: Did you play the game *The Hobbit* for this research study? Have you played the game *The Hobbit* before this research study? Have you read the book *The Hobbit* since the research study? If yes, what motivated you to read the book? Have you read any media dealing with *The Hobbit, The Lord of the Rings*, or any J.R.R. Tolkien work since the beginning of this study? If yes, what motivated you to do so? Have you ever been motivated to read because of a video game? If yes, please explain. Have you ever been motivated to read because of any type of play? If yes, please explain. How often do you play video games? Do you have one or more gaming systems at home? The results were collected in a spreadsheet on Google Docs.

*Results*

Only nine students (5 of the experimental group and 4 of the control group) completed the survey. The size of the sample prevents the researcher from being able to use a quantitative measure to examine the data. The researcher intended to use a Chi Square measure to show a comparison between those who played the game and the control group. Instead, the researcher used a qualitative measure of a comparative method where he examined the answers given in the survey and compared them with ideas present in the literature survey, particularly Gee's idea of gaming and literacy and Adams's idea of motivation.

The answers provided by the students to the questionnaire allowed some results. One subject had the following response about being motivated to read: “Actually doing things has made me want to read: going hiking or biking has made me want to read about adventure;
playing soccer or baseball made me want to read about soccer and baseball, etc.” This supports previous research that play is motivation for reading. Through the activities of this subject, identity dealing with the specific activities was created, which led to self-motivation to read about the areas of interest.

Qualitatively, it is important to see that out of the five students who played the game and responded to the survey, two of them did read at least some of The Hobbit. It is not clear from their responses whether playing the video games had a role in this, but this is justification for running this experiment again on a larger study. From the nine subjects who answered the survey, none claimed to play video games on a regular basis. The most often any one of them played was “less than one hour a month.” If the player were to be a regular gamer, then perhaps the result would have been different. The subjects, being less likely to play video games, are surely less likely to be impacted by playing for 30 minutes. The player must really be allowed to 'get into' the game, and according to Gee (2005) and Adams (2009), create identity through the video game. To address the theory that playing a video game can give the player motivation to read, one subject who answered that he had been motivated to read by playing a video game before said: “If the story gets you into the adventure and captures your imagination, it can make you read.” This correlates with Adams's theory that if a player becomes engaged and interested in the game, through imagination and the interactivity which is the adventure, reading can be a result.

Limitations

If this study were to be run again, there should be a longer time over which the subjects play the game. Also, the book should be given to every subject in both the control and experimental groups. I think it would be best if the students would be required to complete the
game. Rosas et al (2003) described a classroom being more motivated when students played an educational game and were encouraged to socialize about the game, and help one another out. I think it would be beneficial if the subjects in the control group were encouraged to communicate with each other about the game during the experiment, perhaps by playing all at the same time, in a central location. Finally, there should be a wider age-range, regularity of playing video games, and reading abilities within the subjects.

Discussion

Due to the lack of completion of the survey by a majority of the participants, the results of this experiment cannot be used as anything more than a pilot study. Statistical analysis would be inconclusive. However, I do think that there are enough results to say that this “has a chance.” While only one subject who responded to the survey saw in himself a correlation between play and reading, the question concerning play was misunderstood by another subject, pointing out that the survey in this case was unclear to the subject. As the primary researcher, I cannot say that this experiment is conclusive in either a positive or negative way. The hypothesis is still unproven. I do believe though, through outside research, that this theory is testable and can be proven to be true. It is worthy of more and larger studies than mine.
References


