

Chapter 4.4

Perspectives from Multiplayer Video Gamers

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ABSTRACT

The purpose of this study is to determine whether multiplayer video gamers perceive that playing video games can increase higher order thinking skills such as motivation, problem-solving, communication, and creativity. Multiplayer video gaming allows participants the opportunity to collectively discuss problems with other players, find solutions, and accomplish objectives. This study was used as a barometer to determine if multiplayer gamers perceived that playing multiplayer games had educational value. This research specifically sought to verify whether multiplayer video gamers perceived that higher-order thinking skills such as motivation, communication, problem solving, and creativity were increased by playing multiplayer video games. The bulk of respondents reported that they somewhat felt there was learning occurring in all of these areas.

GAMING AND LEARNING

Approximately six billion people around the world play computer games (King, 2002), including hundreds of thousands of people who participate in multiplayer online games. Multiplayer gaming is a term used to describe multiplayer online games (consoles and personal computers), video arcade games, and network games (both intranet and Internet). Berger (2002) indicated that most people are surprised when they find out that the video games industry is a bigger business than the film industry. According to the Entertainment Software Association (2003), the video game industry generated \$6.9 billion in 2002 in the United States alone, which was up 8% from 2001. In 2000, video gaming was a \$17.7 billion global industry (Lange, 2002). In 2000, the computer and video gaming industry grew at more than twice the rate of the U.S. economy (IDSA, 2002).

Most likely, gaming will continue to experience such growth. As educators, we have a responsibility to research the use of games, specifically in areas of teaching and learning. Aldrich (2004) proposed that there must be extensive learning taking place during game playing as players learn by participating and practicing until they become successful against others playing the game. This success requires gamers to learn roles, understand direction, and comprehend the complex systems within the game's structure.

The computer's artificial intelligence (AI) works as a flexible rules-based organizational mechanism to keep the game challenging to the players by presenting problems that players must solve in groups instead of solo. Players are able to construct their own meaning, relationships, character skills, and appearance in many of today's video game titles. This allows the gamer the opportunity to create and experiment with different configurations and attributes while role-playing characters that might be unlike himself or herself or any other real-life people. Role-playing allows the gamer to immerse himself or herself in a character and allows for experimentation. Video games are increasingly using greater narratives and stories to envelop characters into the storyline. Where books and video games differ is that in many video games there are communities of users who develop programs to mod or add new content and stories to games.

Previous research on video games typically focuses on negative aspects surrounding video games like aggressive behavior (Gentile, Lynch, Linder, & Walsh, 2004), violence (Thompson, 2001), and addiction (Chiu, Lee, & Huang, 2004), even though Sherry (2001) performed a meta-analysis of the video gaming literature and found only a minute relationship between hostile behavior and violent video games.

It appears that limited research has been conducted concerning gaming and its educational potential. In 1999, the independent research firm

MediaScope found only 16 studies involving video gaming (Thompson, 2002). Most of the research currently available tends to focus on the negative side of games (i.e., addiction) and not on the potential educational benefits of games. According to Griffiths and Davies (2002), online games may have a larger impact on education than traditional single player games. Many online games are role-playing adventures or other teamwork-related games that require cooperation from several participants to accomplish game objectives.

A study for the Pew Internet & American Life Project (Jones, 2003) found that although some instructors and professors believe students can learn from games, 69% of those surveyed indicated they had never had an educational experience in the classroom with video, computer, or multiplayer gaming. In the same survey, one of every five student participants felt that multiplayer computer games helped them make new friends and further develop relationships. Gaming has become much more than a solitary hobby and is, instead, a social activity involving both old and new friends (Jones, 2003). This evolution of gaming into an interactive experience can potentially assist in motivating students and helping to develop problem solving, creative and communication skills.

According to Hosen, Solovey-Hosen, and Stern (2002), in order for useful learning to take place, incidental learning and peer interaction must be key elements in the educational process. Incidental learning has been identified as the foremost way language skills are developed and learned (Verspoor & Lowie, 2003). Unintended, or incidental, learning occurs through one's experiences, including mistakes, successes, and interactions with others (Marsick & Watkins, 1990).

Aldrich (2004) indicated that when learners engage with computer simulations, they become engaged in an atmosphere where they possess complete authority and are ruler supreme, such that everything within the context of the game environment is dependent on their actions. These

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