Exploring African Student Video Game Play from a Connected Learning Theory Perspective

by

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Abstract

This pilot study looks at the video game play of African students from a connected learning theory perspective. Interpreting the data through the lenses of connected learning theory principles, the findings reveal that learning takes place during video game play. Participants in the study show peer support, interest, shared purpose, academic orientation, and production. These themes or principles from a connected learning perspective describe a learning community. The paper concludes by connecting these principles to other skills used in video games literature to evidence learning.

Keywords: video games, learning, Africans, connected learning

Introduction

Different theories have been used to explain and investigate learning that occurs in video games. Theories such as socially situated learning theory, situated, and distributed cognition theories have shown that players learn and acquire skills during game play that can be transferred from the game world to the real world (Squire, DeVane, & Durga, 2008). Yet, studies investigating video games and learning mostly consider students with western-cultural background to explain and describe the learning that takes place during video game play (Squire, DeVane, & Durga, 2008; Hommel, 2010). Although, the Entertainment Software Association (ESA) in 2013 reports an increasing diversity among video game players in the US, few studies explore video games play among other groups such as African students in US-based institutions. For this reason, this pilot study inquiry concerns African undergraduate students playing a game called FIFA 15 and uses the connected learning perspective to interpret and define the learning that takes place during these students game play.

Video Games and Learning

Research into learning and video games was energized by the works of authors such as James Paul Gee and Marc Prensky. Gee (2003), in his book, argued that commercial video games such as Deus Ex and Arcanum engaged players in reflective practice, complex problem solving and critical learning. Using learning principles from cognitive science, in his observation of his son and drawing on his own playing experience, Gee (2003) demonstrated that video games are learning spaces as they push players to identify and establish relationships, to construct meaning through various modalities (images, texts, symbols, interactions, abstract design, sound, etc.) and not only through words. In the same vein, Prensky (2006) contended that the change in learners that grew up playing video games called for changed in the way people learned. Games in his view are teaching tools, a positive media that should be incorporated into schools to engage learners because while playing, gamers are learning on their own (Prensky, 2006). Examining popular games such as Grand Theft Auto III, Prensky (2006) argued that in video gaming, players acquire skills such as problem solving, language and cognitive skills, strategic thinking, and multitasking skills.

The works of Gee (2003) and Prensky (2006) have excited the educational community and attracted media attention. The fact that students are not always interested in learning difficult things in schools, but are eager to pay (i.e., buy games) to learn long, new, complex and difficult games shows the learning value of video games (Gee, 2005). For example, problem solving skills players develop while playing games are essential outside the game context and for learners in the 21st century (Gee, 2005; Prensky, 2006). Hommel (2010) adds critical thinking, decision making, and intertextuality (i.e., the complex interrelationship between a text and other texts taken as basic to the creation or interpretation of the text) to describe some examples of learning that occurs in the video game play and environment. Game playing has also been proven to promote academic engagement in students by stimulating them to find resources outside the game to help them gain a better understanding of the game storyline (Squire, DeVane, & Durga, 2008). Indeed, investigating the potential of Civilization III to teach world history to American students often alienated from school, Squire et al. (2008) found that participants not only acquired new vocabulary, but were also able to use that vocabulary in their discussions about events related to the game. Gee (2005) goes further to show that principles built into the games by game designers such as customization, well-ordered problems, and co-design (i.e., player participation in the development of the story) trigger learning. Still, most of this study focused on participants with a western cultural background.

However, Ryu (2011) differed from the work aforementioned. The study focused on non-native English speakers and the skills they acquired while interacting in the game with native English speakers. Participants had as first language Spanish, German, French, Portuguese, Chinese or Japanese. Ryu (2011) also concurred with previous studies and showed that participants learned new strategies, developed multimodal literacy, and acquired argumentative and narrative skills while and after playing games with others.

The literature reviewed indicates the learning potential of video game play for gamers. Nonetheless, these studies do not explore video game play among African students and the type of learning that may ensue. Participants in these studies were mostly American, European or Asian. Furthermore, none of the studies used connected learning theory to survey the learning potential of video games. Therefore, the purpose of this pilot case study is to understand the learning that occurs during the video game play of African students enrolled at an American-based university from a connected learning perspective.

Theoretical Framework

This study draws on the principles of connected learning theory. Connected learning is a developing educational approach that recognizes that learning happens everywhere (Ito et al., 2013). Connected learning takes advantage of the digital age opportunities to make learning more engaging and relevant for students by linking their interest to a community of support and to academic topics (Ito et al., 2013). Connected learning is guided by the following major principles: interest-powered, peer-supported, academic performance, production-centered, and shared purpose (Ito et al., 2013). Although still developing, this approach to learning was useful to examine learning in video game play because it attempts to define learning in the age of digital media, while building on previous theories such as constructivism, constructionism and sociocultural theory of learning (Ito et al., 2013). In other words, this theory takes into consideration the various contexts, demands and environments of the 21st century learners.

Research Question

To add to the literature on video games and learning, this study investigates African students playing FIFA 15. This research was guided by this main question: what practices and behaviors in this community of players reflect connected learning principles? To understand learning experiences in this group of gamers, this case study draws on connected learning to focus on participants' interest, academics, production, shared-purpose, and peer support.

Description of the Game

FIFA (International Federation of Football Associations) is the world's governing body of the most popular sport in the world, soccer. Soccer has an estimated 3.5 billion fans around the world in the four continents (Africa, America, Asia, and Europe). FIFA 15 is part of the association simulation video game series started in 1993. FIFA 15 was ranked among the top 10 selling video games in United States by the gaming analyst group NPD in 2014 (Matulef, 2015).

The exact number of people playing FIFA 15 is not known, yet it can be assumed that there might be at least a million of individuals playing FIFA 15 around the world. FIFA 15 gives gamers the ability to experience the professional players and managers' soccer world (Sharp, 2015). Indeed, video gamers can play against or with their favorite soccer player, team and club.

Methods

A qualitative case study approach was chosen because it allows the research to gain an in-depth understanding of the situation, interactions, sentiments and behaviors occurring in a specific context or process (Woodside, 2010). In addition, case study allows the researcher to conduct micro and meta-level studies, to obtain more holistic analyses (Qiu & Yang, 2010). While the purpose of this pilot study was not to develop generalizations, this study aims to describe the type of learning occurring within a community of FIFA 15 players; hence providing insights into the learning experiences of African students' video-game players.

Participants

This case study focuses on a group of African students enrolled at a top-ranking university in the US who gather to play FIFA 15. Participants are from Nigeria, Cameroon, Liberia and Soudan. The selection of participants was in large part due to the limited number of African students playing games at the chosen university; and this group of players was, at the time of the study, the only African students' video-game players known by the researcher. Four participants from the community of players (refer to here as We Game Ensemble in this article) were selected for semi-structured interviews using a snowball sampling method. With regard to gender, all participants were male undergraduate students enrolled in the same college. Names used in this paper have been changed to protect the privacy of participants in the study.

Data Collection, Analysis and Results

The data were collected through semi-structured face-to-face interviews. The interviews were transcribed and coded to identify content that matched the connected learning principles. The following paragraphs discuss connected learning principles and their application to WGE participants. The results of this study are organized according to the connected learning theory principles. Thus, data from the semi-interviews were explored in light of the following five principles of connected learning: interest-powered, peer-supported, academically oriented, Shared purpose, and production-centered.

Interest-Powered

The interest-powered principle refers to the learners' interest. This interest can be intrinsic or cultivated in a context that allows for different interests to develop, for diverse identities to exist, and for "personalized learning pathways" (Ito et al., 2013).

Interest in soccer is what brings WGE members together. Most WGE members are from countries where soccer is the most popular sport and is viewed as the only sports that unite all members of the society: rich, poor, women, men, children, able and disabled. WGE is important for members because they often do not find people who share the same interest in their local communities. As one member of the community, Henry, points out "soccer is part of my culture, it's my identity". Alfred further says that "I played soccer in my country. In high school with my friends; soccer was part of my life; we had teams and competed. I was a good player. Here I can't play like that anymore, so I play FIFA 15". William, in the same vein, states that:

> FIFA was an easy game for me to learn because I love soccer and I was a soccer player; I already knew the rules and did not need to learn them anymore. I play NFL and NBA2K sometimes, but it takes so much time to just learn the rules.

WGE community is also important for members because they can, to some extent, reproduce the competitive-soccer environment they experienced in their country of origin. For Mathew for example, the community is important because "I have always been a fan of FC Barcelona, and Leonel Messi is my favorite player; Louis is a Chelsea fan. We like to play against each other in our favorite teams".

Predictions are an important part of FIFA and vital to countries' or continents' champions league as they attract new type of soccer fans sometimes only interested in gaining points, prizes and the fame related to every correct prediction. In WGE community, anticipating the premier league semi-finalists, finalists and even premier league winners of the English, Spanish or German soccer championship as well as the finalists and winner of the EUFA (European Union Football Association) Champions League is part of the community's routine. Forecasting plays a supporting role in the community since it allows members to connect the game FIFA 15 to the actual competition, but also to gain some prestige even if they are not expert at the game. For example, members whose predictions are correct often enjoy some sort of recognition in the community.

Peer-Supported

This principle refers to the spheres of peers, community members, or mentors with the similar interest and/or who support the learner in his/her pursuit (Ito et al., 2013). Hence, WGE members are not all experts at the game. However, the group provides mentorship and support to "newbies". The following statement from Samuel who joined the community not knowing how to play the game supports this principle: "I did not know how to play the game; the first time I came, I watched them play first, then Henry gave me the controls and taught me how to play. Now, I can teach others". Henry who is considered an expert at the game adds that:

> when someone joins the group for the first time and does not know how to play, we have him often play with someone who is either an expert or not a" newbie" for him to learn. During this time, he usually cannot participate in competitions we have with other players online until he gains some level of mastery. But it happens sometimes that one of us gets tired or when we notice that we have a considerable advance on the other team online, we can have the newcomer play for a couple of minutes to have a feel of the competition and to partake in the excitement.

WGE members argue that FIFA 15 is a good means of relaxation after a week of stressful courses. FIFA 15 is a means to connect with others and talk about news related to the continent and soccer. In other words, the community or the space created around the game has become an environment where members learn and share information about their continent of origin, their favorite players, teams, and leagues. In this regard, Guy declares that:

> … while playing we also talk about what is happening on the continent; we talk about African politics. We discuss politics and share our dreams or goals for our country. You know, it is almost impossible to know at all times what is going on; what is happening to Samuel Eto'o; but we have guys who specialize in the British premier league for example, in the Brazilian team, Barcelona, Didier Drogba or other African players and teams. They often have the most updated information about that league, team or player and when we get together you learn much more about the latest happenings in the soccer world than if you were to look up online all this information by yourself.

Interesting in this group is also members using words such as "friendship" and "brothers" to describe the peer-supported experience in the community. This can be found in the declaration of Souley who has been with the group for two years now:

> FIFA 15 has brought us together in a very unique way. We are a community of friends and brothers and we get together not only to play FIFA, but also to eat out and study. I will say that FIFA has strengthened our relationship in a very different way. We share an apartment with all players because we always leave the door open to ensure that every member of the group can come in at any time and play even if he does not leave with us. Members of the group also receive assistance in aspects such as finding an apartment or transportation from other member of the community.

Academically Oriented

Hence, this principle in connected learning means relating or establishing a connection between peer interaction, interest and the academic performance of the community. The interest of members and the interaction/support among members should translate or fuel academic success. In the case of WGE, this principle can be identified when members address concerns about balancing FIFA 15 play time and studies. Besides their African origin (first-generation immigrants), in their majority, members of this community belong to the same college or department. While playing FIFA 15, in addition to the topics previously mentioned, members discuss course selection, create group studies to collaborate and set time to meet in the library to work on assignments. Louis describes the relationship between WGE community and his academics as follow: "you know, Francis is really good at programming. When it comes to computers or anything related to it go to him; he is the expert. We will work in the library before going home to play FIFA". Henry adds that "we always study together, except for Cyril who is in a different major and studies alone. Still, we are always together in the library". These statements can relate to academic performance principle since within/through the community members identify "experts" in challenging subjects. And just as in the case of "newbies" taught by the expert at FIFA 15, the expert-Francis- works with members of the community less competent in computer programming. And additionally, members during game time do not only discuss soccer, but also academic related matters and develop strategies of success such as group studies and collaboration. In this regard, members' interest in soccer (FIFA 15) and "peer-culture" activities are linked to academic subjects.

Shared Purpose

In connected learning environments, participants and peers who share the same interests contribute to a mutual purpose. Members of WGE depend on the collective effort of each member to keep the group alive. Playing with another member is a way to work collaboratively and to participate to the group's life. Players who play against each other for example or against an online team are sometimes watched and cheered by other members of the group. In addition, each member has the responsibility to be informed about the latest development in the soccer world, the schedule of matches of the preferred teams, and about the additional features of the upcoming version of FIFA 16.

Production-Centered

Production-centered points to the experiential nature of connected learning environments as learners create, experiment, circulate, remix and use media to comment (Ito et al., 2013). WGE produce knowledge through their analysis of soccer-related information, and by sharing news they critically analyzed with other members. Members stepping up to teach new members as well as using the information they gather online to predict winners of actual championship around the world are examples of production. Interestingly, members enjoy the virtual simulation of the EUFA Champions League to confirm or to challenge the supremacy of a character in the game (e.g., Leonel Messi or other famous soccer player in the world).

Discussion and Conclusion

This case study analyzed the experiences of students engaged in interest-driven activities in an informal setting through the lenses of connected learning principles. The results indicate that each member of WGE learns the importance of knowledge sharing and the practical meaning of the word expert. Being recognized as an expert of the British premier league means that the member is up-to-date with the latest development in the league. This requires research skills and the ability to filter and summarize information. This pilot study also shows that participants who engaged in interest-driven activities learn. For instance, participants in this study, driven by their interest in soccer/FIFA15 engaged in other activities such as creating group studies, or researching information on specific leagues and in the process built their research skills. This case study exhibited some of the major principles that define a learning community according to connected learning theory. In this view, this study supports previous study demonstrating that video games trigger learning and can be learning tools.

This study also shows that even in an apparently unstructured environment, when students have an interest in the activities they involve in, there will be academic orientation, or what Squire et al. (2008) call academic engagement. In terms of skills identified in the video game literature such as critical thinking, problem solving, creativity and collaboration, they could be found in and/or matched to the shared purpose, peer supported, and production oriented principles. Video games are learning spaces and activities that are driven by learners' interest promote learning. However, more studies are needed to investigate learning through games from different perspectives and among participants from non-western cultural background.

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