

Chapter 3.3

Integrated Design of Web–Platform, Offline Supports, and Evaluation System for the Successful Implementation of University 2.0

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ABSTRACT

University 2.0 is a collaborative way of constructing and sharing knowledge, based on epistemological and social technologies to amplify the effect of interaction and participation at higher education settings. In this case study, Web 2.0 social technologies were implemented to improve teaching and learning performances by integrating user-centered interactive platform, offline support strategies, and evaluation systems. The interactive web-platform is the essence of University 2.0 and enables the various interested parties to practice the 2.0 spirits of openness, sharing, and participation. In order to make learning based on the web-platform more effective

and efficient, offline supports such as learning cells, learning facilitators, and learning spaces should be supplemented. The CIPP model was employed to monitor all processes of the University 2.0 project, to guide developers to the next steps, to attract attention from faculty members and students, and to derive consensus among them.

INTRODUCTION

When the term “Web 2.0” first emerged, it was not about technological abruptness. This generative concept was the result of empirical observation about the changes of doing economic activities and facilitating social interaction through web-platform in this

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knowledge-oriented global society. After “dotcom bubbles” burst, experts in Internet business started to realize that what made some Internet network companies successful was strongly related to increasing individual participation, amplifying the effects of knowledge sharing, and facilitating social interaction in more effective, efficient, and pleasant ways (O’Reilly, 2005). University 2.0 is an educational attempt to bring the successful 2.0 stories into our field of higher education.

This chapter introduces a case study as an example of implementing Web 2.0 social technologies to an institute of higher education under the name of University 2.0. The purpose of this implementation is to improve teaching and learning performances by employing user-centered interactive platforms, offline support functions, and evaluation systems in an integrated manner. A private university located in southeastern Seoul applied University 2.0 to its College of Bionano technology, which was newly established in 2007.

Bionano technology is a cutting-edge and highly interdisciplinary scientific field, encompassing a variety of science and engineering applications (Park, 2005). Bionano technology is a fusion technology that applies nanotechnology to biological systems (Borisova et al., 2007; Park, 2005). Combining biotechnology and nanotechnology has the potential to yield breakthrough advances in the area of science and engineering, such as the creation of new drugs, sensors, diagnostics, and fluidics tools (Park, 2005). Because bionano technology is multidisciplinary in nature and is changing rapidly, the traditional way of linear knowledge transmission from faculties to students was neither desirable nor valid. Therefore, students in this field need to improve self-regulated learning competencies to simultaneously understand all related information with collaborative activities. In order to improve students’ learning competencies in the field of bionano technology, University 2.0 learning strategies incorporate offline support, such as learning cells and learning facilitators, with an online platform

consisting of open course ware, blog, user-generated contents (UGC), tagging, multimedia library, and podcasting services.

The purpose of this chapter is to share the experience of implementing Web 2.0 at a higher education setting and to explain each component of University 2.0 in the categories of web-platform, offline support, and evaluation system. The focus is on how to design these components as a unified learning intermediary. The 2.0 web-platform is required to construct the University 2.0 environment; offline support tools should be designed to fully assist learners in using a web-platform; evaluation system works as a navigator to lead all members involved in this project to strive for the same goal, which maximizes the effects of 2.0 learning activities. According to Vygotsky, human learning and growth can occur in environments created by humans through sociocultural intervention (Moll, 2000). University 2.0 can become another such human-created environment, integrating virtual space and physical learning space in a more dynamic and effective way.

BACKGROUND

The concept of Web 2.0 indicates epistemological and social changes about how we create, distribute, and share knowledge through dynamic social interaction on interactive web-platforms. Managing knowledge and information through Web 2.0 platforms would become a legitimate way of handling the speed of knowledge expansion and embracing its advantages, particularly in educational settings.

The necessity of 2.0 systems in handling information is becoming apparent. It was estimated that the total amount of human beings’ knowledge has doubled for 18 months from 2007 (Foray, 2006). This phenomenon implies that the life span of knowledge will be shortened and that uncertainty, along with knowledge in the knowledge-based economy, will be largely increased. The economic

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