

“Kids will probably be more interested and get involved since our generation is all about technology”: An exploration of the uses of video games in history education.

Technology is becoming more and more important in the modern classroom. Many of the new teachers entering service today grew up with the use of the some of the same technologies that are now fully developed and have been integral parts of their students’ lives since they were born. However, many areas of education have not changed much in the past 20 plus years. One of them seems to be the history classroom in the 9th through 12th grades. But, as Brom, Sisler and Slavik pointed out, “Educators and reformers all acknowledge the need that there is a need for further history knowledge and history related skills,” (2009). Thus, it is important to find new ways to reach out to students in this setting and help them to gain the knowledge that they need. The use of video games is one technology that has been looked at in depth in other fields, such as STEM. This technology could be incorporated to be use in the history classroom as well.

There are several figures in this field that believe this is a very good idea and should be looked at more closely. Gee and Hayes are two of those and they said in 2009:

Although the use of PC games in the history classroom might be relatively new, the ideas for these assignments and the theory behind their use borrows heavily from a number of areas and combines different pedagogical techniques. Using computer games allows teachers to recombine disparate teaching threads into something novel that will serve history education in a number of ways.

Thus, it really would not be very complicated to incorporate this technology in the history classroom. Most of the important parts are there and teachers use them already. We just

need to help educators see the values incorporating them all and using them to build lessons based on the games. Thus, I decided to help educators see the need.

This study is the beginnings of just that. The purpose of this study is to look at the interest of different students in using two genres of video games as well as virtual reality within the history classroom setting. The study was conducted using interviews and artifacts to see if this idea was truly a sound one in the eyes of students and the games they proposed to use really did have some historical value in their content. Looking at the use of virtual reality gave a glimpse into the next realm of possibilities for the classroom. I found it important to look at what students might be interested in the future.

Methodology

The use of video games in history education is not a topic area that is a well-researched and thus will make a great place for me to be able to add more to the field. There is information on using video games in STEM courses and this is understandable do to their focus in modern classrooms to improve student test scores, but since all subjects are covered in the time students go through their 9th through 12th grade educations, it is important to find ways to reach them in every class. That is what draws me. Finding ways to reach students at their own level and this generation has grown up playing video games. So, it seems it is a great way to help them understand some complex materials.

Research Question

This research purpose statement and research questions are as follows:

The purpose of this study is to explore the uses of video games in history education amongst high school aged students in a rural Midwestern setting.

- How do the students experience the use of strategy video games in their history classrooms?
- How do students experience the use of role-playing video games in their classrooms?
- What do students think would experience with the use of virtual reality video games in their history classrooms?
- What are students' perspective on video gaming in history education?

Participant Population and Site

I used a study of convenience for this and did my research at places where I can easily have access to students in the 9th-12th grades, although I had to expand my study to students who had just graduated the 12th to have enough interviewees. Since school is not in session I will have to use students that I know through their parents. I have many friends with high school aged students and so they will be who I am interviewing for the 3 interviews. All three of the interviewees were male. One will be entering the 10th and the other 2 are recent graduates. They all live in a rural area in Northwestern Illinois and each attends or has attended one of the local high schools.

The ethnographic make up of this school district is: 59.6% Caucasian, 32.1% Hispanic, 3.5% African American, 3.6% Two or More Races, 0.8% American Indian, 0.4% Asian and 58.6% Low Income Students. This is an economically and culturally diverse school district the students attend which is not very common when comparing to other rural districts within the area. The income levels in this district are pretty similar to other districts in the area.

Data Collection and Analysis

I used two different methods to collect data for this research project. The first was through interviews. I interviewed three different students about how they think the use of video games genres in which they have already play will be effective in history education. Does this interest them? Do the students feel that this will make history a subject that is more perceptible? Many students find history to be a boring topic and so I am hoping that bringing video games to the subject will help to grab their interest and hopefully through the interest process this will prove to be true. I conducted approximately 30 minute interviews with each student. It was important to gather enough information and some of the students did not understand the questions I was asking, so I had to be sure to follow Weiss's guide and particularize exactly what I was looking for to further draw out more detail and gather the right information (1994). I recorded the interviews via my iPhone audio recorder and then transcribed them for analysis. I also used artifacts for this study. The main artifacts used for this study were images from the games that the students talked about and thought that they might have historical value for the classroom. I wanted to corroborate their ideas with images from the games to see if their ideas were correct. I believe that many of the games will have information that could be very useful to educators and being able to see the images from the game themselves might help educators to want to look further into the idea of using these games within their own classrooms.

After I gathered all of the data I used open coding first on the transcriptions of the interviews. After finding some main themes I then used what Emerson, Fretz and Shaw called focused coding to break down my original codes into more focused sub codes

(1995). I specifically used pattern coding by which I was looking for patterns within the sub codes to find common themes. When I completed that I then used triangulation to compare the data I had found from the interviews to the data from the artifacts to see if there were any links.

Researcher Role and Possible Biases

My researcher role in this process was as an insider. I have personally known all of the interviewees for many years, some I have watched grow up from infancy. The site was whatever was convenient for them, so their homes. I had also been to these places many times and was an insider for the sites as well. I don't feel that this biased my data because I was looking for specific information and a lot of the answers that I received I had not known before. My assumptions that the students would have played video games in a classroom might have been biased. I assumed since this was a 1 to 1 student to computer school that they would have more exposure.

Findings

The findings of this study are important to help fill some of the gap in research in the use of video games in history education. Some researchers have looked at using some different games in history education at the higher education level, even ones mentioned by the interviewees in this study, but there not very much real data on the interest of students in these games and how they feel about using them in the classroom. Thus, this study will help to give students a voice as to what and why they would like to use video games in their history classrooms. The main research questions are the first points that are discussed in the findings. The final topic was unique and was not in the original

research questions, the desire of competition between students to help keep them interested in their work.

Strategy Video Games

The first research question is about the students experiences playing strategy based games in the classroom. Students had varying experiences with playing strategy games, however none had played any in the classroom at all. Only one of the students, Alex, remembers playing the classic board game Risk in the classroom during his time in history education. The others had no experience and this is not terribly surprising to me. Even though all of the students seemed keen on the idea of using video games in the classroom setting, it seems that educators have missed the mark on strategy games as a whole. When Alex talked about playing Risk in the classroom he stated that “We also played the old fashioned board game version of risk. This was fun because we got to experience what it would be like fighting and planning World War 2”. It sounds like the use of this strategy game in the classroom was a positive experience for Alex, however it was not using a video game. He enjoyed having the chance to be able to experience planning out battles and playing the role of the general. But, since it was a board game it was not as interactive as it could have been visually. The “countries” on the map in this game are not named to match and specific time period or war. There is no specific cultural relationship to anything going on in the world past or present. The teacher has to add that information in.

On the contrary, Alex did have positive things to say about using strategy video games in the classroom as a concept. He had played several different strategy video games at the time of the interview

Alex: I played Age of Empires, Age of Mythology, I can't remember the name of this one game, but it was a futuristic like Age of Empires.

Tim: Of all those games, which ones, if any have any historical information you can use in history classrooms.

Alex: Age of Empires had the whole, you went through and did various campaigns where you were Joan of Arc or different Roman ones. They had the conquistadors which showed how much more damage they did against bows and arrows type deal.

He made a very good point about the use of the campaigns within many of these games. The campaigns often follow the timeline of history and thus allow the player to experience the life of the leaders' they are playing in the game. They get a unique perspective into what was happening at the time and often some information as to why.

James was very different from Alex in his experience with the strategy video game genre. He was the only person to have played a video game in the classroom, Kahoot, which is a trivia type game. But, he did not have any experience playing strategy games at all. The games that he thought might fit in the genre, League of Legends and Counter Strike: Global Offensive are actually a MOBA (Massive Online Battle Arena) and a First Person Shooter game. Thus, they did not fit into the category and he could offer no insight into playing strategy games in the history classroom.

When I was talking with Scott I got much of the same impression from him as I did from Alex about his views on using strategy video games in the history classroom. He also had not played any of these games in the classroom itself, nor had he played a board game that was strategy based in the classroom. He had played many of the same

video games as Alex as well as a few new ones like Tropic 5, the original Warcraft games, Command and Conquer games and StarCraft. Scott did voice the concern when asked what he thought about using strategy games in the history classroom, he said “I feel like if you try to make people learn with them you might be taking all of the fun out of them.” Which, has been a concern that I was wondering if it would be raised by one of the interviewees before starting this process. I then posed the idea of playing these games via an in-classroom network system which would allow players in the classroom to interact within the games and play cooperatively or competitively. He thought that was a great idea because it would allow for competition within that classroom, which is a point I will show the importance of little later in this paper, as well as allow them to learn more about history by doing so.

In appendix 1 you will find a few screenshots taken in-game from some of the games the interviewees mentioned. Both show different things. Image 1 shows a screen of one of the rulers you play. It gives some cultural information and important technologies that were developed by the people of these nations. Image 2 shows a map of the gameplay of Civilization 5. There are several different empires pictured here and each have different troops and cities. They game even names the cities of each empire names from the real area the nation/empire exists/existed in. Both show the cultural and historical value that could probably be taken and learned by students while playing these games as per the ideas of the interviewees.

Role-Playing Video Games

After talking about the use of strategy games in the history classroom I then asked the interviewees questions about the use of role-playing games in the history classroom

and what they thought about the possible value, if any, of these games could be. While talking with James about his experiences with role-playing games, he said that he had never played any in the classroom at all. But, he had played a number of them during his own free time. The list of games that he had played included Trove, Skyrim, Assassin's Creed and Grand Theft Auto. When asked if they had any historical information that could be useful to the history classroom he said "Well Skyrim is one I can think of kinda... Trove has some mythology in it." When asked if he thought any of these could be used in the history classroom he said no, because they are often too violent. But, I pointed out that often the violence level can be turned down or not focused on to minimize their effects and he thought that could make their use possible.

When Alex was asked about the use of role-playing video games in the history classroom, he also said that he had never had the opportunity to be able to use them in this setting. He had played many of these games of his own volition like James had done. He listed off Grand Theft Auto, Diablo, Saints Row, Bully, Mafia and Assassin's Creed. When asked if any of these games had historical information in them he said "Um, not really. Well, does Assassin's Creed count as one?" To which I answered yes that counted as a role-playing game with lots of relevant historical information. When asked if he thought these games would be helpful to play in a history classroom he said, "Yes, well obviously they make everything more action packed, but the actual history around it, the environments and other things are all good... they would have to focus on things other than the violence." Again, the mention of violence seems to be important and I can see why using these may be one of the fears of teachers and school administrators. This is especially true since Assassin's Creed is rated M for Mature, which means 17 years of

age and older. So, it seems to me that at the very least these could be played by juniors and seniors if the violence could not be toned down enough.

When Scott was asked about his experience with role-playing games in the history classroom, he had also not played any in that setting. Again, he had played a few of these games in his free time. The list that he gave included World of Warcraft, Assassin's Creed, Skyrim, Grand Theft Auto and Final Fantasy. He said that he could see these being used to allow students to go out and explore different places right now and see how things were during the time period that game was taking place.

In appendix 2 you will find images from video games in the genre. All are from the Assassin's Creed series showing various time periods that this game has explored and could allow students to explore. I choose to use these images because every interviewee mentioned this game and thought it would be good for use in the classroom. Image 1 shows Independence Hall in Philadelphia during the late 1700's. Image 2 shows 19th century London. Image 3 shows Paris, France during their revolution. Image 4 shows 15th century Venice, Italy. The final image (5) shows a group of players getting ready to participate in either a cooperative or competitive game mode, which all students mentioned competition as a key to their interest in game play.

Virtual Reality

Virtual reality was a topic that all of the students seemed to think was a great idea for the history classroom. The concept itself is that students put on a headset that allows them to look any direction and see a 360 degree view of the virtual world in which they have been placed. This is a new technology and so has not even had a full commercial roll out yet, but many gamers (the interviewees and myself included) have been closely

watching its progress and awaiting its full release in early 2016. All of the students thought this tool would be a great addition to the classroom and would allow students to see and do things that would otherwise be impossible or cost prohibitive. For instance Alex stated that virtual reality was a good idea:

Because it could bring the student to different times and places that they could never experience. Like after high school for instance they will never be able to experience these things. But, if they can experience them during school that might help to push them into a different career.

Scott went further to add that it would allow teachers to do anything they want to do throughout history. If they really wanted they could even go sit in a lecture of someone famous, although he said that jokingly. James also thought you could see what the climate was like. If you wanted to see what slavery or other bad things in our history were like you could allow your students to do so.

Competition

Talking with students about their experiences in high school and what sorts of factors helps them to stay motivated in the classroom has proven to be I have determined that one of the biggest motivators for student satisfaction in their classroom experience is competition. High school can be a trying time for many students and it is important for educators to know how to reach their students at their level and in ways that grab their attention and keep them motivated. One of the ways in which to introduce competition into the classroom is through the use of various games, with video games being the newest media for this to be used. For instance, James experienced the use a computer game called Kahoot in the classroom:

Tim: So, did you enjoy these games in the classroom?

James: Yeah, it was like a competition.

Tim: So Kahoot is like a competition?

James: Yeah.

Tim: Ah, okay. So it is like a competition or something?

James: Like if you get the answer right, it depends on how long it takes you to get it right depends on how many points you get.

Tim: Interesting.

James: At the end of every question it tells you who is in the lead.

Tim: So, you like the challenge of being in competition with your fellow students?

James: Yeah, it helps us to learn.

James experience competition in this game and he found it to make the learning experience a more positive one. He noted that it helped him and his fellow students to learn more effectively. The challenge of having to try to beat his peers in the game helps to keep it interesting for him and his peers. It also seems to provide them with a way to learn based on others mistakes because they must work to know everything that is needed as well as be able to recall it as quickly as possible. This is also similar to the games which students play in their free time.

Alex, on the other hand, did not specifically have much experience using video games as the catalyst for competition. The games he discussed also helped to keep him involved, but were of a more traditional variety. These games may be something that many students are used too. For instance, one game he mentioned playing was a Jeopardy

like game in his history class. In this game he said it felt great because it almost was like he was “winning real money”, but instead they were being awarded bonus extra credit points for their winnings. He said the competition helped him to feel more involved. He seemed to like the involvement in learning and it made him feel like the time was better spent. The competition of this game is another way to keep students involved in the classroom and thinking about the work they are doing. The whole goal is to help the student to stay involved and to want to participate. When students do not want to participate their learning does not reach the level they need to be at.

Another point of view for this topic comes from Scott. Scott also did not have any experience with video games in the classroom. But, being an avid gamer had the most experience with games of many styles overall. First, Scott talked about how one of the games, an old favorite of many teachers, was Around the World. This game involves answering questions. If you answer correctly you move on and if not you do not move on for that round. When Scott was asked about the games he had played in school he also talked about how his teacher in his history class made a trivial pursuit type game for the class. “When we play games it makes the class better... because I like competition... and it makes the class more fun...honestly, it is anything but a lecture. It could provide competition to keep us motivated”.

Conclusion and Implications

This study has provided some unique insights into what students of today would like from the classrooms they are studying in. It seems that the more technology we can provide to students the more they will be likely interested in interacting in the classroom. It also seems that many students value the chance to see new things and interact with

likenesses of the past so that they can get a more realistic feel for what was happening during this time period. While only one of the students had actually experience the use of a video game in a classroom and that game was of neither genre in which this study was looking at, they all had played some sort of game in classrooms. This can be assumed to be one reason they know they would like to use video games in their classrooms.

Another reason is that this generation of students grew up playing video games and they are a unique part of the way they interact with each other and the world around them. Thus, it is important that we find ways to incorporate this technology so was can reach more students on their own levels.

Only two of the three interviewees had experience with role playing games in their own lives. They seemed very interested and gave good reasons for the use of these forms of games when they were learning. The campaign modes in these games are often designed to do just that. They allow the player to be able to take on the role of a leader of a people and experience what was going on during that point in history. Because this form of games allows students to see the development of time from a larger scale and to control more than just one person, it gives them a chance to see overarching themes within history that might otherwise be hard to grasp. That is a unique perspective and the interviewees thought that the interaction they could have within these type of games with their peers might add more to the experience.

Role-playing games do many of the same things that strategy games do, except students experience things on a more micro level. Students play the role of an individual living during the time period and can move about freely within different buildings, cities and regions to explore what life was like and how people were living during the time

period the game takes place. The one concern the interviewees showed for these games, I also share this concern, is that many incorporate violence as part of the play, but there are ways to work around this such as turning down some of the violent settings, such as visible blood, and also asking students to focus on other parts of the games.

Virtual reality was the final part of the research questions that was found to be significant. All of the interviewees were very interested in the idea of using this new technology for the history classroom. They thought it could bring a whole different perspective from what even video games could offer. The students could actually see with their own eyes a virtual representation of the time period they were placed and move about it in 3D. Because this technology is immersive the feelings and visual students could get would be the most real experience that is possible so far without the ability to travel to the places and times that the teacher wishes them to see.

The one topic that was brought up by all of the interviewees that was not originally part of the study involves the desire for competition. The students, through their experiences in either traditional games or video games have found that this was a way to keep themselves and their peers involved in the learning process. Competition allowed them to feel like they had something more at stake in their learning and they wanted to get as much as they could out of it.

Further research on the use of video games in history education is needed. It would be very valuable to gather more information about the types of games that work in this setting. There are a few other genres that were not discussed in this paper and research into students' interest in their use could be important. We also need to prove the effectiveness of the use of this technology in this setting. Studies to understand the

implications games have on the success rates of students could really help to grab teachers' interest and have them see the value of adding it to their curricula.

The implications of this study for practitioners, such as teachers and administrators of 9th-12th grade students, is clear. Students crave the access to technology that they are used to in their lives. To not heed this call and ignore the needs of their students to have access to the technology they crave is no longer something that educators can ignore. Video games are one great way to be able to reach students through technology. Studies in other fields such as STEM have shown their effectiveness and so now we know that students desire access to this technology in the history classroom as well. Doing so should increase student involvement in their studies and allow them to grow even more than traditional book learning could do. As James said and I quoted for the title of this paper, "Kids will probably be more interested and get involved since our generation is all about technology."

References

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Appendix 1



Image 1 – A ruler in Civilization 5



Image 2 – Example of map in Civilization 5

Appendix 2



Image 1 - Independence Hall in Philadelphia during the late 1700's



Image 2 - 19th century London



Image 3 – Paris, France during their revolution in the late 1700's



Image 4 – Venice, Italy during the 15th century



Image 5 – A team of players about to go on a cooperative or competitive mission

Annotated Bibliography

Brom, C., Šisler, V., & Slavík, R. (2009). Implementing digital game-based learning in schools: Augmented learning environment of 'Europe 2045'. *Multimedia Systems*, 16, 23-41.

This article was very valuable because it gives several main ideas in helping to incorporate video games into the history classroom that would be useful for educators to be aware of. It is important to incorporate game content in ways that students can solve and integrate lectures into gameplay to help provide further guidance. Be sure to help students utilize their information seeking drive to help them gather the needed topics and concepts from the game.

Chuang, T. (2009). Effect of Computer-Based Video Games on Children: An Experimental Study. *2007 First IEEE International Workshop on Digital Game and Intelligent Toy Enhanced Learning (DIGITEL'07)*, 12(2), 1-10.

This study is very important because first it shows that computer game based learning can help to improve students' cognitive learning processes. Further, it showed that students can development and learning can benefit from playing video games. The importance of this data goes a long way to show that using these tools could really help grow our students' minds.

Eseryel, D., Law, V., Ifenthaler, D., Gel, X., & Miller, R. (2014). An Investigation of the Interrelationships between Motivation, Engagement, and Complex Problem

Solving in Game-based Learning. *Journal of Educational Technology & Society*, 17(1), 42-53.

This study showed that competence, interest and engagement were not inter connected. However, self-efficacy and engagement did seem to be tied together. There was also a large increase in ability related to complex problem solving when using game based learning. This study is important to my research because it gives more unique topics that are of interest in showing what is necessary to make video game based learning effective. This also used a different type of video game because it used massive multiplayer online games.

Huizenga, J., Admiraal, W., Akkerman, S., & Dam, G. (2009). Mobile game-based learning in secondary education: Engagement, motivation and learning in a mobile city game. *Journal of Computer Assisted Learning*, 25, 332-344.

This article showed that the use of mobile game based learning can help to improve scores of students as compared to students using regular project based learning assignments. It also showed that students with already high aptitude in history gained more from playing this game than students who started out with an initially lower level of ability. This was surprising. Although my study did not talk about mobile gaming, the comparisons between mobile gaming and traditional PC video games are easily drawn.

Pagnotti, J., & Russell, W. (2012). Using Civilization IV to Engage Students in World History Content. *The Social Studies*, 103, 39-48.

This article is important because it talks specifically about the use of one of the games the interviewees mentioned using in the history classroom. It provides guidance on how to use this game in the classroom. The authors have even come up with some sample lesson plans that were very helpful in seeing the value of the game.

Panoutsopoulos, H., & Sampson, D. (2012). A Study on Exploiting Commercial Digital Games into School Context. *Educational Technology & Society*, 15(1), 15-27.

This study provided evidence to show that commercial video games, such as the ones discussed in this study, could do an equivalent quality level of job in teaching students mathematics. The data showed that students enjoyed the experience and found that the real world implications presented in this game helped them to learn effectively.

Shah, M., & Foster, A. (2014). Undertaking an Ecological Approach to Advance Game Based Learning: A Case Study. *Journal of Educational Technology & Society*, 17(1), 29-41.

This study is useful because it shows some of the key components that are necessary to incorporate video games into a classroom based learning environment and that the results can be positive when these components exist. The necessary components included a teacher that is able to identify and decode the relationship between the game and the learning objectives. It was also shown to be helpful when the administrator and school as a whole was on board with the process. Some of these ideas from others that have been talked about in studies and thus their uniqueness is important.

Wainwright, A. (2014). Teaching Historical Theory through Video Games. *The History Teacher*, 47(4), 579-611.

This article discussed the use of two of the games that the interviewees mentioned, Civilization and Assassin's Creed, in the teaching of historical theory in history classrooms. This article was useful in giving me ideas for how using this games might actually work in a classroom since this teacher had actually done so. The class was given good reviews by the students after completion as well.