Chapter 5
Virtual Environments Can Mediate Continuous Learning

Kiran Pala  
International Institute of Information Technology, India

Suryakanth V Gangashetty  
International Institute of Information Technology, India

ABSTRACT

In human beings, learning is a life-long and continuous process; it can encompass both active and passive activities in accordance with social changes and the development of society. In this era, the development and use of technologies have changed the face of information accessibility. Similarly, such technologies facilitate learners with new and different options to engage in learning through interactive tasks and content delivered through CD-ROMs, websites, communication software on the internet, and virtual games, which have had a significant impact on human learning and education. The significant question arises on which type of content and what way of representation of the content are required in this connection. Researchers need to reconsider any approach to teaching or providing platform to learners which is concerned with an explanation of how learning ability and development are prompted by an exposure to the target in view of the dramatic differences in experiences of learners. This chapter defines the concept of Virtual Environment (VE) based learning discussing how a VE differs from the traditional classrooms approaches. Thus, this chapter presents a unique framework and a formalism for interactive linearity or non-linearity in controlling the structure of learning activity or interaction. These activities aim at addressing the relationship between the main constructs targeted toward developing a VE. This chapter takes stock of various distributed models and projects a framework on how the learners can be engaged continuously in learning activities according to their previous linguistic and educational experiences. It also focuses on how a learner can be reported to the admin or tutor and self assessments.

DOI: 10.4018/978-1-4666-2530-3.ch005
INTRODUCTION

“The illiterate of the 21st century,” according to futurist Alvin Toffler, “will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn.” (Pond 2003, p.13)

In a world of globalization and reduced distances, technology has become a part of an individual’s life and has created a new global economy. In the current circumstances, the nature and purpose of the educational system has changed due to the developmental implications of this new global economy, commerce and technology. The US Department of Labor (1999) has recognized and clarified that there is a need for a change to the nature of educational system to meet the demands of personal education and development with new avenues of technology. And the information availability has to be “powered by technology, fueled by information and driven by knowledge” (US Department of Labor, 1999). Especially, the application of information technology in education may be attributed to numerous factors such as linguistic heterogeneity of a country or region, specific social attitudes, or the desire to promote national identity etc.

To develop any country, it is necessary to develop the education system of that country. And to build a proper and effective education system, any country requires huge human resources and infrastructure which constitute basic needs. Producing effective human resources according to a nation’s requirements and developmental strategies is a huge time taking process and in addition, a costlier matter. Concerns over the relevance of the quality and imperative of expanding learning opportunities like new skills or languages etc. to the development of an educational system should be squared up to the demands driven by the global changes.

Generally, VEs consist in not just real world simulations; internet or online based content or multimedia material which includes radio and television also fall under the gamut of VEs. More specifically, introducing VE is more important on grounds of justification derived from calibration of a multitude of learning requirements and personal demands. On the other hand, national educational policies can be formulated, in broader terms, on the basis of new techniques and strategies in the growth of learning channeled by the introduction of VEs. To be briefer, what can be said about VEs in precise terms is that VEs are high potential and powerful tools for enabling educational changes and reforms in the nature of learning and teaching methods which will thereby change the access and selection of content (Pala, In press).

This expansion of accessibility and availability of informational base with the help of various VEs strengthens the relevance of selection and informational access to the increasingly digital workplace, and beefs up learning quality by, among others, making teaching and learning an intertwined engaging and active process connected to real life. Getting information to learn is a linear activity, but learning, that is, interpreting and perceiving that information, is a non-linear activity. Also the perception of information depends, among other things, on the intensity of interest, that is, motivation toward the particular objective. If the objective is not of significance or need, the learner will take the input and interpret it narrowing down the space of interpretations. If, on the other hand, the learners’ interest is more intensified, they can operate on the same information forming a plethora of connections to other sources. From another angle, if their needs are not of immediate requirement, the perceptual information will undergo a blocking and the cascaded information will be carried forward to later stages of learning.

A huge development of information and communication technologies (ICT) and their applications has penetrated into various domains of education, agriculture and other fields too. This has come as a new revolution especially in education and academics in which the implementation of ICT is maximized by using the relevant tools.