

## Chapter 13

# The Effect of Online Collaboration Environment on Prospective Teachers' Attitude and the Evaluation of Their Opinions

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### ABSTRACT

*This study examines the use of Moodle assisted online collaboration environment in a Special Teaching Techniques class. In this paper, the authors investigate the effect of Moodle assisted online collaboration on prospective secondary mathematics teachers' attitudes toward the use of the Internet and evaluate the prospective teachers' opinions regarding the process. The method of this study is one grouped pre-test post-test model. The 30 participants of secondary mathematics education without thesis program are the study group of this research. The special mathematics teaching techniques class supported lessons with the help of the Moodle environment for 9 weeks. After the process, no significant difference existed in the attitudes of the prospective mathematics teachers toward Internet usage. However, according to the interviews, the teachers said they found the process advantageous and favorable and want further implementations in other classes.*

## **INTRODUCTION**

Nowadays, technology integrated learning environments are very popular. And also, online education has been becoming widespread in Turkey as it is in all over the world with the help of the information and communication technologies (Sağlam, Sever & Çardak, 2008).

In the knowledge of era that we are living in, accessing the knowledge through the usage of web libraries and data bases by the help of internet, instead of published materials has become a necessity for all of us (Çağırtnan Gülten & Deringöl, 2008). The educational fields should catch the new effective tool of the world with the existence of distance education (İşman, Altınay & Altınay, 2004). In Turkey, the education system needs to be revising, and integrating technology and internet into the classrooms. Learning Management Systems (LMS) are web-based systems that allow instructors and/or students to share materials, submit and return assignments, and communicate online (Lonn & Teasley, 2009). And they can be used in managing or supporting the online learning. The most efficient and popular LMS Moodle is a pretty useful program regarding how the new technologies can be reached to the students, how the students can be met with online learning tools and especially how this tools can take part in learning process (Arslan, 2008). Nowadays distance education gained interactive, dynamic and live dimension by becoming widespread of usage of telephone, PC's, VCR's and online courses via internet (Yener & Köklü, 2008). Presentation of quality education by distance education is an indicator of necessity especially to people who cannot have education because of illness, physical distance and money shortage (Yener & Köklü, 2008).

As known throughout the ages, people have negative feelings towards the new inventions that they do not have the skills to use them and resist to concept of the chance (Çağırtnan Gülten & Deringöl, 2008). Teachers are one of the important

factors in integrating technology. That's why; teacher education in the subject of technology integration is of vital importance. If the teachers in the educational institutions want to make real the evolution, at first they have to change their selves and accept the concept of change and especially be aware of the innovations in the world of computer technology (Çağırtnan Gülten & Deringöl, 2008).

By development in technology, many changes occurred in mathematics education since 80's. Computer-assisted instructional design, animations, simulations, software, and etc. take place in math education by using computers, internet and web in education (Mert Uyangör & Karaca Ece, 2008). Mathematics is the field which students can learn and practice with difficulties. Thus, it is time to revise the traditional methods of teaching and learning mathematics. Many universities and corporations started rethinking the design and implementation of the learning systems. To take advantage from the emergence of the Internet, it provides an inexpensive and flexible infrastructure that can greatly enhance the communication among e-Learning system and students (Kamber & İnceoğlu, 2008).

The development of sensitivity in mathematics teacher candidates regarding the usage and application of computer technology is really very important for the future, because they will be the ones who will affect the future by their knowledge, attitude and behavior (Çağırtnan Gülten & Deringöl, 2008).

Web based learning has many advantages; such as time and place independency to reach knowledge, controlling learning processes, rapid access to required resources and monitoring and evaluating the performance (İşleyen, Bozkurt & Zayim, 2008). Many researchers and educators use internet-based learning combining different theories for effectiveness (Sarsar & Altun, 2008).

Therefore, online assisted learning and teaching must be utilized in the field of mathematics teachers' education. This study is regarding to the use of Moodle assisted online collaboration

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