

# Chapter 2

## Education in the Digital Information Age

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### **ABSTRACT**

*Rapid developments in technology and the resulting changing needs require change and development in education and training activities. In this context, the aim of the study was determined to comprehensively examine education in the digital information age. Within the scope of the research, the digital transformation process, the digital transformation process in education, the basic issues experienced in the process, the reflections of innovative tools on education, as well as the differentiating roles of teachers and students were examined. An attempt has been made to present a comprehensive and holistic view on the subject by examining the learning models updated with the digital transformation in education and the concerns regarding the process. It is thought that this research, which aims to provide a comprehensive and holistic view on digital transformation in education, will increase knowledge and awareness about the process, make important contributions to educators, researchers, and policy makers.*

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## 1. INTRODUCTION

With the rapid development of technology and the beginning of the fourth industrial revolution, the world has entered a period of rapid change and development. This process of change and development affects our daily lives and causes radical changes in many fields such as economy, industry, transportation, communication, communication and education. With this remarkable change, digital transformation in our lives is becoming more widespread day by day. Digital transformation is the use of technology in areas such as management, industry, transportation, health, communication and education, in order to provide more competitive advantage and achieve higher efficiency, along with developing technology (Karabacak & Sezgin, 2019; Schwertner, 2017). In short, it can be described as a transition process in which institutions and organizations operating in different fields use new technologies to adapt to digital change. It is inevitable that institutions and organizations that manage this transition process in the most effective way and integrate it into their applications will stand out from others.

While digital transformation affects many different fields, it also significantly affects education and training activities and makes it necessary to change. Although the rapid development of technology facilitates access to information, it often brings along the inadequacy of the information provided and the inability to use the information correctly. In addition, the possibilities brought by technological changes reveal new educational needs and provide new opportunities for educational practices (Çelik & Kahyaoğlu, 2007). Therefore, becoming technology literate in the developing digital world and laying the foundations of the interactive world in terms of communication; the use of technology in the education and training activities of today's individuals who can use technology skills very effectively makes the use of technology a necessity (Topaloğlu, 2020). For this reason, technology can now be characterized as an indispensable element of education.

Digital transformation in education is called Education 4.0 and it is thought that it will respond to the needs of society in the age of innovation and that it is more than education (Puncreobutr, 2016). In other words, Education 4.0 refers to the innovation and education-oriented process that the society in the innovative age needs (Harkins, 2008). In addition, in this process, the concept of "Anytime, anywhere education" gains importance. Therefore, in order to realize digital transformation in education, learning should not be limited to the time spent at school or in the classroom, but should be considered as a lifelong process. Technology is not only limited to the opportunities offered in classrooms, but also provides a flexible learning tool and provides a connection between all stakeholders of education (Ataş & Gündüz, 2019). In this context, countries also have to keep up with this situation. Some of the

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