

Chapter 12

Unraveling a Progressive Inquiry Script in Persistent Virtual Worlds:

Theoretical Foundations and Decision Processes for Constructing a Socio-Cultural Learning Framework

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ABSTRACT

The radical utilization of collaborative learning processes in Three-Dimensional (3D) multi-user virtual worlds has been widely investigated. However, a study to delineate a comprehensive pedagogical model aimed at facilitating the same productive-argumentative knowledge practices is still lacking. This chapter presents the most reliable principles of contemporary socio-cognitive learning theories and teaching models. These socio-cognitive constructs can reinforce the majority of collaborative social-cultural students' pursuits and capabilities in the learning process in order to better handle their cohesion or coordination with other peers in 3D multi-user virtual worlds. Consequently, with the adaptation of the Progressive Inquiry (PI) teaching model, this chapter proposes a novel framework for the implementation of this model in online collaborative processes that can be held in 3D multi-user virtual worlds. Educational implications for a reputable instructional format with the conjunction of the PI model and further suggestions are also discussed.

INTRODUCTION

The fact that e-learning is one nascent and innovative course delivery method for students' access to an abundance of Web-based services and

sources arranged from various electronic forms is currently well-known today. Many facilitating ways, such as the abduction of information or production-based literacy in online services have resulted as an ever-continuing wave, supporting

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various educational applications. Students can gain knowledge from a medium used in order to be implemented learning process at a distance (computer, internet, e-learning platforms) which created in a different theoretical edifice in which students converged should try to co-exist and co-construct through their own concepts an innovative new “knowledge field”. Thus, this dimension has prompted researchers to determinate collaborative practices in order to facilitate a more sustainable future for e-Education.

A growing academic literature body (Trushell, Byrne & Simpson, 2012; Tsai, 2007; Tsai & Chuang, 2005; Wang & Reeves, 2005; Wang et al., 2006) has already addressed to the emerging issues of the online learning with some interesting principles. These are the following:

- The conformation of users to utilize multimedia and online learning environments.
- The principle of an active learning process through an educational context. In this approach, users convoked several teaching practices based on their active construction of knowledge for each group according to their personal needs and demands.
- The principle of cooperativeness can foster the interaction between students and the instructor’s facilitating role, in order to provide the necessary feedback for their actions. However, considerable care must be given to the “space” or the “environment” which should allow the positive interdependence, responsibility and use of students’ (e-)skills to be solved problem-based learning situations.
- The principle of propagation and equal opportunities for all students through a heterogeneous group.
- The recognition of each student’s personality, as a unique entity and personality for his/her participation in collaborative activities.

- The assumption that every student as a member of the community that has different ways of approaching the knowledge should also be considered as an important reason for the featuring familiarization with the environment.
- The balance between different approaches of knowledge, such as empirical, prescriptive, and self-organized learning.
- The principles of “internal” (user-based) or “external” (team-based) evaluation may import the original specification, for rethinking new packages of innovative educational programs for all levels of education, aimed at satisfying the principle of all-round development of students’ personality.

Despite the use of this great innovation from the vast majority of other media sources, it is also crucial to decode some parameters for their effectiveness that include:

- The recognition of a unique self-existence that pervaded each student.
- The movement of knowledge from the “traditional” (instructive) approach to a new one, where team members acting collectively and harmoniously together for a common purpose.
- The gradual dissociation (fading scaffolding) of experts through active processes and active supply for the construction of a situated knowledge field.
- The distribution of projects and constructive applications standards of learning through the collaborative exchange of knowledge and users’ experiences that is necessary for the implementation of a successful program.

Nowadays, the integration of ICT (Information and Communication Technologies) in the field

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