

# Warcraft in the Classroom

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**A Meta-Analysis of Developing MMORPGs into Viable Sources of Learning**

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## 1. Introduction

With the recent explosion in popularity of Massively Multiplayer Online Role Playing Games (MMORPGs) over the last two decades, many researchers have been shifting their attention to how these online games could be better used to facilitate learning in the current educational system (Dickey, 2006; Paraskeva, Mysirlaki & Papagianni, 2009). One of the MMORPGs that has received much attention is World of Warcraft (WoW) created by Blizzard Entertainment Inc.; the immense success of the game has garnered much attention as a potential model for future scholastic games. Nardi, Ly, and Harris (2007) make the claim that despite the game's instruction manual being so small, "no one fails World of Warcraft"; this statement opens up the idea that players learn and internalize thousands of game-specific facts through actually playing the game, rather than reading fully comprehensive instructions. Researchers believe that many of the key elements of the game, which include fact-finding, formulating strategies, and learning in-game morals, are strong ideas and concepts that could be well-utilized in the classroom (Nardi, Ly & Harris, 2007). However, the most widely discussed aspect of MMORPGs as a potential learning tool, is the inherent communication and collaboration that takes place with other players inside the game (Nardi & Harris, 2006; Childress & Braswell, 2006; Nardi, Ly & Harris, 2007; Paraskeva, Mysirlaki & Papagianni, 2009; Dickey, 2006; Colby & Shultz Colby, 2008). In this meta-analysis, I seek to corroborate five published research papers on similar subjects to determine which aspects of the popular MMORPG, World of Warcraft, should be appropriated for development of educational games for future potential use in the

classroom environment. I also seek to ask players who enjoy World of Warcraft for its entertainment value, if they believe that the structure of MMORPGs help with the learning process. Furthermore, I would like to learn what other benefits they believe they receive from the game. Together, these two analyzed insights will attempt to create firm evidence on whether the development of instructive MMORPG-based games are, in-fact, a good direction for future educational game development.

## **2. World of Warcraft**

World of Warcraft is a fantasy-based MMORPG, based in the mythical land of Azeroth. As an RPG (role playing game), players create avatars (or virtual characters) and level them up through completing quests, discovering new areas, killing monsters, and killing other players. Characters begin at level one, and by gaining experience, work towards attaining the maximum level (which at this point in time is 85). Players create these characters by choosing a specific race (there are 12), along with a specific class (these impact gameplay and roles within the game, e.g. hunter, warrior, priest). As players level up, they explore and discover new zones, all of which help the player learn about the current state of the “World”, learning about ancient lore and the struggle between the two factions (Alliance and Horde). Many players report that engagement and interest in the game come from more than just the gameplay; players can interact with one another through a small “chat-box” on their screen, providing a rich social aspect to the game as well (see Figure 1). It is through this inter-personal chat that players make friends, trade objects, and learn from others experiences. Initially released November 23, 2004, the game



“World of Warcraft”, “MMORPG” were used in the search functions to obtain studies were on-topic, as well as relevant to this research question. These initially found studies had two criteria that they had to pass in order to be used:

- a. Studies could be no older than eight years old. This is because the game, World of Warcraft, came out in the year 2004. Because technology also increases at an incredibly rapid pace, my chosen studies had to focus on recent developments within the online gaming world. Limiting meta-analyses to recent (5-10) years is a common practice, so that only the latest studies in the field are utilized (Ferguson, Coulson, & Barnett, 2011).
- b. The studies had to include findings that were relevant to learning that could be used in future classrooms. There have been many studies that focus on: the addictiveness of WoW (Peters & Malesky, 2008), how WoW helps with emotional struggles (Yee, 2006), as well as how WoW can play a role in studying the effects of disease/biochemical attacks (Lofgren & Fefferman, 2007). This study requires that the found articles be focused on the potential benefit of utilizing Massively Multiplayer Online Games in future learning environments.

Once a few relevant studies were found, the “References” sections of these papers were looked at to find other papers that were clearly based on the topic of learning within/through World of Warcraft. Again, the key words were the main determinant in initially gathering these other sources. A total of five significant papers were found to be used in this meta-analysis.

### 3.2 Chosen Studies' Methods

In order to study the actual in-game learning techniques that take place as well as what makes the game so enthralling, many researchers utilize participant-observation fieldwork in their qualitative research. In studies on WoW, researchers have created characters within the game to participate in the wide variety of choices that are available to players (Nardi, Ly, & Harris, 2007; Childress & Braswell, 2007; Nardi & Harris, 2006). Explorations into different guilds, factions (one of the two opposing groups players can choose between), classes, and realms help provide a more all-inclusive view of the game and style of play. This type of research allows the researcher to directly witness and experience how players go into the game not knowing much, but then quickly discover large amounts of in-game knowledge through different methods. Another way of learning which aspects of WoW could be appropriated included interviews with players inside and outside the game, as seen in the studies by Nardi, Ly, and Harris as well as by Childress and Braswell. However, for most of the studies, the most important method used was the observations of in-game chat logs. Chat logs were collected by Nardi and Harris in 2006, Nardi, Ly, and Harris in 2007, and by Childress and Braswell in 2007. In all three studies, the chat logs were observed to determine who, when, and what types of questions were asked, as well as when people taught other players.

### 3.3 Players' reflections

Interested in whether players thought they were learning anything from World of Warcraft, or if the game was a viable source of learning, I turned to Blizzard's forums. On

the official WoW forums, players can pose questions, post opinions, or ask for feedback regarding the game. I created a forum post asking players (written somewhat informally, so as to appeal to the player community):

“I've read a few studies suggesting that World of Warcraft or MMORPGs could be implemented into learning systems with a few changes. Others say that WoW teaches can improve social interactions with others.

Do you guys think that World of Warcraft could be used in these scenarios?”

After allowing time for players to respond, I recorded the answers and looked at them for trends, seeking to learn if players thought that World of Warcraft had helped them in a noticeable way.

#### **4. Results**

Results received from my online-forum post were qualitative in nature, citing many different skills, talents, and understandings improved by playing World of Warcraft. Answers ranged from topics of emotional support to typing speed, and improved grammar to improvements in real-life scenarios. Some responses were honest and sincere, while others were obviously in place to troll other participants (trolling refers to trying to annoy or make arguments out of the smallest of comments). There were a total of 33 posts from a variety of different classes, levels, and of both factions.

## 5. Discussion

### 5.1 Building on Success and Shaping for the Future

Educational games in the past have never had the popularity of their entertainment-based game counterparts (Dickey, 2007). Studies into appropriating these games for educational purposes wish to capture the many opportunities for learning and attractiveness that existing MMORPGs possess. Regardless, MMORPGs without modification, such as World of Warcraft and “Second Life<sup>1</sup>”, are already being used in the classroom with much reported success (Colby & Shultz Colby, 2008; Childress & Braswell, 2006). The social nature of the virtual worlds create an environment that sustains cooperation and collaboration between students. Childress and Braswell’s study specifically provides examples where the interpersonal gatherings of students directly relate to cooperative learning (see Table 1). They cite that many effective techniques used in traditional classrooms, can be directly transcribed into the virtual environments. While in virtual worlds, students can easily form pairs for certain partner learning opportunities, and groups of varying numbers of students can be arranged without difficulty (Childress & Braswell, 2006).

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<sup>1</sup> **Second Life** is an MMORPG developed by Linden Lab, launched on June 23, 2003. Residents can explore the world (known as the grid), meet other residents, socialize, participate in individual and group activities, and create and trade virtual property and services with one another.

**Table 1. Cooperative Learning Techniques Utilized Successfully in “Second Life”**

<b>Partner Activities</b>	<b>Group Activities</b>
Think/Pair/Share	Electronic Café
Share/Check	Round Robin/ Round Table
Work/Review/Discuss	Jigsaw
Peer review/ Edit	Discussion Group
Partner Conference	Structured Controversy
Peer Interview	Panel Discussion
Tell and Retell	Debate

Four key adolescent-related qualities that were found to be significant when designing MMOGs (Massively Multiplayer Online Games) or MMORPGs for educational purposes were frequency of play, identification with the (created) character, game type, and gender differences (Paraskeva, Mysirlaki & Papagianni, 2010). These factors all influence and shape the target audiences that the proposed games would be designed for, concluding that to reach the broadest applicable audience, the game should use the structure of a MMORPG. MMORPGs had the greatest fan-base, indicating it should be used as a model for future game design.

## 5.2 Social Benefits in MMORPGs

Collaboration and inter-personal interactions between students as a teaching technique has been researched and advocated immensely by professionals of the field (Gokhale, 1995). There is substantial evidence that working with other students improves information uptake, raising retention times and helping students gain a deeper understanding (Johnson & Johnson, 1986). In World of Warcraft, as well as other MMORPGs, there are infinite possibilities for human interaction and teamwork. Challenges with quests, dungeons, raids, or even figuring out optimal stats for a character often require consultation or cooperation with other players in-game. As there is a certain anonymity within the game, as players are represented by their created avatars with chosen names, players have less inhibition to ask for aid or question why things are as they are (Nardi & Harris, 2006). Collaborating with strangers is easy, as the shared common goal of improving through gameplay helps bring people together (Brown & Bell, 2004).

Interpersonal cooperation within World of Warcraft, specifically, has strong evidence in helping with fact finding, formulating strategy/tactics, and learning the game's morals and ethos (Nardi, Ly, & Harris, 2007). Players easily pose questions and receive answers which contain in-game facts or information to aid in better play styles. These findings have strong implications for future game design. Players learn and internalize facts and lore from the mythical World of Warcraft; however, if a game were created based on real-world events of the past, players would in turn be learning real facts and information from history (instead of fictional fantasy).

### 5.3 Players Views of Their Existing Learning Through World of Warcraft

When asked whether they thought World of Warcraft's structure had potential to be more than just a game, there were many mixed responses. In this particular forum, there were no responses regarding the structure of the game, but viable answers in relation to collaboration and other benefits to their lives due to playing the game. The responses reflected three main trends of benefits that they said that World of Warcraft had increased their mental dexterity, provided emotional support, and improved their view of real-world social situations.

Players reported an increase in mental dexterity due to their gameplay, most likely attributable to the exciting moments within the game. An example of an answer which discussed this aspect is as follows:

It has helped my hand-eye coordination, my strategizing and problem-solving skills, my math (AH [auction house] helps a TON with that). Being an RPer<sup>2</sup> has also helped my vocabulary, my typing speed, and the game as a whole has helped my reflexes and memory-retention, especially with stuff in here like the Ogri'la "simon says" daily quests.

(Dominatori, 2012).

Here, player Dominonari explains improvements received from time spent playing. There were a wide variety of improvements, all of which have improved his active thinking, strategizing, vocabulary, and memory. Other benefits mentioned by other players from this

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<sup>2</sup> Here, "RPer" refers to a player who, when they play, fully becomes the character they play. This includes changing their attitudes, mannerisms, and speech patterns to how they believe their character, if real, would act.

category included: learning proper grammar and punctuation, recognizing patterns, and basic concepts of supply and demand.

Previous researchers have looked into the emotional support (and also dependence) players can receive through playing WoW; this forum revealed many of the same findings. When players face hard times in their real-life, they often cite turning to virtual worlds to cope with their problems. This aspect of MMORPGs is important to note when choosing parts of MMORPGs to potentially appropriate for future educational-games. An example of two different players' reasoning:

WoW has helped me as a painkiller and something to do after having surgeries or being really sick, so there's that. (Ohgodfleas, 2012).

Well, it helped me deal with a lot of past issues, some emotional weakness and dealing with a lot of personal things.. Though that can be mostly attributed to the amazing people I've met. (Arctius, 2012).

Both players admit to gaining some form of emotional support from WoW, despite citing different sources of problems. Player Ohgodfleas cites that participating in the virtual world helps distract from inability to normally function, even claiming the game served as a "painkiller". On the other hand, player Arctius cited his specific form of aid came from his communication with others within the game. Here, the benefits of the social-aspect of World of Warcraft reemerges, helping with emotional support rather than intellectual collaboration.

The final trend that the forum conveyed, were the situational benefits in the social realm. Interactions between players in-game are often direct representations real-world scenarios. Here, player Slainidh explains how an in-game scenario helped her learn a real-world lesson:

I think it taught me a useful lesson - I remember when I started out and somebody asked to borrow 50g, back when 50g seemed like a lot. I did, but then when I asked for them to pay me back, they fobbed me off and then turned right around and asked to borrow more. I wrote that off, then I started noticing in real life when people lent money, even to close friends and family, it rarely ever got paid back, and never in a timely fashion. Lesson learnt - never, ever loan money to anyone. Give it freely as a gift, but never lend. (Slainidh, 2012).

Fortunately for player Slainidh, the cost of learning this lesson was considerably less than if she had learned it through a real-life scenario. The players also cited a previous study they had seen of how WoW could be used to study real-world social patterns or trends. In 2005, a glitch caused an in-game epidemic, which certain virologists studied in order to learn how people acted and how people would react to a real-world epidemic (Lofgren & Fefferman, 2007). Situational simulations in virtual worlds have much lower consequences than the real-world counterparts, adding yet another benefit of MMORPGs which could be utilized in a wide range of educational fields.

## 6. Concluding Statements

Development of new technology is advancing at an ever-increasing rate, as is the scope of situations in which it is being utilized. Specifically, progress in the educational field has been evolving to incorporate new technological techniques in with traditional methods. Researchers are currently working on creating and improving interactive-based learning environments (Winn, 2002), such as MMORPG-based games. Future research in this area of study should include exploration of how the discussed “emotional support” would play into a classroom game. Whether this would help in the learning process or distract from it requires further inquiry. Another topic for future research is how immersive future educational games should be; a balance between addictively in-depth or a shallow storyline, allowing players to detach and focus on other priorities. If educational games appropriated from MMORPGs are to be successful, they must appeal to the widest audience possible.

The ethnographic studies conducted within the “World” of Warcraft revealed a variety of findings related to how individuals come to discover information within the game. The different papers focused on slightly different areas, but all the varied findings clearly tied together. Researchers, teachers, and players understand the significant learning opportunities within MMORPGs, and the varied educational properties of the games have great potential for future use. The compounding findings further strengthen the argument for using the structure of MMORPGs as a basis for future educational games and systems.

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