

## Chapter 16

# Technology Integration Into Instruction in the United States: A Policy Brief on Accountability in Higher Education

Ibrahim M. Karkouti

 <https://orcid.org/0000-0001-5900-2682>

*The American University in Cairo, Egypt*

### ABSTRACT

*Technology integration into higher education is considered essential in terms of achieving accountability performance measures that qualify institutions to receive federal grants. The policy presented in this chapter focuses on technology integration into curricula and instruction as a means to enhance student outcomes. This chapter describes the problems that prevent higher education institutions from integrating technology effectively into their educational systems, tracks the implementation of America's Higher Education Opportunity Act of 2008, and measures the progress of Section 204, Part G of the law. The chapter also proposes key solutions in an effort to better integrate technology into higher education classrooms.*

### INTRODUCTION

Technology integration, which is a process that aims at supporting teaching and learning at schools (Young, 2003), can be defined as effective educational technology implementation and practices to improve teaching methodologies, achieve learning outcomes, and increase students' motivation towards learning (Davies, Sprague, & New, 2008; Koruyan, 2016). In addition to improving the quality of education, increasing accessibility, and enhancing cost-efficiency, technology integration helps learners to face the challenges of globalization (Albirini, 2006). According to Jung (2005), implementing technology into education has become a necessity to decrease postsecondary institutions' financial expenditures while enhancing the quality of their educational systems.

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Technology integration has been affecting higher education since the successful introduction of microcomputers (e.g., Commodore Educator 64) in the early 1980s (Haran, 2015; Wang & Reeves, 2004). Nevertheless, the integration of technology into curricula and instruction has been plagued by many barriers inhibiting the implementation of this initiative (Faudler, 2011; Surry, Ensminger, & Haab, 2005). One of the problems is the lack of sufficient and efficient technology training, which in turn, prevents faculty from professionally integrating technology into their teaching practices. Students and teachers need adequate training to use technology effectively for learning purposes (Gönen & Akbarov, 2015).

Researchers have identified the reasons why technology integration into curricula and instruction seems to be essential today. One key reason is the rising financial burdens confronting higher education that has focused the attention on technology integration as a means to improve the quality of learning and enhance student outcomes, while significantly reducing instructional costs (Green & Gilbert, 1995; Selingo, 2013). For example, online learning costs 41% less than traditional learning, and the total cost of a student enrolled in an online program is 57% less than traditional face-to-face instruction (Jung, 2005). As such, investing in technology decreases the cost per student, which in turn increases higher education institutions' financial capacity. Jones and Mathews (2002) and Christensen and Eyring (2011) stated that the main reason why states and higher education institutions are interested in greater use of technology into their educational systems is that education practitioners and policymakers believe that information technology is now essential to the global economy and has transformed the majority of U.S. industries except education.

According to Prensky (2005), the issue of technology integration asserts itself because students today seem to come to class with a technological expertise that disturbs some teachers and appear to go untapped. Prensky (2001) proposes the concept of 'digital natives' who have grown up with technology and rely on it. Students have spent their entire lives surrounded by and using computers, videogames, digital music players, cell phones and all the other toys and tools of the digital age, and they are naturally skilled at using new and emerging technologies (Prensky, 2001). Therefore, educators should embrace technology and adopt approaches that enable students to take an active role in the learning process.

In addition, the globalized impacts of fast-paced technological changes necessitate the development of new higher education models that integrate technology into curricula and instruction (U.S. Department of Education, 2017). Therefore, this chapter aims to investigate the factors that obstruct and facilitate the integration of technology into curricula and instruction and highlights the policy that mandates the incorporation of technology into higher education. Simply put, the chapter seeks to answer the following research question: How can educational leaders enhance the use of technology for teaching and learning purposes?

First, this chapter addresses the importance of integrating technology into higher education, identifies the policy that governs its implementation, and describes the factors that obstruct technology use inside the classroom. It then offers recommendations and solutions to improve the use of technology inside the classroom based on a systematic review that was conducted for this specific purpose.

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