A Brief History of Video Games in Education

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| Quote | Games | References | Footer |

"Games make learning a necessity to have fun. So there's no better motivation for kids to learn than to teach the concept with a game." – Kara Carrero

The history of video games in education is fairly recent and continuing to evolve. The earliest use of video games in education is flight simulators to train pilots in the 1940s. Video games made their way into educational institutions in 1960 with the development of PLATO (Programmed Logic for Automated Teaching Operations) at the University of Illinois (Sheldon, 2011).

However, video games, educational or not, were not widely available until the 1970s (Prensky, 2003). After 1976, when the personal computers were available, educational games became more common. It might be generous to call these early programs "games", as they were essentially just electronic version of coursework with silly pictures (Sheldon, 2011). The purpose of these "games" was to supplement classroom education (Sheldon, 2011).

The first research into video game education appeared around this time as well; however, the research was not published until 10 years later (Aguilera & Méndiz, 2003). The early research primarily focused around the improvement of spatial

awareness among those that play video games.

Bell, who was one of the early researchers, concluded that video games were also beneficial for learning intellectual skills such as reading comprehension. At that time, his theories were controversial (Aguilera & Méndiz, 2003). The United States army also showed some interest in the educational properties of video games during this early history. The military was interested in using video games as a training tool (Alvarez, Jessel, & Rampnoux, 2011) and for war simulations (Freitas & Maharg, 2011).

Despite the educational promise surrounding video games in the 1970s and into the 1980s, video games were still seen by society as a waste of time (Aguilera & Méndiz, 2003). However, by 1984, researchers began to investigate video games potential to develop problem-solving skills (Aguilera & Méndiz, 2003). The year 1984 also marked the introduction of computers to the classroom.

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Jan Davidson is credited as being the first to bring a computer into her classroom (an Apple II). The new trend of bringing computers into the classroom led to the development of edutainment (Yu & Olinzock, 2011). The term *edutainment* was coined to refer to entertainment that had an educational aspect. Edutainment was primitive by today's standards (Prensky, 2003) and not very fun (Sheldon, 2011). The educational aspects of the games were over-emphasized leaving little entertainment value (Sheldon, 2011). In addition, most of the edutainment available has no empirical evidence suggesting that edutainment aids learning (Bidarra, Rothschild, & Squire, 2011).

From the 1990s onwards, the amount of research into video games has dramatically increased (Aguilera & Méndiz, 2003). One reason for the dramatic increase was the e-learning crisis of the 1990s. As correspondence courses moved online, educators became concerned about presenting information statically. Instructors wished to create more dynamic content that adapted to learners and viewed video games as a viable solution (Mester, Molcer, & Delić, 2011).

At the same time, researchers were finding that video game players had higher intellectual ability than non-players

(Aguilera & Méndiz, 2003). However, not all research in the 1990s viewed video games as a valuable resource. The 1990s were marked by hysteria concerned with media increasing violence in children. Despite the absence of any relationship between video games and violence (Squire, 2003), much research was conducted trying to prove the connection (Aguilera & Méndiz, 2003).

Types of Educational Games

Drill and Practice or Action Games
    Enrich lessons by engaging students with and action game.
Strategy Games
    Promote skillful thinking and strategic decision-making.
Simulation
    Simulations of real-world principles.
Serious Games
    The ~~natiative~~ narative of the game is focused on the learning
    outcome.
Role Playing Games
    Players assume the role of a character in a defined world.
Massively Multiplayer Online Games (MMOGs)
    Any games that support hundreds of thousands of players in
    the same environment.

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