Chapter 18
Managing Distance Learning Systematically:
The Change of the LMS and Virtual Classroom Paradigm

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ABSTRACT

The distance education structure is preferred by many learners in the world. With the COVID-19 pandemic, distance education has become an even more important trend all over the world and in Turkey. With the spread of e-learning and distance education applications, educational content and management of applications in electronic environment has become increasingly important. There are many different applications where activities can be managed together or separately in educational processes. In this study, the concepts of content management system (CMS), learning management system (LMS), and learning content management system (LCMS) are examined, and different aspects of each term are explained. It will contribute to the national literature. This chapter will examine the latest approaches in the use of learning management systems and virtual classroom software before pandemic, during pandemic, and after the pandemic.

INTRODUCTION

Distance learning, including the concepts of distance education, e-learning, and online learning is a form of education that focuses on overcoming physical distances among teacher and students via information and communication technologies. These technologies facilitate participants' communication and collaboration. The development of internet technologies and the more use of these technologies have contributed to the spread of distance education. The components of distance education are students, teachers, and course content. The software that brings together these components in different locations is called learning management systems (LMSs). This software provides management and realization of learning activities. LMSs have the following core features:

- Managing lessons
- Managing users
- Sharing, archiving, and organizing learning materials
- Assessment, evaluation, and exam processes
- Discussion and communication tools
- Providing feedback
- Reporting

In the literature, two types of LMSs are mentioned in the classical sense. Open source and commercial LMSs. Each platform has its own advantages and disadvantages. Commercial LMSs can be easy to install and maintain, but they are costly. In contrast, open-source LMSs are free, but with maintenance and improvement costs. The common problem is that both platforms have long installation times and scaling issues. In the global coronavirus pandemic, these problems have arisen more because users want to switch to distance education quickly. In addition, the high demand for synchronous communication media has caused new problems for existing LMSs. Companies that appeal to the end-user have developed products such as LMS and virtual classroom software to solve these emerging problems. Users demanded and used these products at a high rate. These reasons are thought to differentiate the approach to learning management systems.

Considering the academic studies on the development of distance education, it is seen that the changes are experienced in the technology axis. Some of these studies, which are rare, deal with the changes in a sociological framework. Due to the global coronavirus pandemic, teachers and students who had never experienced distance education before had to meet with distance education. However, the technological infrastructure insufficiencies and the problems in the hardware supply increased the problems experienced by these users. Software companies that saw the gap in the market tried to meet the needs of users by showing a rapid adaptation. All these developments have brought about some changes in the perspective of learning management systems and virtual classroom defined in the classical sense. In this study, the sociological paradigm change on distance education, learning management systems and virtual classroom software due to the coronavirus pandemic is aimed to be shown. In this context, it will be looked at why the LMS and virtual classroom software used in universities changed and how they changed during the coronavirus epidemic. For this purpose, academic publications describing what institutions have done to switch to distance education during the pandemic process were examined. Also, the seminar and conference records in which the managers attended and explained what they did during the pandemic process was examined.

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