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The Effect of Digital Learning Environments on the Learning Teaching Process

Erol KOCOGLU
Inonu University

Abstract: It can be said that the changes that have occurred in many areas of life from the past to the present in the world have an effect on the different reactions of human beings. These reactions had positive developments as well as negative repercussions. One of these developments is that digital environments have come to the fore with the introduction of technology into human life. According to some experts, it has been emphasized in the studies that these environments save people from their physical burden and cause them to face many threats. In this study, the education dimension of digitalization was evaluated. In the study, the effect of digital learning environments prepared in educational institutions on the learning - teaching process was evaluated in line with the opinions of the teachers who manage the process. This study is a case study prepared in line with the qualitative research method. In the study, it was stated that the teachers who contributed with their opinions have remarkable perceptions about the subject, based on the findings obtained as a result of the study.

Keywords: Digitization, learning, teaching, process, teacher.

Introduction

In similar to the needs-based developments in the world, it can be said that there are changes and developments in the learning environments where learning and teaching activities are carried out in a planned way. It can be stated that these changes and developments occur in a more technology-based digital dimension in the globalizing world. Technologies of the digital age changing at a dizzying pace; communication, the way people relate and access information, and the way they learn, increasingly (Johnson et al., 2011; Bates, 2015; Ünlü, 2019). In this period, which is also called the information age, computer age, especially since 1970, personal computers have been used as a dominant technology for the rapid and easy transfer of information (Wang et al., 2016; Helfaya et. al., 2019; Ünlü, 2019) has been used. On the other hand, with the concept of Society 5.0, the social life of the future is tried to be described. Especially in Japan, the Internet of Things (IoT), big data, artificial intelligence (AI), robotic application and sharing economy, etc., which became widespread with the Fourth Industrial Revolution. It is aimed to create the society of the future by including technologies in industry and social life (The Government of Japan, 2019; Ünlü, 2019). Farmer (2019) defines digital learning as learning performed using online networks. In another study, e-learning is stated as an environment where computer and communication technologies are used to provide learning (Ünlü, 2019). It is possible to apply different learning strategies in virtual learning environments. For example; Activities such as games, research, simulation, social communication and campus that allow both research and practice (Brown et. al., 2012) can be designed. In addition, these environments offer realistic learning experiences in teaching difficult and dangerous situations in real life (Firat, 2008; Yılmaz et. al., 2014). From this point of view, this study aims to evaluate the effects of digital (virtual) learning environments on the learning-teaching process in line with teacher perceptions.

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Method

The case study model was used in this study, in which the effects of digital (virtual) learning environments on the learning-teaching process were evaluated in line with teacher perceptions. Case study is a methodological approach that involves an in depth examination of a limited system by using multiple data collection to gather systematic information about how and how it works (Chmiliar, 2010 cited in Subaşı et. al., 2017). Merriam (2013) defines the case study as an in depth description and examination of a limited system. On the other hand, according to Creswell (2007) case study; It is a qualitative research approach in which the researcher examines one or a few situations limited in time with data collection tools (observations, interviews, audio-visuals, documents, reports) that include multiple sources, and defines situations and themes depending on the situation. Case study; it is a model in which a single situation or event is examined in depth, longitudinally, data is collected systematically and what is happening in the real environment (Subaşı et. al., 2017).

The participants contributing to the study with their opinions consist of 40 secondary school teachers from different branches working in public schools in different provinces in Turkey. In order to obtain the findings of the study, the semi-structured interview form was prepared by the researcher and the participants were asked the questions in this form, and the opinions of the participants were taken. While preparing the interview form, attention was paid to the principles of preparation, such as clarity and clarity of questions, from easy to difficult.

In this study, Tool A semi structured interview form prepared by the researcher was used to obtain the findings of the study in Turkey. Content analysis technique was used to analyze the data obtained in the virtual environment (mail) with semi structured interview form. The responses given by the teachers in the study group were classified as themes around common views and given in the findings with figures.

Findings

The data obtained in the study were analyzed by content analysis, and the findings were classified as themes and given under 3 headings.

Making Sense of the Digital Learning Environment

In the study, the answers given by the teachers to the question "What do you understand by the term digital learning environment?", which was asked to the participants through the semi-structured interview form, were analyzed using the content analysis technique, and the data obtained were classified as themes and given in figure 1.

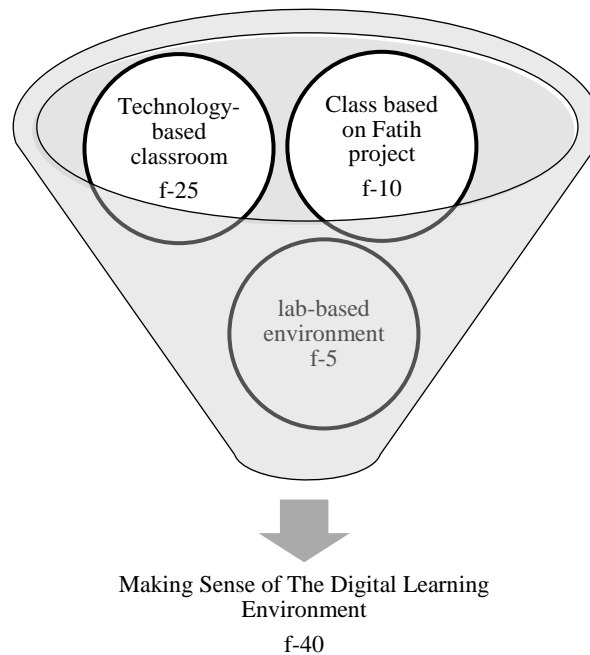


Figure 1. Participants' perceptions of the digital learning environment

Looking at figure 1, it is seen that the teachers who make up the study group have different and remarkable perceptions about the subject. It can be said that this means that teachers have different interests and expectations regarding the digital learning environment.

Benefits of The Digital Learning Environment for The Student

In the study, the answers given by the teachers to the question " What do you think are the benefits of the digital learning environment for students?", which was asked to the participants through the semi-structured interview form, were analyzed using the content analysis technique, and the data obtained were classified as themes and given in figure 2.

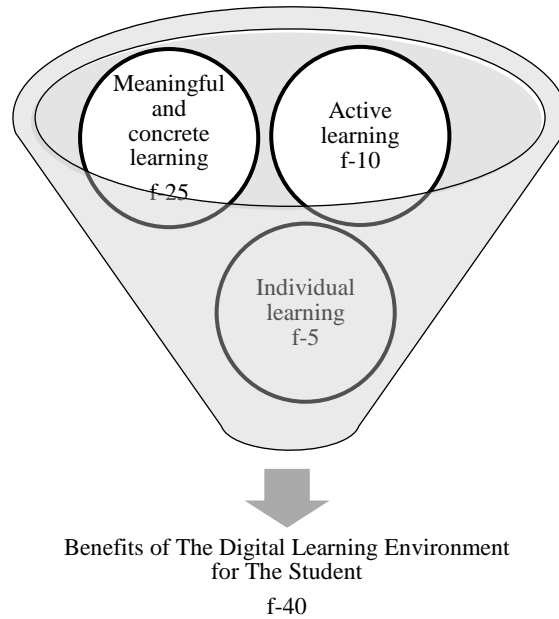


Figure 2. Participants' perceptions of the benefits of the digital learning environment for students

Looking at figure 2, it can be said that the teachers who make up the study group have remarkable perceptions. When the findings are examined, it is observed that the basis of the benefits of digital learning environments for students is the activeness of students in the learning-teaching process.

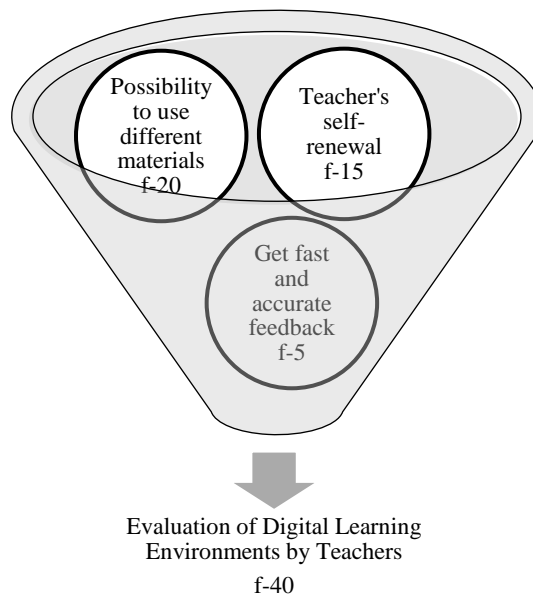


Figure 3. Teachers' perceptions of the effects of digital learning environments on teachers

Evaluation of Digital Learning Environments by Teachers

In the study, the answers given by the teachers to the question " What do you think are the effects of digital learning environments on teachers?", which was asked to the participants through the semi-structured interview form, were analyzed using the content analysis technique, and the data obtained were classified as themes and given in figure 3.

Looking at figure 3, it can be said that the teachers who contributed to the study with their opinions had important perceptions about the subject. In particular, the theme of "teacher's self-renewal", which is remarkable, can be put forward as an evidence that reveals the situation in which teachers accept that they do not renew themselves.

Conclusion and Recommendations

As seen in the study, digital learning environments can be considered as environments with the appearance of a laboratory where technological tools and materials, especially internet technology, are used extensively. For this reason, the orientation of the teachers who are the administrators of the environment and the students who are the learners to the digital learning environment is very important. In this study, in which the effects of digital learning environments on the learning-teaching process in Turkey were evaluated in line with teacher perceptions, remarkable and different results were observed (figures 1, 2, 3). Looking at the results of the study, it is observed that the participating teachers emphasize the positive results for the students in the learning-teaching process of digital learning environments, and they assign new responsibilities to the teachers who manage the process in these environments. Based on these results obtained in the study;

- ✓ Teachers' orientation towards digital learning environments should be improved,
- ✓ Teachers' competencies regarding the digital learning environment should be developed,
- ✓ It should be ensured that students benefit from the tools and equipment in these environments effectively, recommendations can be made.

Scientific Ethics Declaration

The author declares that the scientific ethical and legal responsibility of this article published in EPESS journal belongs to the author.

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Author Information

Erol KOCOGLU

Inonu University

Bulgurlu, Malatya Elazığ Yolu 10.KM No:44210, 44000

Battalgazi/Malatya, Turkey

Contact e-mail: erol.kocoglu@inonu.edu.tr

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