Chapter 11
Designing a Pathway to Digital Fluency:
Considerations for Authentic Learning Design

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ABSTRACT

This chapter addresses the need for developing digital fluency skills in higher-education students in order to best prepare them for real-world success. The pathway to digital fluency is complex and requires a reimagined, collaborative approach to learning design. This chapter considers the elements of authentic learning as a means of developing students' digital fluency and proposes learning design as a pathway to action for teacher-developed authentic learning activities. The chapter begins by exploring the concept of digital fluency in order to develop a definition that informs pedagogical approach. Approaches to digital fluency development are examined through digital literacy and authentic learning frameworks. The pedagogical approach is further examined and conceptualized through the process of learning design. Considerations are presented at the end of each section to illustrate relationships between digital fluency, authentic learning, and learning design, and to allow for further exploration of concepts within unique contexts.

INTRODUCTION

From the paper "The Future of Teaching and Learning" published in 1968, Goodlad makes the following observation about teaching: "As a profession, we have tended to be bogged down in the narrow details of our calling, details pertaining primarily to the means: the means of buildings, classrooms, books, and all of these together" (p. 14). Today, digital tools would be added to that list. Goodlad (1968) then makes an appeal to the profession to "raise the level of the dialogue to the truly significant question of

educational ends" and poses the question, "To what extent is each individual being provided with his unique opportunities to develop potentialities to the maximum?" (pp. 14-15).

Learning has meaning when it is relevant and students are given opportunities to develop their potential. Incorporating technology into classrooms and lessons does not signify that relevant, meaningful learning is taking place. Nor does it indicate students are learning the digital skills needed for success outside of school. Often, efforts evaluating technology integration and digital competency are based on active use or presence alone as the defining factor of success (Davies, 2011; Wang et al., 2012). Furthermore, having access to technology does not guarantee proficiency or fluency in use.

"Digital Natives," a term used to define people born into the digital age, enter into higher education with a certain level of technical ability simply as a result of being born into a technology-saturated landscape (Prenksy, 2001). However, learning experiences cannot be designed with the idea that all learners possess equal knowledge of digital tools and landscapes. As learners are provided more opportunities and access points to education over the course of a lifespan, the idea of a heterogeneous group of digitally equipped learners can be damaging. Evidence has shown that students enter into higher education with a wide variety of existing knowledge, skills, and attitudes about technology and that gaps in abilities are influenced by socio-economic factors (Bennett & Maton, 2010; Davies, 2011). Learning today depends on digital competency, and digital competence improves a person's ability to develop other competencies throughout his or her life (Hargittai, 2010; Resnick, 2002).

The Educause Horizon Report, which profiles significant trends, technologies, and practices impacting higher education, consistently calls attention to the rapidly changing needs of an evolving workforce and the skills it demands from new graduates. The most recent report calls specific attention to remote work and learning as trends accelerated by COVID-19 (Alexander et al., 2019; Becker et al., 2018; Brown et al., 2020; Pelletier et al., 2021). Traditional didactic attitudes about technology integration, instructional design, and pedagogical approach are no longer suitable to meet the needs of today's students. In "A world at Risk: An Imperative for a Paradigm Shift to Cultivate 21st Century Learners," Zhao (2015) points to three indicators of risk being experienced on a global scale: (1) massive youth unemployment; (2) unemployed, underemployed, and underpaid college graduates; and (3) a global talent shortage. He illustrates the need for an educational paradigm shift that moves away from uniform curriculum standards, standardized testing, and the global benchmarking that comes with standardized assessments, towards one that develops creativity, entrepreneurship, and global competence (Zhao, 2015).

Possession of digital skills is now more than ever, a fundamental part of a person's professional, academic, and social success (Broadband Commission for Sustainable Development, 2017). Learning opportunities exist in diverse formats, often enabled by technology, and the workplace increasingly requires workers to re-skill and upskill to keep pace (Broadband Commission for Sustainable Development, 2017; OECD, 2019; Pelletier et al., 2021). Today's students must enter the workforce not as recent graduates, but lifelong learners. Learning depends on digital competency, and digital competence improves a person's ability to develop other competencies throughout their life (Hargittai, 2010; Resnick, 2002).

Students do not passively acquire the skills needed to effectively and ethically navigate academic and professional digital landscapes simply because they are "digital natives." As part of the Digital Visitors and Residents project, White et al. (2012) conducted a longitudinal study assessing learners' engagement with digital technologies in an academic setting and found three emerging trends in use:

- **Convenience:** Google and Wikipedia are often the first and only starting point for seeking out information.

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