Awarding digital badges instead of grades? Research and reflections from an undergraduate initial teacher education course

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Micro-credentials are seeing increasingly rapid adoption in higher education (McGreal & Olcott, 2022), however their efficacy is still being explored (Stefaniak & Carey, 2019); as Oliver (2019) notes, "rapid innovation can be exhilarating, but it can also confuse the very people who might benefit most" (p. i). This Pecha Kucha is derived from a project that examined the impact of awarding digital badges instead of assessment grades within a large undergraduate Initial Teacher Education course in Australia. The aim of the project was to examine the impact of micro-credentials on the student experience, including motivation and engagement with feedback, as well as the impact on the quality of university provision, including the alignment between university assessment and broader workplace standards frameworks.

Traditional methods of assessment, such as numeric grades, may not reflect the full range of competencies that students hold and that will benefit them in their future careers (Bassett, 2015; Robinson & Aronica, 2015). Moving away from awarding marks/grades to using competency based micro-credentials may help to address this issue, as micro-credentials can be used to assess both skills and dispositions, as well as knowledge in practice. Micro-credentials (to be referred to as digital badges) may also contribute to a more holistic and detailed record of students' achievements (Elliot et al., 2014).

This work was broadly underpinned by theories of human motivation (Deci & Ryan, 1985). Specifically, and following from the aims outlined earlier, the project was guided by research on gamification and (student) motivation (Hamari & Koivisto, 2015; Hamari, 2017), and research on the impact of grades on student motivation (Butler, 2011). With respect to university provision, the project was guided by Stefaniak and Cary's (2019) framework for implementing digital badges in higher education.

- What impacts did implementing digital badges have on student motivation and engagement with feedback?
- What impact did implementing digital badges have on university provision?

Study design and implementation was informed by Stefaniak and Cary's (2019) *Framework for Successful Badge Program Implementation*, which includes 'Badge Instructional Design', 'Badge System Platform', and 'Badge Program Implementation'. A three-phase, mixed method approach was adopted, consisting of online surveys and semi-structured focus groups.

Findings showed positive motivational and social impacts of digital badges, and positive effects on engagement with feedback, however removing grades from a course designed around traditional modes of assessment also caused significant student anxiety. It was also found that digital badges improved university provision through promoting constructive alignment between assessment and professional standards. There were also unexpected findings warranting future research, including how digital badges reduced student anxiety around the awarding of numeric grades.

A number of key recommendations were made: 1) if using badges, remove marks 2) adopt a whole-of-school approach 3) badges are not a substitute for quality written feedback, 4) invest in appropriate software infrastructure, 5) developing a badge framework is important for both students and staff, 6) students need to know exactly what to expect, 7) develop a 'badge tree'.

Overall, it was found that digital badges have considerable potential to improve the student experience, however these benefits can be overshadowed by student anxiety if the badging system

is not optimally conceptualised and executed.

Keywords: Micro-credentials, Initial Teacher Education, Assessment.

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