Micro-credentialing as a sustainable way forward for universities in Australia: Perceptions of the landscape

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Abstract

A rapidly evolving higher education landscape is an opportunity for Australian universities to reconsider how it offers education. In a time where knowledge and skills need to be updated constantly, a three- or four-year degree may not suit the currency required in many jobs and other work. A student's employability and entrepreneurship abilities need to be contemporary and flexible. However, recognising them in a way that is translatable across academia and work providers is limited. This paper surveys how some universities approach micro-credentialing to maintain the currency of their offerings and how the Australian higher education landscape is evolving to meet this need. Also discussed is the perception of the universities' presence in this space as informed by the survey.

Background

The Australian higher education sector is at the cusp of recognising what has long been the body of work in the micro-credentialing space. More broadly, it is seen that the sector is still in the seminal stages, and that there is much to learn about common good practices (Dyjur & Lindstrom, 2017), thus it is important that this topic be broadly debated and benchmarked. Three important documents frame the thinking around micro-credentialing in this paper.

Firstly, A review of the Australian Qualifications Framework (AQF) (Noonan 2019) was recently conducted and found it needed to be more responsive to contemporary needs in the industry. Prominent among these more recent developments is the widespread trend towards micro-credentials, flexible delivery options and mechanisms to assist learners to construct their own programs, sometimes across sectors, to meet individual learning needs. The final report on Review of the AQF was released in October 2019. The much anticipated Review, led by Professor Peter Noonan, makes the case for reform of the AQF to make it more future ready. On page 9, the recommendation is:

> *The AQF Pathways Policy is revised to broaden guidelines for credit recognition across AQF qualifications and to define and provide for recognition of shorter form credentials, including micro-credentials, towards AQF qualifications.*

This follows the implementation of a similar approach in the New Zealand Qualifications Framework (NZQF) in 2019. Establishing guidelines for shorter form credentials within the AQF will assure quality.

Secondly, Emeritus Professor Beverly Oliver, Deakin University, updates the discussion on micro-credentials in the report *Making micro-credentials work for learners, employers and providers* (2019). Preceding the AQF Review report by 2 months, she foreshadows having the opportunity to have formal qualifications systems recognise different forms of credentials. She defines micro-credentials as a form of short form credential, clarifying (i):

> *a micro-credential is a certification of assessed learning that is additional, alternate, complementary to or a formal component of a formal qualification.*

She makes the case for more granular, certified learning which builds trust, adds value and is sustainable through a national credit framework, recognising prior learning for mature learners and implementing lifelong learning accounts through digital systems.

The third document framing the thinking for this paper is UNESCO's 2018 report on *Digital credentialing: Implications for the recognition of learning across borders*. It proposes a global reference for recognising and negotiating credentials across digital systems. Learning and technology standards are recognised as critical areas to be addressed for credibility in this endeavour. Hence, contemporary national frameworks, such as proposed in the AQF review, are important quality assurance systems.

Literature review

One of the foundational papers in the field, within the Australian sector, is again by Beverly Oliver (2016) laying out the concept, disruption and future of micro-credentials. These are linked to 21st Century skills that, she argues, are necessary for the workforce of the future, especially in Australia. There are some good examples of micro-credentialing already established in Australian higher education as the following examples illustrate.

The Royal Melbourne Institute of Technology (RMIT) approaches micro-credentialing as a means of certifying smaller attainments of learning than that of a full degree. This insight includes stackable credit, general recognition of prior learning, evidence of graduate attributes and standards-based competencies associated with professional practice. RMIT Creds is available to all enrolled students. They are generally online and self-paced. Students are awarded a digital badge upon completion.

Deakin & Co, a fully owned private subsidiary of Deakin University, works in the recognition of prior learning space which translates in what they term Professional Practice credentials and awards. These are higher education pathways to Deakin University but also providing vocational education and training. They brand themselves as "workplace learning and recognition specialists".

Other institutions, such as Griffith University already have a micro-credentialing policy and a taxonomy of practice that aligns levels of activity with a multilayered schema of credentials, ranging from, 'for academic credit' to 'recognition of attainment'.

In simple terms there are four main models of micro-credentials currently seen within the Australian sector. These include credentials associated with:

1. Post-graduate short courses and programs based on credentialing demonstrated outcomes, or selling recognition of prior learning (RPL);
2. Post-graduate courses built-up by undertaking a number of shorter courses for academic credit and stacking those credits to attain a recognised award (usually a Graduate Certificate);
3. Under-graduate: where series of short accredited courses may be used to augment a fuller program (typically x4 = 1), that may replace 1 or two courses in a 24 course program. These are typically skill based;
4. Under-graduate: non-accredited, or co-curricular courses to demonstrate experience and enhance a student's portfolio with the view to enhancing employability prospects. (Sankey, 2019)

This leads to the current trend in the sector that is seeking to try and contain (chorale) this at a national policy level, one that would formally recognise micro-credentialing. Countries such as New Zealand already recognise micro-credentials. The New Zealand Qualifications Authority (NZQA) will quality assure the learning included in each micro-credential, having incorporated micro-credentials into the overall quality assurance framework. However, in the case of Australia this will need to be aligned in some way with the AQF (Australian Qualifications Framework), which is structured differently to the New Zealand model.

There is also a variety of methods to offer micro-credentialing. Universities can adopt unbundled learning pathways to maximise opportunities in the sector. Unbundling is the process of disaggregating educational provision into its granular component parts. With suitable and flexible modes of credentialing, this provides ease of movement, portability, and mobility (Czerniewicz, 2019). However, there needs to be a meaningful way to understand what these varieties of credentials mean for stakeholders such as employers. One way to do that is put forward in a knowledge article in EDUCAUSE (2018) using the Credential Transparency Description Language (CTDL).

The other discussion worth noting is within digital credentialing. In the *Next American Economy's Learning Series*, the Roosevelt Institute (2016) offer guiding principles to navigate this increasingly digital space affording credentialing. Ifenthaler et al (2016) explore digital badging specifically focusing on its technical elements in all levels or learning. Open badges is another discussion on badging, usually linked to learning management systems, with significant literature around it (Liyanagunawardena et al, 2017). Another set of curation focusing mainly on North America is by EdSurge (2018) including the work EdX, a key Massive Open Online Course (MOOC) provider, is doing on their "MicroBachelors" program.

While there are several means to offer micro-credentials, there continues to be the debate on how best to verify these credentials, especially if they are to be portable between institutions and sectors. McArthur (2018) suggests blockchain technology, which is generally defined as "distributed digital ledgers", to be one solution to this. Blockchain technology is regarded as a disruption to the way education is now offered, primarily certified by the institution which offers the award. For example, in Australia and New Zealand, certified digital documents are already offered by all universities using eQuals.

Methodology

The Australasian Council for Open, Distance and e-Learning (ACODE) is a key organisation in the region promoting technology enhanced learning in higher education. A survey was conducted of its 45 member institutional representatives through its members forum. A call went out to the forum to complete a survey to benchmark the micro-credentialing activities of its universities. The survey itself is on Qualtrics, providing a secure, de-identified environment to capture responses. The survey was conducted by 2 ACODE members who are the authors of this paper. The authors are also supported by the Australasian Society for Computers in Learning in Tertiary Education (ASCILITE) as part of a mentorship project by the organisation. In total 37 institutions are represented in the results, representing 35 member universities and 2 member private providers.

As the name suggests, ACODE is an Australasian Council and so the results cover this region, with 29 Australian institutions, 7 New Zealand institutions and 1 institution from Fiji participating.

Discussion

Respondents were asked a series of seven questions to ascertain the level of micro-credentialing work at their institutions of higher learning. It was also important to gauge the level of awareness the participants have of their university's work in the space.

When asked if their university had a micro-credentialing policy, 22% responded confidently that there was and 65% were confident there was not (Figure 1). Interestingly the rest were unsure. This is not unusual considering many universities are considering micro-credentialing but have not necessarily enacted a policy.

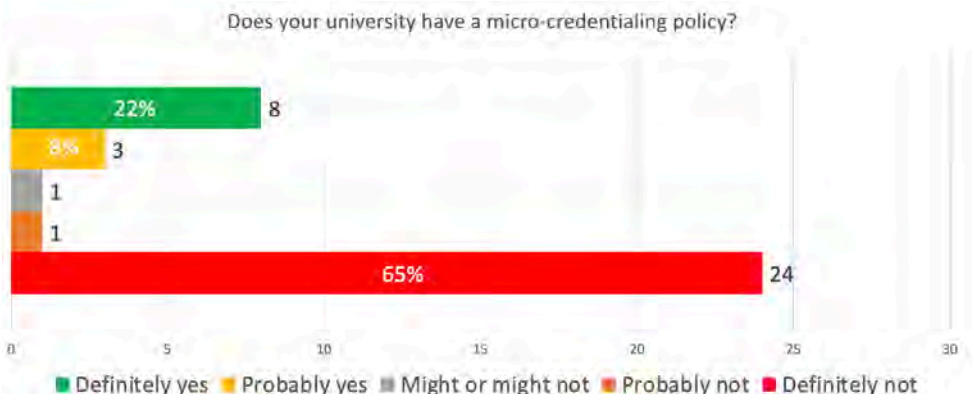

Figure 1: Universities with micro-credentialing policy

Figure 2 shows the responses to the question whether universities have an approved matrix of levels of badges that will be offered for a particular level of learning, that may or may not be aligned with the AQF. Interestingly, most respondents were confident that their universities did not have such a matrix. This would likely indicate that it is still a maturing space for micro-credentialing. It is linked to the previous response on policy whereas a lack of policy would mean such a matrix is unlikely to exist.

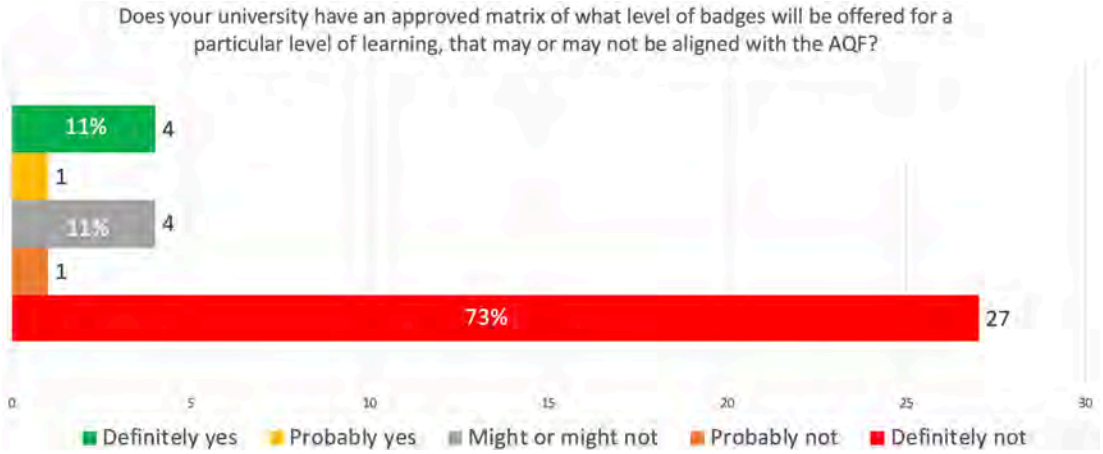

Figure 2: Universities with an approved matrix of badge levels

Respondents were also asked if their universities used a credentialing engine. The percentage of responses, depicted in Figure 3, are close to those in Figure 1. This may again indicate that the use of credentialing engines are also perceived as being far along the micro-credentialing journey than universities are at present.

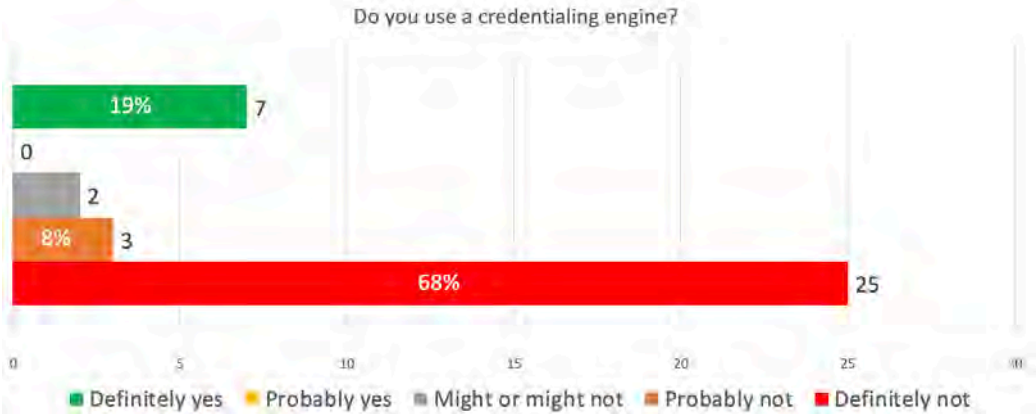

Figure 3: Universities using a credentialing engine

The most credentialing engines reported to be used were:

- Credly x 3
- Badgr x 2
- Acclaim x 1
- Accredible x 1

A simple but insightful question was the state of adoption of micro-credentialing at universities, depicted in Figure 4. 73% responded that it was still developing but none thought it was yet mature. This indicates institutions have at least an awareness of this effort.

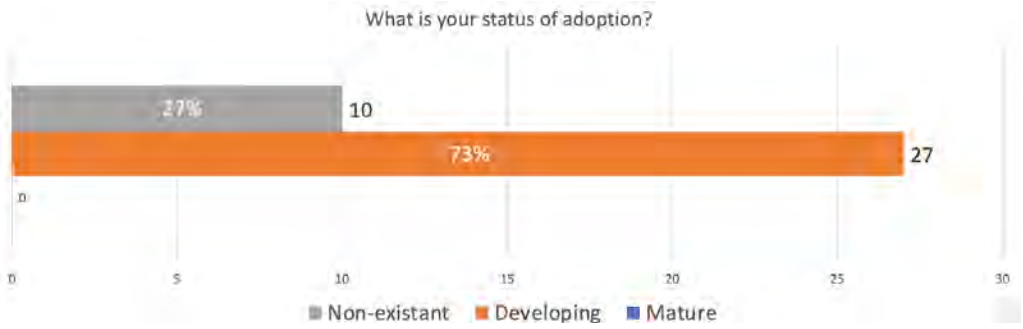

Figure 4: Status of adoption of micro-credentialing

Figure 5 shows most respondents indicated their institutions already are or planning to micro-credential short courses followed by postgraduate courses. This is likely as short courses are low-hanging fruit that can be credentialed into an award pathway. Undergraduate courses will need to consider the student experience transitioning into higher education and may explain why institutions may be reluctant to micro-credential these courses for now.

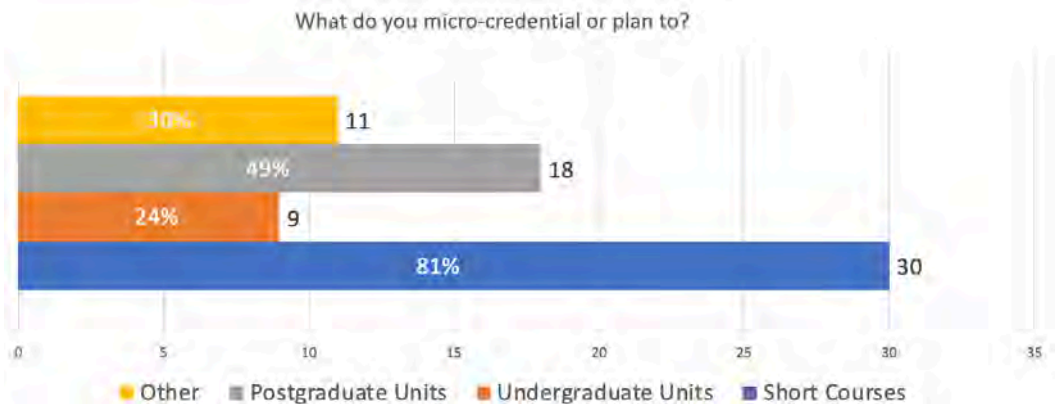

Figure 5: What institutions micro-credential or plan to

Respondents were also asked qualitative feedback on professional development offered at their institutions that are currently or potentially micro-credentialed. In summary, 14 respondents could identify professional development that are credentialed. 22 respondents, the majority, responded that there was nothing happening in the space right now. However, this included 9 responses that indicate there is some plan for professional development in their institution to be micro-credentialed.

Finally, respondents were asked to explain if and how micro-credentials are being used for student credit and/or staff development. The responses are varied. In the main, however, professional development is where institutions seem to be using micro-credentialing. Other uses include recognition of prior learning,

graduate diplomas, as a pathway to an award, degree enhancement, undergraduate digital fluency and graduate attributes.

Next Steps

There is a need to extend this research formally to inform institutions to meet the recommendations in the AQF review around micro-credentialing and the global trends in this space. This survey was undertaken within the ACODE network, but not all institutions in Australasia are a part of this Council. Furthermore, there are a small number of ACODE member institutions that have not completed this survey. It would also be good to extend this survey to these institutions. This will provide an even more robust picture of the current state of micro-credentialing in the Australasian sector.

Conclusion

Micro-credentialing is growing significantly in Australian higher education institutions. Most institutions already have presence in the space or are planning to do so. The review of the Australian Qualifications Framework recommends the recognition of micro-credentials. This provides the additional impetus for institutions to consider micro-credentialing. The low-hanging fruits would be short courses and postgraduate programs. An area for higher education institutions to work on would be to have policies to govern this work in their institutions and to formalise micro-credentialing.

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