Chapter 1
Multiple Intelligence Theory in the Digital Age of Learning

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ABSTRACT

The understanding of how individuals learn is continually changing. With the tremendous influence of technology in the classroom, it is vital that educators integrate the use of technology with specific attention and profound thought with respect to the needs of learners, including the role of multiple intelligences. Moreover, learning environments are now customizable due to new communication and information technology tools that are revolutionizing education. Research indicates the need to coordinate the use of technology with the style in which students learn. With the tremendous options and continual transformations available, educators must appraise instructional techniques, specifically the use of technology, with consideration to various learning styles and intelligences in order to engage students in their learning and also to reinforce learning in various ways. This article seeks to explore the concepts of multiple intelligence theory through technology applications.

INTRODUCTION

The understanding of how individuals learn is continually changing (Jackson, Gaudet, McDaniel, & Brammer, 2009). With the tremendous influence of technology in the classroom, it is vital that educators integrate the use of technology with specific attention and profound thought with respect to the needs of learners. Moreover, learning environments are now customizable due to new communication and information technology tools that are revolutionizing education, primarily due to the rapid changes with the Internet (Nelson, 1998) and technology's role in society. Research indicates the need to coordinate the use of technology with the style in which students learn (Arce, 2006; Eris Fose, 2005; Jackson, et al., 2009; Prensky, 2001; Sanchez-Martinez, Alvarez-Gragera, Davila-Acedo, & Mellado, 2017; Tamilselvi & Geetha, 2015).

In addition to the revolution of technology's role in education, cognitive psychologists are continually developing new theories and researching innovative findings regarding the individual differences in human thinking and learning (Nelson, 1998). Intelligence can be defined as "the ability to perceive information and retain it as knowledge for applying to itself or other instances of knowledge or information" (Tamilselvi & Geetha, 2015, p. 1). The concept of intelligence plays a significant role in an individual's social status, educational opportunities, and career choices (Zahedi & Moghaddam, 2016). However, not all learners acquire intelligence in the same manner. Education professor Howard Gardner, of Harvard University, originally introduced the idea of different learning styles through his theory of Multiple Intelligences (MIT) in 1983. Gardner (1983) defined intelligence as "the ability to solve problems, or create products, that are valued within one or more cultural settings" and as "the capacity to respond successfully to new situations…to tackle a task demanded by life" (p. 8). Gardner posited that intelligence should not be limited to purely cognitive facets but rather should consider the affective and emotional sides of intelligence (Gardner 1983 a,b & Gardner 1995 as cited in Sanchez-Martinez, et al., 2017). Specifically, as the theory itself developed, MIT expanded the concept of intelligence to include verbal-linguistic, mathematical-logical, musical-rhythmic, bodily-kinesthetic, interpersonal, intrapersonal, visual-spatial, naturalist and the existential (Gardner, 1999).

Though not immediately embraced in the educational community, the notion that students who were not naturally gifted with traditional logical or linguistic skills still possess cognitive abilities did become a more accepted idea in educational assessments (Jackson, et al., 2009). Over the past three decades, MIT has been further built upon and relied on and remains relevant in today's culture of education. As Eris Fose (2005) explained, all students possess every single intelligence, however, the manner and degree to which they use each intelligence is as individualized as their fingerprint. Moreover, by "making use of these intelligence areas, individuals may solve a problem which can be regarded within one or more than one cultural frameworks and may have a skill of creating a product" (Saban, 2011, p. 1643).

Additionally, in the modern classroom, technology has become a viable means for students to "attain information, reconstruct knowledge, and demonstrate learning" (Marquez Chisholm & Beckett, 2003, p. 262). The influence of the Internet as well as the evolving capabilities of technology have created a teaching environment with the potential to capitalize on a student's individual strength (Macedo, 2013; Nelson, 1998). Further, Jackson, et al. (2009) posited that it is the educator's "responsibility to stay abreast of technology by discovering new and innovative ways to develop and present curriculum" (p. 75). Instructional tools that are technology based allowed for "collaborative learning, classroom presentation, discovery, exploration, synchronous and asynchronous communication, remote and distance learning, …memorization, direct instruction, deduction, drill and practice projects, peer teaching, discussion, teaching games, independent study, programmed instruction, lecture and stimulation" (Nelson, 1998, p. 90). With the tremendous options and continual transformations available, educators must appraise instructional techniques, specifically the use of technology, with consideration to various learning styles and intelligences in order to engage students in their learning and also to reinforce learning in various ways (Eris Fose, 2005; Jackson, et al., 2009; Tamilselvi & Geetha, 2015).

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