

From Dungeons to Classrooms: The Evolution of MUDs as Learning Environments

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Summary. The history of MUDs (multiuser domains or dungeons) goes back to the 1970s. Primarily this is a history of role-playing games and text-based virtual realities. As the decades have passed, MUDs increasingly have been developed and deployed for a wide range of applications in education and the Science of Learning. As opposed to an historical recounting of the development of MUDs, this chapter describes the evolution of MUDs as they have influenced education and learning, from simple meeting and discussion places, to simulated learning spaces, to the current state of the art, which is Immersive Virtual Environments (IVEs) for Education.

1 Introduction

MUDs (multiuser domains or dungeons) have been with us since the 1970s. They are part of the fabric of Internet life, and have been more efficacious in building and sustaining social communities than many technologies we have seen come and go.

As will be explained in detail below, MUDs are multiuser places where people meet in virtual reality. Over the years a large number of MUD variations have emerged, under different names like MUSH, MUVE, and MOO, but the basic idea is the same – these are virtual places where people log on, take on a virtual persona, sometimes referred to as an avatar,

and live a virtual life as a character in a virtual world. The possibilities for the characters are seemingly infinite: Butch McManly can log on as a 7 year-old girl, Poison Ivy can log on as Mr. Freeze, and regular mortals like us can log on to partake in an adventure or a learning experience that would never be available to us in the normal course of our lives.

This is the strange power of MUDs. You can visit impossible spaces, experience things not possible in real life (IRL), and be someone you could only dream of being IRL.

The MUD phenomena, and the history of MUDs, have been documented many times over the years. We review a bit of that here. But our purpose is to trace the history and evolution of MUDs as they have been used for education within a Science of Learning context, which is a somewhat different story.

Over the years, educators have employed MUDs to create a number of educational opportunities: Meeting and discussion spaces for students, simulations for immersion in language learning, simulations for experiencing historical reconstructions, gathering spots for professionals to share ideas and teaching strategies, and in the current culmination of this evolution, immersive virtual environments (IVEs) for education.

This chapter traces the evolution of these systems from the distant past to the current state of the art as they have participated in education and the Science of Learning.

1.1 Technical Notes

There are some things to keep in mind while reading this chapter. First, MUDs are client-server systems, meaning the virtual environments are hosted on a single machine that many players access at the same time. Imagine the virtual environment as a wheel. The people are all out on the wheel rim while the simulation resides in the hub of the wheel. Client software is used to connect the people to the simulation. The client programs were text based in the early days as, indeed, all computing was.

In those olden days (before, say, 1983), there was no such thing as a mouse or a click. Programs were launched from the “command line,” produced text for users to read, and responded to commands typed into a text window. In the very early days, if you made a mistake in your typing, there was no backspace button to fix your command. Instead, you waited for an error message and then retyped your command again. Imagine, if you can, that everything done on a computer was accomplished through something resembling primitive text-only chat messaging. Imagine too, that programming in these simulated worlds was accomplished in the same way,