# Chapter 9 Blended Learning: Blending in the Era of Advanced Technology

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## **ABSTRACT**

This chapter describes blended learning in all its facets to provide a perspective on its potential uses as a solution to limitations in traditional and online educational endeavors, as well as the conceivable drawbacks of utilizing blended learning. The term refers to a wide range of activities including everything from entirely face-to-face learning to entirely online learning, but not both. Moving to entirely online education is costly and argued to lack some of the key presence-related social attributes; this is why blended learning is praised by many for its ability to incorporate the features of online learning with the "interactivity" of traditional settings, while also being considered as a challenge in terms of finding the ideal proportions of the mix. This chapter compares and summarizes some of the common blended learning models found in the literature and continues with drawing a conceptual framework, then briefly introduces the advantages and disadvantages. The remainder of the chapter concludes with a concise presentation of current research trends on blended learning.

#### INTRODUCTION

Learners today are part of a large contemporaneous group commonly and colloquially referred to as digital natives, who use technology not only to communicate with other people, but also to collectively utilize and create knowledge (Northey, Bucic, Chylinski, & Govind, 2015). Such learners, like the rest of the world, are becoming profoundly dependent on interconnectivity aided by internet technologies (Granitz & Koernig, 2011). Such dependency typifies how technology has left an indelible mark on how people learn, consume, and share knowledge (Northey et al., 2015). Concordantly, to meet the demands of today's learners, the presence of e-learning is growing rapidly in education, especially in postsecondary education and in the form of blended learning, and this modern approach to conventional

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#### **Blended Learning**

teaching and learning can be implemented in a variety of ways (Nortvig, Petersen, & Balle, 2018). The COVID-19 pandemic, which has affected the world since 2020, has further revealed the need for such learning environments in every sector. While the literature does not provide an agreed-upon definition or understanding of the concept of blended learning, a perception of reasonably consistent differentiation between the three models — face-to-face learning, online learning, and blended learning — however has developed (Bernard, Borokhovski, Schmid, Tamim, & Abrami, 2014; Chigeza & Halbert, 2014; Nortvig et al., 2018). And while the term has been in the literature for quite a long time, it is still a hot topic as the efforts to define the term still carry on (see, for example, Cronje, 2020; Hrastinski, 2019). The term blended learning refers to a wide range of activities that include everything from entirely face-to-face learning to entirely online or distance learning, but not both. Face-to-face, on this scale, refers to physical classroom settings in which all learners and the instructor are present in the same physical space at the same time (Nortvig et al., 2018) to attend a learning event, and even the use of computers in the classroom environment does not qualify as anything other than face-to-face instruction (Bernard et al., 2014). Whereas, online learning — or virtual learning, cyberlearning, e-learning (Staker & Horn, 2012) and distance learning, the terms that are used interchangeably and will be used throughout this chapter to refer to the other end of the continuum for the purpose of this chapter — is usually defined as the polar opposite of face-to-face learning, in which all instructional activities take place in a setting where learners and the instructor are separated by distance or time or both, with learners typically studying at their own pace independently of each other and the instructor (Moore, Dickson-Deane, & Galyen, 2011).

This chapter is intended to describe the concept of blended learning in all of its facets in order to provide the reader with a perspective on the potential uses of blended learning as a solution to limitations in traditional and online educational endeavors in light of the literature, as well as to inform the reader of the conceivable drawbacks of utilizing blended learning.

#### CONCEPTUAL FRAMEWORK

At this point in the chapter, it will be useful to sketch a conceptual framework for blended learning, which is also commonly known as hybrid learning (Graham, 2006). People may use terms such as mixed-mode learning (Huang, Lin, & Huang, 2012; O'Byrne & Pytash, 2015) to refer to it as well.

According to Driscoll's (2002) definition, as one of the early attempts of characterization, blended learning can be defined as a combination — in one way or another — of components such as modes of web-based technology, pedagogical approaches, instructional technologies, actual job tasks and face-to-face instructor-led training. Defending Driscoll's position, Cronje (2020) defines blended learning as "the appropriate use of a mix of theories, methods and technologies to optimise learning in a given context" (p. 120), relying heavily on pedagogical approaches.

Blended learning in this meaning — and which is the meaning adapted in this chapter — is offered in a variety of combinations of asynchronous and synchronous online instruction and classroom instruction (Welsh, Wanberg, Brown, & Simmering, 2003). It is when "a student learns at least in part at a supervised brick-and-mortar location away from home and at least in part through online delivery with some element of student control over time, place, path, and/or pace" (Staker, 2011, p. 5). In line with that, Bernard et al. (2014) defines blended learning as "the combination of instruction from two historically separate models of teaching and learning: traditional F2F [face to face] learning systems and distributed learning systems" (p. 91). Learner location, according to Staker (2011), is a determinant of also whether

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