

## Chapter 5

# Asynchronous Environments in Online Courses: Advantages, Limitations, and Recommendations

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### ABSTRACT

*Asynchronous e-learning environments can be used effectively to minimize the effects of access problems and technical disruptions that may arise due to the fact that synchronous e-learning environments require simultaneous participation. Asynchronous e-learning provides learners with the opportunity to think more in the process of constructing knowledge and critical thinking in online discussion activities. Having more time for learners can provide an advantage in understanding others' comments and writing their own. The course contents can be updated at any time and delivered to the learners quickly without wasting time. However, there is limited communication and interaction. It is important that the interaction is at a good degree, with the right methods and tools in a quality that will ensure and increase learning, and that the interaction tools are prepared and presented in a way that will increase the participation of the learners, taking into account the preferences and individual differences of the learners.*

### INTRODUCTION

Learning environments are making more and more use of the possibilities of existing digital technologies day by day. Traditional learning environments are today likely to be replaced by distance education environments due to different reasons and requirements. Although the pandemic process, which affects the whole world, has made distance education compulsory since 2019, this process is expected to reach a comprehensive usage network in the future with the experience it has brought from the past. It is also

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expected that the development and transformation process of Learning Management Systems (LMS) will continue in the near future. Existing possibilities and the needs they meet are still the focus of discussion (Severino et. al., 2021). As a matter of fact, it is very difficult to make the instructor and learner dynamics effective in these environments. Several changes have occurred in the roles and responsibilities of stakeholders in distance education and distance learning. In distance learning processes, tutorial planning, content presentation, technology integration processes are subject to certain revisions. In addition, there are important changes in the teaching environments (Seaman, Allen, & Seaman, 2018). Social variables have also evolved into a different structure in the process of giving courses on the Internet. The forms of communication and interaction during a course process differ in synchronous or asynchronous teaching. The physical contact in face-to-face interaction is instant but remote in simultaneous learning environments. On the other hand, the necessity of having a simultaneous and same place disappears in asynchronous learning environments. However, some communication and interaction problems arise (Shih & Swan, 2005). The usages of synchronous and asynchronous learning environments, which differ in terms of their advantages and disadvantages, are also affected by many variables and conditions.

In this globalizing world, where lifelong learning spreads, the age group and characteristics of the learner are quite variable. There is an understanding that learning can be independent of age and standard programs, and this situation is becoming quite prevalent (Parisi et. al., 2019; Poquet & Laat, 2021). Virtual learning platforms are rapidly gaining dominance beyond traditional teaching environments. However, it cannot be expected that all learners in the target audience will be at the same level of cognition and affect. It is rather difficult to prepare a course content for a person who speaks any language anywhere in the world. The simultaneous execution of these courses reveals a more challenging situation because it is quite difficult to pay simultaneous attention to individual differences and to provide immediate feedback specific to these differences. Thus, some problems might occur in the simultaneous curriculum of synchronous learning. In asynchronous learning environments, it becomes more difficult to give quick, effective and simultaneous feedback to the learner. The opportunity to watch again and again, free lesson hours and lesson follow-up are among the advantages. In this respect, identifying the benefits of asynchronous learning environments for the learner when compared to synchronous learning environments and determining the situations where it is difficult to meet the learner's expectations and goals are considered valuable. In these processes, the situations that need improvement for the instructor, the learner and the content appear. Therefore, it is important to understand different applications of e-learning.

## **Synchronous and Asynchronous E-Learning**

A concept that has been widely used since the 1980s; e-learning. it has a definition set that does not completely dissociate with distance education (Harasim, 2000). It includes elements such as text, graphics and animation, and it is expressed as realizing interaction in online environments (Quinn, 2000). E-learning refers to the educational activities carried out in electronic learning environments by providing access to information and interaction with multimedia applications regardless of time and place, with the help of information and communication technologies and local and wide area networks such as the Internet/Intranet (Gülbahar, 2009). In other words, it is the training carried out on a platform with access to the Internet, local network and computer. E-learning environment, on the other hand, refers to an educational environment which uses the internet or a computer network as a communication tool, which is not affected by limitations such as time, place or socioeconomic status, which uses visual and auditory technologies in the interaction of teachers, learners and content, and which allows learners to

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