Using Gaming to Motivate Today’s Technology-Dependent Students

A Review of the Article

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Author Note

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Video games are not just for the pimply faced teenage boys perpetuated by popular culture. Rather, video games are becoming more and more ubiquitous in society. Many who would have scoffed at video games as being too “childlike” and not for mature adults are playing games now in record numbers (Warman, 2011). Games are not just restricted to the couch and television or the chair and computer. Games are mobile on a device personal to you. This means you can play games at your own pace, when time allows, and anywhere. Games are consuming more and more hours of free time in American society. But, when it comes to school, the same tired traditions exist. “Get out the textbook, read this section, answer the questions or work through these problems, raise your hand if have any questions, test on Friday.” Is this how we educate our more connected society? Should educators adjust their curriculum to be more palatable to the particular learning styles or interest of the students? This paper will argue video games can be a motivating force for technology dependent students, thus causing students to use skills in the virtual space creating meaningful learning opportunities.

The world has changed, although many would consider that statement to be trite (and it often is) as it applies to our learners in the classroom. Students these days are inundated with all types of media for much of the day and satiated by technology before bed. Often media is consumed on computers, cellphones, tablets, eBook readers, etc. But when they come into the classroom, the mechanisms to teach content have not changed much. Teacher led lectures and rote memorization of facts are more often than not the norm. As a result, students are bored and unengaged. This means students are missing key opportunities for learning in the school day. Marin Petkov and George E. Rogers from Perdue University argue, “K-12 educational systems need to incorporate the use of technology to accommodate the technology-dependent students of
today. The use of video games in the classroom may be a method to motivate today’s students” (Petkov, 2011). This is a key point of their position- the idea of motivation. We need to hook our students, get their attention, and video games could be the answer. But the real question could be the lack of “play” in the school day. There has been significant research in the benefits of play in especially young learners. Through play learning, students learn creativity, abstract thinking, problem solving, communication skills, new vocabulary words, emergent literacy, and encourage students to take risks, among many others (Singer, 2005). The argument presented Petkov and Rogers did not examine this aspect of the play research, rather using video games due to their popularity into popular culture.

Companies catering to the education industry have seen the popularity of video games and have begun to create video games for the classroom. The problem, in short, these companies have missed the mark. They are focused still on pushing content to students rather than using what makes a game truly engaging- creating things and problem solving. Research also suggests when games are more appealing to students due to their problem solving and creation based tools in game students have seen a forty percent increase in students learning over traditional lecture based instruction (Petkov, 2011).

The problem is the “magic bullet” dogma present in education. For this particular context, it is the argument that since students like video games, students learn best from things they like, we could create educational video games, and all students will learn because they like video games. Petkov and Rogers claim, “Educators are focusing on shoving the educational content in a game by sacrificing the gameplay and engagement. The idea behind this way of thinking is that if the educational content is in the form of a game, this means that it will be
appealing to the students. Serious (educational) games created with this mindset are unappealing to the students” (Petkov, 2011). New technologies such as virtual reality and augmented reality will change the industry organically. With virtually reality (VR) becoming more and more of a cheaper and more accessible technology, companies are going to have to create more meaningful content to stay competitive. The point and click of computer games, rote memorization of facts, and lower level thinking in educational computer games (not all fall into this category) will not work in effectively VR. In VR, one must create something, explore a world, problem solve, and is completely and truly immersed in the world presented to them. Students could work together and create their own experiences instead of being lead down a path an aspect common in most “serious” video games created by education companies. Although these findings are anecdotal, it is important to note American students do not perform as well as students in other countries especially in science, racing, and math (Shepherd, 2010). Could video gaming get us back on top in the world?

I personally believe the industrialized education in the United States lends itself to students being disengaged from the classroom and unwilling or questioning going to upper level institutions for continuing education. Also this paradigm reinforces the low level quality of educational video games. Why is it so hard to create a experiences in video games students playable, palatable, and engaging for students. Games such as Assassin’s Creed though not suitable for younger learners, have shown developers that gamers are interested in being immersed in a historical time period. In this case, the Italian Renaissance (Osb erg, 2014).

Topics which may have been uninteresting to students can now have new life breathed into them through play. It is going to be interesting to see how these old paradigms of education change,
how education will moved from rote learning to learning through experiences. Will VR be the “magic bullet?”
References


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Abstract

In the past several decades, technology has become a big part of American society. It has changed the way people interact with one another as well as how they proceed with everyday life. However, K-12 educational systems have been resistive to change, with most American schools still using traditional instruction in the classroom, consisting mainly of lectures and textbook readings. Lectures are focused on the teacher with minimal student interaction in the discussions. Research has shown that outdated traditional instruction does poorly in motivating the students. However, motivation is a very important factor in academic success. This paper will talk about the use of games in the classroom to increase the students’ motivation.

Introduction

Technology such as cell phones, computers, and the Internet, which once were considered luxuries, are now an essential part of society (Adada & Styron, 2008). According to Escobar-Chaves and Anderson (2008), American youth spend an average of six to eight hours a day using these types of technologies. Technology has changed the way people interact with one another as well as how they proceed with everyday life. The world is changing to accommodate the new way of life but K-12 educational systems have been very resistive to change and still use traditional instructional methods in the classroom (Pannese & Carlesi, 2007).

As noted by Heck, Poindexter, and Garcia (2000) traditional instructional methods consisted of teachers providing lectures and students completing textbook readings. The authors go on to explain that these lectures are heavily focused on the teacher and there is minimal student interaction in the discussions. Prensky (2004) noted that traditional instruction methods lack the motivational incentives needed to keep today’s students engaged in the instructional content. Today’s world and today’s students are vastly different than the way they were a few decades ago. Educational methods that have worked on past generations of students are not as effective for today’s technology-dependent generation (Pannese & Carlesi, 2007).

If the way students interact with the world has changed, why is the educational system not changing? K-12 educational systems need to incorporate the use of technology to accommodate the technology-dependent students of today. The use of video games in the classroom may be a method to motivate today’s students. These types of games are known as “serious games” whose primary goal is not entertainment, but instead to educate the user (Michael & Chen, 2005).
with their fun and engaging gameplay. However, it is not as simple as merely inserting a video game into the classroom as instructional aides. These serious games have the capability of providing the needed motivation boost. This paper is to use video games, which have become a popular source of entertainment for today's youth, into the K-12 school is needed to accommodate the technology-dependent generation. A possible solution proposed by the Internet, and video games have become the main source of information and entertainment for today's youth. This dependency on technology has made traditional classroom instructional activities such as one-way teacher lectures, textbook readings, and written homework assignments less effective. A different instruction approach in the educational system is obsolete. According to Annetta, Murray, Gull-Laird, Bohr, and Park (2006) K-12 schools are lacking the instructional technology in their curricula which students have grown accustomed to using in everyday life. Educators need to embrace and use technology in the classroom.

So what type of technology is needed in the classroom instruction to increase the students’ motivation? To be able to answer this question, it is important to look at what technology-dependent students like to do when they are not in school. According to Lenhart, Kahne, Middaugh, Macgill, Evans, and Vitak (2008), the number one source for entrainment of 12-17 year old students was video games. Their study on American teenagers showed that 97% of teens play video games, with 50% of them playing at least once a day. Increasing technology improvements have made video games highly realistic and engaging which appeals to the technology-dependent generation. K-12 students do not want to read books or do homework assignments; they just want to play their video games. The fun, challenging, and competitive nature of video games motivate students to want to play them every day (Prensky, 2004). Educators should be taking advantage of the desire of students to engage with video games. If video games are popular among students, why not introduce serious gaming as part of the classroom instructional methodology?

As indicated by Westera, Nadolski, Hummel, and Wopereis (2008), if done correctly, serious games have the capability of presenting the educational material in a way that is more engaging than traditional classroom instruction. Rankin and Vargas (2008) found that students find boredom in the traditional classroom and that serious gaming can offer a fun and engaging environment. Serious gaming offered the motivational boost that students have been looking for (Rankin & Vargas). The ability to relate to video games makes the students excited about the topic (Rankin & Vargas). The positive results of serious gaming were noted by Mayo (2009). Mayo’s research indicated that instruction with video games yielded up to a 40% increase in student learning over traditional lecture instruction.

However, the current push on serious games focuses mainly on the educational content of the game while overlooking the engaging parts which make the video games fun for students (McMahon& Ojeda, 2008). Educators are focusing on shoving the educational content in a game by sacrificing the gameplay and engagement. The idea behind this way of thinking is that if the educational content is in the form of a game, this means that it will be appealing to the students. Serious games created with this mindset are unappealing to the students (McMahon& Ojeda, 2008). Instead of using the serious games as the main form of instruction, the games should be used as an educational aid with pre-existing traditional instruction to engage and motivate today’s students. The serious games should be developed to align with the content of the traditional instruction. The serious games need to be integrated with the existing curriculum, instead of being just an addition. Traditional instructional methodology will need to focus on the learning aspects and the serious game on the engagement factor which will motivate the students. For a serious game to be appealing, the fun and engagement needs to be in the forefront with the education aspect well integrated with the gameplay and narrative (McMahon& Ojeda, 2008). This balanced instructional method will ensure that the topic is both educational and engaging enough to motivate the students to learn in class.

**Conclusion**

Based on the discussions in this article, there is a problem with the current instructional methods that are used in the K-12 educational system. Traditional instruction is outdated and does not provide the motivation incentives for the technology-dependent generation to achieve academic success. The current generation of students spends a third of their day using some kind of electronic medium (Chaves and Anderson, 2008). Mediums like television, the Internet, and video games have become the main source of information and entertainment for today’s youth. This dependency on technology has made traditional classroom instructional activities such as one-way teacher lectures, textbook readings, and written homework assignments less effective. A different instruction approach in the K-12 school is needed to accommodate the technology-dependent generation. A possible solution proposed by this paper is to use video games, which have become a popular source of entertainment for today’s youth, into the classroom as instructional aides. These serious games have the capability of providing the needed motivation boost with their fun and engaging gameplay. However, it is not as simple as merely inserting a video game into the classroom.
curriculum and hoping that it will increase the students’ motivation and academic success. For a serious game to work, the video game needs to be developed with content that matches the traditional instruction that is being used in the curriculum. The video game needs to be well integrated the same way PowerPoint slides are integrated with a lecture. Serious gaming will give a well-balanced instruction which contains the desired educational material as well as the motivational boost that is needed for the technology-dependent students.

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