


Chapter 6

The Role of Multimedia Learning Theory and Digital Distraction in Learning and Instructional Design in Higher Education

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ABSTRACT

The instructional design and technology (IDT) field is broad and interdisciplinary which complicates the role of instructional technologists. It is reported that IDT studies mainly concern hard, computer-based technologies and there is a lack of studies about learning theories and design frameworks. Therefore, the present chapter starts with the introduction to the field of IDT in 21st century higher education. Second, it continues with defining multimedia learning theory with its design principles for online learning environments which is considered to be critical for learning in a digitally driven age. Third, the concept of digital distraction is introduced which is a critical issue for effectiveness and efficiency of online learning experiences. It is implied that the digital distraction of university students is at an alarming level. In sum, the present chapter deals with revisiting instructional and learning design concepts along with multimedia learning and digital distraction issues.

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INTRODUCTION

The instructional design and technology (IDT) field is broad and interdisciplinary. The studies related to instructional design and technology are disparate and unconnected for practitioner implications (Bodily, Leary & West, 2019). That issue complicates the role of instructional technologists. As West (2021) discusses these roles he noted that instructional technologists understand and work with people; study the design process, how people learn and the role of media in learning; reflect on interdependence of theory, research, practice and the “how’s and what’s” of media and lastly play. A research trends analysis of instructional design and technology study (Bodily et al., 2019) showed that IDT studies mainly concern hard, computer-based technologies and there is a lack of studies about learning theories and design frameworks. So, the present chapter starts with the introduction to the field of instructional design and technology especially in 21st century higher education.

BACKGROUND

Main purpose of instruction is to help people learn and it is mainly described as the preplanned set of activities, information, and environment (place of instruction, methods, media, equipment, etc.) to facilitate learning some intended goals (Heinich et al., 1999). On the other hand, design, which is a creative process, (product design, branding design, software design, website design, print design, publishing design, environmental design, graphic design, animation design, ...) refers to the plan for achieving these goals. Technology, shape, color, and function each are means of realizing these goals. The general purpose of this chapter is to describe what design characteristics instruction must have to accomplish goals of learning in the light of digital, interactive, mobile, artificial, smart, self-driving information and communication technologies.

In her commentary, Johnson (2021) mentioned that the instructional design is the catalyst. Having a crucial role, instructional design defined as the systematic development of instructional specifications using learning and instructional theory to ensure the quality of instruction (Msstacymuse, 2020). More specifically, Instructional Design Central (2021) also suggests a definition of instructional design as *the process by which learning products and experiences are designed, developed, and delivered. These learning products include online courses, instructional manuals, video tutorials, learning simulations*. High quality instructional design is crucial for learning since it keeps learners focused, supports learning experiences and it provides the necessary steps to provide good quality instruction from the beginning of the process, through the development, design, implementation, and finally

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