

## **Reexamining Digital-Learning Readiness in Higher Education: Positioning Digital Competencies as Key Factors and a Profile Application as a Readiness Tool**

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Readiness for digital learning is an international research domain exploring the preparedness of people and contexts for successful technology-rich education. This study, focused on higher education, reviews the readiness literature and positions digital competencies as factors within it. A key limitation identified is that despite the position of digital knowledge, skills and attitudes as highly significant factors, readiness instruments are limited by inconsistent conceptualization and unidimensional operationalization of digital competencies. In response, the General Technology Competency and Use (GTCU) framework and accompanying online Digital Competency Profiler (DCP) application, developed in Canada and used over a decade in several national contexts, are reviewed as an alternative readiness-assessment apparatus. Findings from a pilot observational study comparing: (a) self-reported digital competencies (using DCP indicators), and (b) the quality of authentic digital-learning performances, are highlighted in support. Through continued application development and international collaboration, the researchers are pursuing contextually-sensitive and non-exclusionary readiness-assessment tools that help individuals and groups better prepare for successful digital learning.

## INTRODUCTION

Digital learning, an umbrella term inclusive of online, distance and blended learning (Siemens, Gašević, & Dawson, 2015), and incorporating mobile learning (Alhassan, 2016; Crompton, Burke, Gregory, & Gräbe, 2016), has profoundly influenced higher education on a global scale. There are more than 40 million higher-education students in the world taking one or more of their classes online (Atkins, 2013). Of course, the practices of digital learning are diverse, shaped by values, epistemologies and learning models in specific institutional and socio-cultural contexts (Aparicio, Bacao, & Oliveira, 2016).

Some forms of digital learning, such as MOOCs (Massive Open Online Courses) focus on making educational content, often from professors at Western universities, globally accessible (De Corte, Engwall, & Teichler, 2016). Some focus on building educational management systems that balance individualized and cooperative forms of learning, and enhance institutional sustainability (Dalsgaard & Paulsen, 2009; Paulsen, 2003, 2008). Others promote transactional learning in which collaboration functions to reduce confirmation bias and construct knowledge (Garrison, 2016). Still others seek to correct power imbalances in traditional education, and facilitate the development of online communities to address authentic problems using open resources (Blayone, vanOostveen, Barber, DiGiuseppe, & Childs, 2017; vanOostveen, Davidson, Naffi, Price, & Blayone, 2016; vanOostveen, DiGiuseppe, Barber, Blayone, & Childs, 2016). Taken together as a general milieu, digital learning achieves greatest success—which may be defined in relation to program sustainability, participant satisfaction, or other learning outcomes (Bates, 2015)—when the socio-cultural environment, supporting digital infrastructure, host institutions, and human participants are well prepared, or *ready*.

The research literature addressing readiness for digital learning is international, with researchers seeking to align local systems of higher education with an increasingly global and digital society. This study organizes the literature, positions digital competencies as readiness factors within it, and offers a bridge between readiness research and specialized digital-competency research with a view to improving readiness assessment at the participant level. One significant problem identified is that despite the position of digital competencies as highly significant factors, readiness instruments are limited by inconsistent and unidimensional indicators that have not yet incorporated digital-competency frameworks. In response, the General Technology Competency and Use (GTCU) framework, authored by Desjardins