Provocation

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The move to micro-credentials exposes the deficiencies of existing credentials

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The rush to short courses and use of micro-credentials prompted by responses to the pandemic has greatly accelerated a trend already underway. However, few studies have examined the impact of short courses or micro-credentials on skills or employment outcomes, and this hasty move draws attention to major problems in the ways in which higher education credentials - macro and micro - are designed and assessed.

Micro-credentials achieved through completion of short courses have emerged as a potential solution to the rapid up-skilling needed for economic recovery as organisations adapt to the 'new normal'. For example, short online courses in 'high-demand' areas have been announced as a key strategy in the Australian Government's Higher Education relief package which promises *funding certainty to higher education providers and supports workers affected by COVID-19 and who are looking to upskill or retrain* (Department of Education, Skills and Employment, 2020).

While degrees have been criticised as unreliable signals of employability, the return on investment attributable to them has been closely examined (e.g. Tholen, 2017; Tomaszewskei et al., 2019). Degrees do not guarantee jobs nor 'work-readiness', but graduates have higher rates of employment than non-graduates. Graduate employment outcomes have primarily declined in response to labour market congestion and competition between graduates, not reduced demand. So how are smaller, micro-credentials likely to stack up against these?

As with any qualification, the use of micro-credentials as signals of employability in themselves, is dependent on the relevance of their learning outcomes and standards of achievement, the validity of judgements made and how convincingly they are communicated. Digital means are increasingly

being used to verify achievement of micro-credentials, which by design, focus on a limited set of learning outcomes. These features can enable more transparent communication of specific standards of achievement (Jorre de St Jorre, 2020). However, in reality digital credentials can be conferred by anyone for anything and few credentials - macro or micro - offer sufficient granularity to inform recruitment decisions.

The Australian Higher Education Standards Framework (Commonwealth of Australia, 2015) requires that all accredited courses must be described in terms of learning outcomes, and institutions responsible for conferring credentials must assure that appropriate standards of achievement are met. However, if we take a typical unit (i.e. subject) from most degrees, it has multiple learning outcomes which may or may not be well mapped against degree level learning outcomes.

The unit is typically assessed and represented by a single mark or grade (often a weighted average of multiple assessment tasks). Grades are generally not calculated or recorded for each learning outcome and even if they are, they do not necessarily indicate that all learning outcomes are achieved at a threshold level of performance. Intrinsically, such an aggregate grade cannot indicate what a student has achieved, because a grade in itself cannot represent an explicit standard.

Micro-credentials are being promoted as potentially cheaper and more flexible opportunities for learners to gain macro-credentials. For example, some micro-credentials can be mixed and matched with conventional course units so that a qualification is constructed from a hybrid of the two modes of study. However, assembling micro-credentials in ways that assure or complement the achievement of learning outcomes associated with larger programs, requires soundness of the broader credential to which they become part or are stacked upon, and this is where the gross inadequacy of existing credentials and the ways in which they are structured becomes apparent.

Micro-credentials cannot be simply added into the mix. If assessment of current course units does not enable a determination that learning outcomes have been met, how will anyone know if the mixture of micro-credentials and normal course units adds up to meeting the requirement for a qualification when the learning outcomes of all parts cannot be assured?

If existing course units do not assure learning outcomes then they cannot become micro-credentials because they do not meet the minimum requirements of adequacy. The increasingly common re-packaging of existing units into micro-credentials must be regarded with suspicion.

What can be done about this problem?

Firstly, we need to refrain from creating micro-credentials simply through unbundling existing credentials, until these are reformed to be transparent in meeting the minimum standards of achievement required, for each designated outcome. Without this, flaws associated with macro-credentials will inadvertently undermine micro-credentials. Learning outcomes need to be individually judged and reported on to enable inferences to be made about what learners are capable of doing.

Secondly, the relationship between each micro-credential and the program they are intended to fit into should be mapped and communicated to show how they build overall capability. Whether or not micro-credentials fit within existing (reformed) credentials or new coherent programs, the relationships between the part and the whole needs to be clearly articulated to inform enrolment decisions and judgement of progression towards completion of the program they are nested within.

Thirdly, where micro-credentials are mapped against larger programs we need agreement on procedures through which micro-credentials can be assembled. This will involve some degree of standardisation of the quantum of achievement per micro-credential, which may vary by level of qualification. Each micro-credential should be accompanied by a map which shows pathways into one or more recognised qualifications in, say, the Australian Qualifications Framework. Of course, any particular micro-credential may be placed within multiple qualifications, but a demonstration of

legitimate possibilities is required for learners to be confident that they have not entered on to a path that leads them nowhere.

Fourthly, careful consideration is needed of how both micro and macro-credentials are assessed. Over-assessment is a common trap in both cases, and is a particular problem with the micro as it is important to insure that there is a reasonable balance between learning and summative assessment and room for formative assessment in an activity that might be quite time-limited. There is an argument in favour of some micro-credentials being assessment of prior learning only, so long as they are part of a broader program of study. Some digital units could of course be learning-only and a credential obtained only when several are assessed in a credentialing unit.

Conclusion

In conclusion, the current move to micro-credentials has exposed the embarrassing fact that despite quite explicit legislation, it is often not clear how current qualifications meet basic standards: Not all declared learning outcomes are assured, grades are not aligned with learning outcomes, and course units can be passed by superior performance on some outcomes compensating for poor performance on others. They are unfit at present to be used as the basis for micro-credentials. The impetus of micro-credentialling provides a useful prompt for completion of the major reform that for all courses, completion assures that all learning outcomes have been met.

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