ABSTRACT
With the constant improvements in gaming technology, ranging from graphics to new types of controllers to faster processors, there is a growing problem of computer game addiction. In order to fully understand this problem, one must define addiction. According to the Center for Addiction and Mental Health, addiction is a psychological or a physical dependence on something [1].

KEYWORDS
Addiction, computer gaming, MMORPG.

LITERATURE REVIEW
In this paper, we will discuss the problem of computer game addiction, one of the most addictive games, and ways to prevent or stop addiction.

Massively Multiplayer Online Role-Playing Games
Game addiction really started turning into a problem with the advent of Massively Multiplayer Online Role-Playing Games, or MMORPGs. While regular games would keep you entertained until you beat it, MMORPGs have no ending, so there really is no reason to stop playing. MMORPGs immerse the player in the world and since there is no way to beat the game, the goal is character progression. Leveling up your character and obtaining better and better armor and weapons is usually the norm in most MMORPGs.

Addiction Questionnaire
Dr. Kimberly Young, known as “the world’s foremost Cyber-Psychologist,” created a set of eight questions to ask one’s self to test for online gaming addiction [2].
1) Do you need to play online games with increasing amounts of time in order to achieve the desired excitement?
2) Are you preoccupied with gaming (thinking about it when offline, anticipating your next online session)?
3) Have you lied to friends and family members to conceal extent of your online gaming?
4) Do you feel restless or irritable when attempting to cut down or stop online gaming?
5) Have you made repeated unsuccessful efforts to control, cut back, or stop online gaming?
6) Do you use gaming as a way of escaping from problems or relieve feelings of helplessness, guilt, anxiety, or depression?
7) Have you jeopardized or lost a significant relationship, or even risked your marriage because of your online gaming habit?
8) Have you jeopardized a job, educational, or career opportunity because of your online gaming habit?

Answering yes to any of those questions could mean that you are addicted. One would think that video games are harmless, but once they start interfering with real life and even take precedence over it, then there is a real problem [2]. Video game addiction has not received
official recognition as a diagnosis in the DSM IV standard [8], but is still a concern for many people.

**Problems with addiction**

One study done on the problems of addiction used a modified version of the formal definition of gambling addiction [7]. 607 8th and 9th grade students where surveyed, and of these 15% where classified as addicted. Of the addicted students, approximately 80% where male. Less than 30% of non-addicted student reported having been in a fight in the past year, while almost 50% of addicted students reported the same. Addiction also correlated with reported arguments with friends, and with teachers. Just as many students classified as addicted reported having a B average as those classified as non-addicted. However, there where 4 times as many F students classified as addicted as there where non-addicted, and far more non-addicted A students than addicted ones. Not surprisingly, students classified as addicted averaged almost 4 times as much playtime as non-addicted ones [7]. These figures are somewhat worrying.

**World of Warcraft (WoW)**

The current king of MMORPGs is World of Warcraft. According to a press release on Blizzard’s World of Warcraft webpage, World of Warcraft's subscriber base numbers more than 8.5 million, as of March 7, 2007, and it continues to grow every day. The expansion pack that was recently released sold nearly 2.4 million copies worldwide just on the first 24 hours [3]. It is often referred to as “World of Warcrack.” Dr. Maressa Orzak, a Harvard professor and founder of Computer Addiction Services at McLean Hospital in Newton, MA, estimates that as many as 40% of the people who play WoW are addicted. She believes that games like World of Warcraft are designed to keep people in the game and that they are inherently addictive [4].

There are dozens of websites just for the purpose of providing support for WoW addiction. The game has a feature where if you type “/played” into the chat interface, it displays how much time you have spent playing that particular character. Some people report that they’ve spent 200 to 300 days played in the game [5]. In 2004, Zhang Xiaoyi, a 13 year old Chinese boy, committed suicide by jumping off a building after playing World of Warcraft for 36 hours straight. He left a suicide note saying that he wanted to “join the heroes of the game he worshipped” [6].

![Fig. 1: A large battle between the Alliance and the Horde](image)

**Is it Addiction?**

According to Weimer-Hastings and Ng, many people who are excessive MMORPG users are not actually dependent on video games [8]. They propose that many of these people use video games not because they are addicted, but because it is the only comfortable social medium for them. This was found through a comparison of MMORPG players and other video game players. The MMORPG players tended to spend far more time playing, but
much of that time is spent socializing. Some MMORPG players who showed long hours of playtime didn’t actually show any of the signs of addiction [8]. This study shows that care must be taken with the definition of addiction.

**Conclusion**

Video game addiction is something we must come to terms with as a society. Whether it is decided to be a read full-fledged addiction, or just a compulsive behavior, it can still cause trouble in people's lives. The problem will not go away either, it will probably only get worse, as designers get a better understanding of what makes consumers want their games. On the other hand, the problem is not as bad as it sounds at first. For many people these games are a social outlet, not an addiction. Video games are an integral part of many people's lives now, and they're here to stay. Let's learn to use them responsibly.

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