

**Making Connections:
An Investigation into the Motivation of Gaming and Learning**

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Introduction

Online games and virtual worlds have opened up new opportunities to enhance the educational experience through media-rich immersive learning (Wagner, 2008). It is important for researchers to make the connection between these media-rich immersive environments together with learning and motivation. Online games can range from simple text games to games with complex graphics and virtual worlds with multiplayer interaction. The influence of the online gaming culture on the classroom could have a dramatic impact on the paradigm of the current teaching and learning practices. For when people interact with video games, they are learning in deep ways and game design can leverage deeper learning as forms of pleasure in everyday life (Gee, 2007). The learning experience that happens in these games is usually focused on exploration and activities that both engage and motivate students (Turkay, 2010). Yet there has not been much research conducted on the connection between gaming, learning and motivation and how this can be implemented in the classroom environment.

One of these media-rich immersive gaming environments is called World of Warcraft (WoW). World of Warcraft is a Massively Multiplayer Online Role Playing Games (MMORPG). This particular game has players assume the role of a character in a fantasy world and through quest and experiences achieve higher levels (Blizzard, 2010). There have been several studies conducted on World of Warcraft from investigating the impact of game culture and play (Dickey, 2011) to using communities of practice to explain how people learn from play (Oliver & Carr, 2009) to learning experiences with virtual worlds (Wagner, 2008). Most of these studies have been conducted on adults, who engage and navigate these virtual worlds for enjoyment, yet learning, collaboration and motivation are happening, too.

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This research study will investigate adolescents who play World of Warcraft and how they successfully navigate the complexities of the virtual environment. The study will probe deeper by trying to understand what motivates these young players to persist in completing quest and achieving higher levels of competency.

The primary research question in this study will be how do young players of the World of Warcraft successfully navigate the complexities of the game? There are two supporting questions that will assist in exploring this issue. The first question is framed around the learning, how do adolescent players learn how to complete “quest” and “achieve higher levels” in World of Warcraft? The second question addressed motivation and asks, what motivates adolescent players to persist and move to higher levels of competence in the game?

Rationale/Significance

World of Warcraft is one of the most successful Massively Multiplayer Online Role Playing Games (MMORPG) in the world (Blizzard, 2010 & Yee, 2006). This virtual environment entertains over 12 million of players, from many different demographics, engaging them to learn how to navigate complex situations and achieve high levels in the game. Many people enjoy playing online games and are motivated to play more for the emotional response and pleasure they derive from the experience (Huang & Cappel, 2005). Yet there are not many research studies on how players learn the complexities of the gaming environment and what motivates them to engage in these online games.

Conducting research on what motivates students to engage in and become successful in the game, World of Warcraft might shed some light into how educators could use similar strategies to motivate adolescents to learn across content areas. As educators we must be

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constantly scanning the horizon for ways to teach and motivate students, as John Dewey once said, *“If we teach today's students as we did yesterday's, we are robbing them of tomorrow.”* (The John Dewey Society, 2011)

Theoretical Framework

The two theoretical frameworks that will be used for this study are the New Literacy Studies and the Self Determination theory. The New Literacy Studies is a relatively new tradition that views the nature of literacy as a social practice, instead of viewing literacy as an acquisition of skills (Street, 1997). Video gaming has been described as a new literacy. James Paul Gee describes video games as a new literacy, because game designer uses multimodal codes involving images, actions, words, sounds and movement for players to interpret in order to be successful in the game (Coiro, Knobel, Lankshear & Leu, 2008). William Kist (2007) has some critical thought on new literacy. He wonders how new literacies can fit into how we currently “do” school. He believes that the new literacies instructions that currently exist often only come out of the fortitude of lonely pioneers of new literacies. Knobel and Lankshear (2006) think that if educators engage in...video gaming...they will better understand how new literacies can better be integrated into worthwhile classroom learning. The New Literacy Studies will assist in defining the use of video gaming as a strategy for literacy in the classroom.

The second theory that will help to frame this study deals with motivation. The Self Determination Theory explains that when individuals complete a task, this accomplishment meets their needs and this makes them feel competent or “in control” of the situation at hand. Edward Deci and Richard Ryan at the University of Rochester initially developed the Self Determination theory with research comparing intrinsic and extrinsic motivation (Deci, 1971). The focus of this theory deals with an individual’s behavior based on self-motivation and self-

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determination (Deci & Ryan, 2002). There are three human needs that are stated to be universal, innate and psychological. These needs include competence, autonomy and relatedness (Deci & Ryan, 2002).

The New Literacy Studies will provide the framework that will support this research on how players learn to successfully navigate the complexities of a Massively Multiplayer Online Role Playing Game by addressing the use of new literacies for learning in a virtual environment. While the Self-Determination Theory will help establish the reason of motivation for why players persist and move to higher levels of competence in the game.

Literature Review

Computer games and video gaming has been an area of interest to researchers for the past two decades. In the past ten years, the emergence of the massively multiplayer online role-playing game (MMORPG) has over taken the gaming market (Blizzard, 2011). In these MMORPG's players are allowed to interact with each other in a representation of a 3D virtual fantasy space (Dickey, 2011). One of the key components of the MMORPG is the social arena for the collaboration between players to becoming successful in the game (Steinkuehler, 2006). However, researchers have not explored how players successfully navigate these games either in collaboration or alone. In addition, there are few studies that explore what motivates players to continually engage in these types of games.

As early as 1987, Malone & Lepper explored why gamers are motivated and how this motivation is applied to learning. Hidi and Harackiewicz (2000) conducted research on how intrinsic and extrinsic motivation factors can be combined to optimize academic motivation. They found that if students were first given carefully administered extrinsic rewards to complete

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a task, that there is a chance that genuine interest and intrinsic motivation will emerge. Hidi and Berndorff (1998) suggest that once an activity becomes engaging, no further internalization through conscious, deliberate decisions are necessary, but motivation becomes spontaneous and effortlessly integrated.

Most of the research that has been conducted on gaming has focused on the single player games. Conversely, in the past ten years gaming has become more of a social activity with players interacting with other players in the game or with other peers in the same physical location (Gee, 2003). Researches have overlooked the pedagogical implications of gaming and social interaction, by posing questions on how games play a role in their lives or how games can be used to support learning environments (Squire, 2002). The research on socially situated learning in games is lacking, as it is complex endeavor to investigate.

Oliver and Carr (2009) conducted one study attempting to meet this challenge. They explored the experiences of adult couples that participate in the MMORPG called World of Warcraft. Their objective was to develop a better understanding of what was learned and how it was learned through social engagement. They found that the social learning followed Wenger's model of Communities of Practice. They also confirmed that virtual worlds create an environment that supports learning. They gained insight into the processes of learning from virtual worlds as well as the mastery of content, skills and other outcomes. The study revealed concerns about how the couples manage and balance their time to learn and play the game with other commitments in their lives.

Another area of interest in the study of gaming is the enjoyment factor or what keeps them coming back for more. The enjoyment of participating in online gaming is one of the strongest reasons that affect attitude towards playing (Wu and Liu, 2007). Basically, those who

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enjoy the game and derive emotional pleasure from the game are more likely to be motivated to play more often. But there is little research on the motivating factor that drives these emotions. Turkey and Adinolf (2010) looked at this topic in regards to how the customization of the game adds to the players overall enjoyment of the game, therefore motivating players in continued engagement. They used the game World of Warcraft to conduct their study, because there are many different levels of customization available in this game. In the study, they discovered that it was critical to know and understand the specific audience making the choices, in order to satisfy their experience in the game. It was concluded that more research and a better method was needed to target the understanding of design features, which make the game more enjoyment, and motivating (Turkey & Adinolf, 2010).

Community or social interaction may be a different reason that motivates players to engage in these MMORPG. Dickey (2011) conducted a study on undergraduate students to explore some of the dynamics of play as a component of learning. The study focused on how the gaming culture and the practice of play impacted the student-to-student and class dynamics. The findings show that when these games are brought into the classroom, the culture of the game also becomes part of the learning environment. It is important to keep in mind all aspects of the game, both imposed by the game and the aspects that emerge as a result of the players participation in and around the game. The values that are valorized and marginalized by the game and the players can be critical to the learning. This study raised some intriguing questions for further study about how students perceive play, can play be made mandatory and should we use the word “game” when referring to learning activities?

There has been interest in applying gaming technology to the K -12 educational setting. There is much to be learned about student’s gaming habits outside of the classroom in the form

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of social contexts and practices and how these might transfer to the formal learning environment (Williamson & Facer, 2004). The question then becomes, can gaming interfaces demonstrate the effectiveness of authentic practice within social context in the building of a learning model for adolescent students? These students are accessing more sophisticated digital worlds outside of school and educators are challenged to react to this situation. Games and associated technologies may not make schools obsolete, however educators need to recognize the type of learning that is happening outside of the classroom in these digital worlds and through gaming (Squire, 2006).

This research study will build on the past research while focusing on how adolescents outside of the classroom learn the complexities of the MMORPG specifically, World of Warcraft and what motivates them to keep playing in the World of Warcraft environment.

Methods

Context

This study will be conducted with adolescents who attend a high school and middle school in a suburban/rural school district located in Southern Arizona. These middle class schools were chosen because there are students at these locations that play the Massively Multiplayer Online Role Playing Game (MMORPG) called World of Warcraft. The socioeconomic position of these students allows them to be able to afford the cost of this game, which is about \$15 a month for the membership.

Students at the schools will be asked if they play the game, World of Warcraft. These students will then be asked to identify others at the school who play the game or who are interested in learning the game using a snowball sampling.

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The interviews and observations will take place after school at the researcher's home, because the school computer labs do not have access or the bandwidth to accommodate the World of Warcraft software. The participants will access the game on an Apple computer with a 24" screen for observation purposes. The focus group interviews will also be conducted at the researcher's home away from the gaming environment in comfortable surroundings.

The gaming environment of World of Warcraft is an online mythical, magical 3D world. There are hundreds of realms, which are duplicate areas of play to help with the speed of the game. Player must first choose a realm and a side. There are two sides, the Horde and the Alliance. The players then create an avatar by choosing a race and a class. There are six different races and eight classes from which to choose. The avatar moves through the game exploring the 3D environment. The objective of the game is to complete quest, which are missions or tasks that must be accomplished before moving on to higher levels. Upon completion of a quest, the player may receive rewards to assist them in moving to higher levels of play. The highest level in the game is 85, however there is no ending to the game. Most players have more than one avatar playing in various realms, in different races and classes. Another aspect of the game is collaboration between players to complete raids and gain experience. To accomplish this type of collaboration players join guilds and parties. A guild is a large group of avatars that join together to assist other members on quests. A party is a small group of avatars that unite to attack and raid a specific place in the game. Most avatars are at higher levels when they join a guild or party.

This study will be conducted in both the physical and virtual environments. The researcher will be interviewing and observing the participants in the physical environment.

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There will also be interaction and observation of the participants while they play the game in the virtual environment.

Participants

Participants for this study will be adolescents between the ages of 11 and 17, who are actively playing World of Warcraft. They will be attending the suburban middle class schools in Southern Arizona. To qualify for this study participants should play between 10 to 20 hours a week and have at least achieved up to a level of 30. They should also have joined in a guild (group play) on a regular basis. To deepen the findings of the study, the players should have experienced the game as different characters on the two different sides, the Alliance and the Horde or as characters in a different class.

Participants who are interested in learning to play World of Warcraft will be allowed to join the study. This will be helpful to gain understanding how a “newbie” learns to adapt to the gaming environment.

Data Collection

The data collection used in this study will be conducted in two phases. The first phase will be to observe the participants playing in the World of Warcraft environment. Observation can be conducted in various ways, from the informal, which is hanging around and getting to know the participants, to the formal, which involves systematic instruments like a checklist (Marshall & Rossman, 2011). For this research study only the informal observation method will be used. The researcher will sit behind the participants and observe the interactions from both the virtual and the physical worlds. Field notes will be taken during this time of observation.

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Field notes will consist of detailed, non-judgmental, concrete descriptions of what is observed as the participants navigate the World of Warcraft environment (Marshall & Rossman, 2011). Next the researcher will join the participants in the virtual world to observe and play along with them. Immersion into the virtual world will allow the researcher to really hear, see and experience the reality, just like the participants (Marshall & Rossman, 2011). During this participant observation phase, the playing time will be documentation via software that can record the computer screen. Later the recordings will be reviewed and transcribed for action and language. This technique will allow the researcher to participate freely in the virtual environment without the distraction of taking field notes.

The second phase will be focus-group interviews. A group of 3 to 4 players will be asked questions about their experience in the World of Warcraft game. By creating focus groups among these players a social support network will be built and ties will be formed that will lead to a more candid conversation about the experiences in the game. The purpose in facilitating a focus group is to study these adolescents in an atmosphere that is more natural and relaxed than a one-to-one interview (Marshall & Rossman, 2011). There are some challenges to consider when conducting the focus group. The power dynamics of the group and the control of the conversation will have to be managed by the researcher (Marshall & Rossman, 2011). The researcher plans on recognizing the group dynamics and will gently lead the participants through the process, so that all voices will be heard.

Data Analysis

The data collected from the focus group interviews will be transcribed verbatim and coded into categories based on the patterns and themes that emerge (Galman, 2007). The data

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gathered from the observation field notes will be divided into themes that become apparent as the researcher immerses into the data (Marshall & Rossman, 2011).

The data analysis will consist of peer debriefing, member checks and an audit trail of the field notes from the observations and the transcriptions of the focus interviews (Marshall & Rossman, 2011). For the peer debriefing, there will be a formal review of the coding that has been derived from field notes and transcriptions with another colleague in the field of gaming and technology. There will be an informal review with several colleagues in the field of education and new literacy studies based on the themes and patterns that emerge. The member checks will be conducted through out the process of data collection by asking both the participants and the focus groups questions that help determine if they “got it right”. A final discussion will bring participants together to review the findings. This will allow the participants to clarify their perspectives and insights.

Finally, an audit trail will be conducted based on Lincoln and Guba’s (1985) work in the six categories of information. These six categories include: raw data, data reduction and analysis products, data reconstruction and synthesis products, process notes and instrument development information (p.319). For this study the sources will be observation field notes, interview transcriptions, recorded chat logs, researcher’s memos and recorded game interaction.

A bottom-up approach will be used to analysis the data. The researcher will immerse into the data looking for the most important themes. Then figure out how these themes fit together and discover how these themes and relationships create the bigger structure of the research (Galman, 2007). A traditional and an electronic codebook will be kept to track the researcher’s immerse journey into the data.

Possible Implications

These research findings will give an indication on how adolescents who play World of Warcraft successfully learn to navigate the complexities of the virtual environment. Based on these findings, educators and software developers can work on how to translate the learning techniques used in a MMORPG into the classroom environment. Educators would realize that there is much to be learned from the way student play and interact in the video gaming world (Gee, 2003).

The findings will also help to explain what motivates players to persist in completing quest and achieving higher levels of competency. This information could be used to motivate students in the classroom. The teachers could implement quest into the learning environment and switch from grading achievements to leveling at the student's own pace. As an example, to accomplish a quest or achieve a level students would learn through situated meaning while engaging with the content to complete the task. Finding the key that unlocks the student's own motivation to learn the content might be located inside of these virtual worlds of games.

This study may also lead to other research being done in this area. There are not many studies that link gaming, learning and motivation together for classroom purposes. There is more to playing games than "just having fun" or "killing time". Exploration into these complex virtual worlds may increase knowledge of how to teach and motivate students in both the virtual worlds and in the physical world.

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Appendix

Positionality

I am a newbie in the World of Warcraft arena. I have played this game many times, but I am not at the level where I have earned the respect of other War of Warcraft players. Even though I understand the theme of the game, I am still learning all of the strategies, nuisances and language of playing the game. I am at level seven, which makes me a “newbie”. I will not be accepted as an insider until I am at least at level 30. Completion of the game is 85, and then you can start all over again as a new creature.

I consider myself an outsider of World of Warcraft on several levels. First, I only play this game occasionally. I do not put in the typical 28 to 30 hours a week that an average player dedicates to this game. I am a female and only about 16% of women play World of Warcraft. Finally, I am not in the age range of the target group that I am interviewing. I do find it interesting that the average age of a WOW player is 28!

However, in some ways, I do believe that I am a bit of an insider. I have been involved in the development of 3-D virtual environments since the mid-1980’s. I started playing video games back in the 80’s, but was never consumed by them. I also have children that play all types of games including MMORPG. I consider myself an outsider on the fringes of the insider’s world.

As I observe and interview participants of this study, I will be perceived as an outsider unless I use the language and know the inside strategies of World of Warcraft and be able to demonstrate this in the interview.