Chapter 53

Creating an Educational Social Network Based on the Private Cloud Simulation and User Interaction in Solving Educational Problems

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ABSTRACT

In the chapter the author analyzes trends in ICT education, considered the possibilities of integration social computing technologies and cloud technologies. The author proposes to create a single platform solution that combines social networking, crowdsourcing management system and knowledge management system and learning management. The optimal approach in this case may be private educational cloud deployments. In a study conducted information modeling the main processes of interaction between participants in the educational cloud. The author also has been proposed criteria for evaluating the effectiveness of the resulting solutions, technological and organizational requirements.

INTRODUCTION

Due to the rapid innovative technologies and implementation of ICT in the educational process and the university management becomes obvious problem of interaction between the institutions of vocational training, participants in the educational process and the employing organization. Solving this problem requires the active cooperation of educational institutions for the expansion of educational space at the expense of the requirements for the competence obtained from business and society. Also important is to develop in educational institutions mechanisms of social performance assessment and their reflection in the mode of free access to information resources (Council of European Professional Informatics Societies (CEPIS, 2011).

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At the same time, there is no evidence-based approach to solve the problem. A reasonable solution to this problem by developing a virtual IT environments using cloud technologies and crowdsourcing, as well as an analysis of the content of the educational network.

The greatest synergistic effect in this case may be obtained by combining in a single platform models of social computing and crowdsourcing (collective intelligence) to solve educational problems at the level of a single information-educational environment. The optimal approach in this case may be private educational cloud deployments. Toward the end, specifically state the objectives of the chapter.

ANALYSIS OF TRENDS OF THE INFORMATION SOCIETY AND A SOCIETY BUILT BY ON KNOWLEDGE, LEARNING AND GENERALIZATION OF ICT INNOVATION, PEDAGOGICAL INNOVATION ON THE BASIS OF DIFFERENTIAL-INTEGRAL APPROACH

So far, analysts IBM, formulated the concept of “reasonable class, identified five factors of future changes in the learning process. Among them:

- Immersion technology,
- Personal learning paths,
- Knowledge-based Skills,
- Global integration,
- Binding to the economy.

We will consider in more detail their entity and influence on education changes.

Immersion Technology

According to today’s problems of education, researchers, students today are “natives” Internet. The network can convert the next few years learning technology, making it a multi-modal. It is predicted the emergence of the need for teacher’s work in more than one environment, the greatest impact on education is expected from the introduction of social networking and other software that supports collaborative forms of learning. From other forms of technological progress are the following components:

- BioLink. Biotechnology combined with IT to provide personalization (adaptive systems that track the direction of gaze interface, biometrics)
- Interfaces. Involve all the tools to create the perception of a deep and intuitive interface (virtual reality, voice recognition, spatial mapping)
- Devices. Receptive environment and intelligent devices that provide mobile and more natural access to knowledge (sensors, miniaturization, embedded chips)
- Information / Databases data-filtering information flows, interaction and the establishment of the relevant context (personalization filters, unlimited storage, repeatedly reproduced training elements)