

Digital Badges as an Agile Pathway: Implementing Graduate-Level, Micro-Credential Programs to Reskill the IT Workforce

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Abstract

Information technology (IT) plays an increasingly significant role in today's world. The COVID-19 pandemic has increased that reliance. Employers in all industries are struggling with considerable shortages of skilled IT workers and are seeking innovative alternatives to meet these needs. Digital badging and micro-credentials have emerged as an alternative system to validate skills. The issuing of digital badges has spanned across a wide spectrum of settings and purposes. However, there is currently less application of digital badges in graduate-level programs to link to important academic or subject-matter related achievements and higher-level competencies. Reskilling and upskilling existing employees need a more practical and sustainable approach and often do not require completion of an entire IT master's degree. To align with such demand, this study aims to demonstrate how a digital badging system can be used to validate stackable certificates for micro-credentials in a graduate-level program. The paper starts with a background introduction of the current IT employment landscape. The next two sections provide an overview of micro-credentials in workforce development and higher education today. This is followed by a section on our conceptual framework used to determine the potential value of digital badging to our graduate programs. The next section focuses on the case study. The last sections conclude with the lessons learned and the future research directions.

Keywords: Digital badge, Micro-credential, IT Workforce, Reskill, Upskill, Graduate program

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