Chapter 50

Different Shades of Virtual Learning Environments:
From Retrospective to Prospective

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ABSTRACT

The emergence of the internet has opened a wealth of new, network-based applications, from digital music stores to new venues for scholarly publishing. It has replaced the physical learning environments with virtual ones. The virtual learning environments are utilized for not only imparting informal but formal education as well. A collaborative virtual learning environment is a computer-based, distributed, virtual space or set of places. In such places, people can meet and interact with others, with agents, or with virtual objects. Collaborative virtual learning environment might vary in their representational richness from 3D graphical spaces, 2.5D, and 2D environments to text-based environments. In this milieu, the proposed study shall make an endeavor to time travel and identify various virtual learning systems, services, and tool that are being used and adopted by virtual learners. In addition, the study shall also anticipate the future virtual learning environments based on current trends and future requirements.

INTRODUCTION

The emergence of Internet and increased reliance on distance learning has opened a wealth of new, network-based applications, from digital music stores to new venues for scholarly publishing. It has replaced the physical learning environments with virtual one. The "learning" aspect is driven by activity and "virtual" referring to the technology that is brought to support the learning (Barajas & Owen, 2000; Tebb & Dee, 2003). According to Oxford University Press (2015), a virtual learning environment (VLE) is a system for delivering learning materials to students via the web. These systems include assessment and student

tracking features, as well as collaboration and communication tools. The virtual learning environments are utilized for not only imparting informal but formal education as well. System which can be referred to as a Virtual Learning Environment can often be referred to as Learning Management System (LMS), Content Management System(CMS), Managed Learning Environment (MLE) and Learning Platform. Various institutions have developed e-learning systems which help educational programs cross borders of time and space. The value of a virtual learning environment is to fully bring out the characteristics of both 'Learning Any Where' and 'Learning Any Time', i.e., learning in an asynchronous way. Importantly, a virtual learning environment can support human-to-human communication by bringing people together and allowing them to communicate via the internet. This communication can utilize collaborative virtual environments (Cheng & Ye, 2010; Olguin, Delgado & Ricarte, 2000; Passerino & Santarosa, 2008). A collaborative virtual learning environment is a computer-based, distributed, virtual space or set of places. In such places, people can meet and interact with others, with agents or with virtual objects. Independent of time-limit or geographical limits, this way allows students exchange opinions and information by ICT (Information and Communication Technologies). Virtual learning environment systems can also help teachers to track individual students login span, performance and also act as a repository where learning materials can be made available for use (Demian & Morrice, 2015). Collaborative virtual learning environment might vary in their representational richness from text-based environments, 2D environments and 2.5D to 3D graphical spaces. Access to collaborative virtual learning environment is by no means limited to desktop devices, but might well include mobile or wearable devices, public kiosks, etc.(Churchill, Snowdon, & Munro, 2012). Virtual learning environment can be accessed via an online or computer-based system and examples include the following and more:

- Distance Learning Degree Programs
- Professional Certification Courses
- Instructional Videos
- Video or Audio Lectures
- Books, Articles, and Other Writings
- Podcasts
- Webinars
- High School or University Classes

In this paper authors deliver deep review of the developments of virtual environments for education, from informal learning to formal instruction, and current trends.

Objectives

1. To trace the time travel and identify various developments in the virtual learning environments till date.
2. To evaluate the current trends in it.
3. To anticipate its future, based on the past and current trends.

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