

A Quality Framework for HE Micro-Credentials

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Abstract

Micro-credentials are increasing in popularity due to their capacity to offer an award for a small volume of learning that is backed by an academic organization. HE has traditionally offered larger volumes of learning than micro-credentials, such as major and minor awards and has a QA system originally designed for such larger-volume awards. Offering micro-credentials along with the more traditional educational offering presents several logistical and QA challenges. QA Framework developments in this space are highly focused on digital awards, where a more holistic approach would be of greater benefit to the broader HE sector. This paper presents a quality framework for a HE to offer micro-credential awards, independent of delivery mode, while still maintaining educational standards and public faith in the quality of all of the HE's awards.

Keywords: *micro-credentials; HE quality framework.*

1. Introduction

Micro-credentials are small units of learning that are increasingly popular in Higher Education (HE), as they can facilitate the requirement of learners to engage with learning in small quantities. As such, they offer an alternative approach to personal, career and professional development, whereby an individual's development, skills, achievements, and accomplishments can be recognized, even at a granular scale. The development of a coherent, robust and innovative quality framework is important to support their validity, credibility and recognition, which is challenging for any HE institute (HEI), whose operation heretofore has been focused on the larger volumes of learning of major or minor awards. The purpose of this paper is to present a quality framework, which captures the existing know-how and long-established practice of HE validation, delivery, assessment and awarding but tailored to these new awards.

Other frameworks have already been proposed, especially at a European level. However, in the authors' opinions these do not sufficiently address the holistic quality requirements of a HE awarding body or mistakenly focus on digital delivery and assessment, where blended or on-campus delivery may be more appropriate for some micro-credentials. For example, the European approach described in *Towards a European approach to micro credentials*, focusses strongly on the QA of online micro-credentials, which, while an important contribution, is too narrow in focus for traditional HE, where the offering may be in classroom, blended or online (Orr, Pupinis, & Kirdulytė, 2020).

To engender credibility, all HE awards must be aligned to a qualification framework, be recognized internationally, and continue to be recognized in perpetuity. Bearing this in mind, this paper proposes key QA principles in the creation, validation and operation of HE micro-credential awards.

2. Micro-credentials in a HEI

Micro-credentials recognize modest, specific achievements of knowledge, skills or experience and the learning may be formal, informal or non-formal. They provide various learner opportunities, ranging from sampling a topic to embracing highly focused upskilling and, as such, lend themselves to reskilling, upskilling, and cross-skilling to in personal and professional development. A coherent, robust and innovative quality framework is important to support the validity, credibility and recognition of micro-credentials.

Internationally and especially in the European Union, there is a growing support for micro-credentials. The EU has included micro-credentials in its approach to education, training, skills development and digital education and this has been captured in the:

- Resolution on a Strategic Framework for European cooperation in education and training towards the European Education Area and beyond (2021-2030) (Council of the European Union, 2021)
- European Skills Agenda (European Commission, 2020)
- The Digital Education Action Plan (2021-2027) (European Commission, 2020)
- The European Commission proposed a European approach to micro-credentials for lifelong learning and employability (Orr, Pupinis, & Kirdulytė, 2020).

While micro-credentials may be credit bearing, and credit-bearing will be the focus of this paper, there is no general agreement on what might constitute a micro-credential in the case of credit bearing learning. For example, according to the Irish national Qualifications body, QQI, micro-credentials can be up to 30 ECTS: *The NFQ's minor, special purpose and supplemental award-types are examples of prototype micro-credentials and perhaps meso-credentials, though micro-credentials can be smaller than the smallest QQI minor awards* (Technical Paper on the Qualifications System, 2020).

Typically, in Ireland Higher Education has adopted respectively 10, 30 and 20 ECTS as the dominant award weightings (87% of awards in a QQI survey of HEs) (QQI early exploration into Micro-credentials in Higher Education, 2014–2020, 2021). On the other hand, the New Zealand Quality Authority defines them as being up to 20 ECTS credits (Orr, Pupinis, & Kirdulytė, 2020).

The choice of 10 ECTS and higher for such awards is understandable from a HE's perspective, where QA, delivery and administrative systems have built up around major awards and their constituent modular components. However, this number of ECTS seems high to warrant the name *micro-*. Recent EU-level research proposes that the minimum weighting be of 1 ECTS (MICROBOL Working Group on Qualifications Frameworks and ECTS, 2021). Such a low ECTS-weighting would normally require a re-evaluation of the HE's QA framework, designed as these have been typically for validating and operating higher-weighted awards and supporting students on longer-duration courses of study (Orr, Pupinis, & Kirdulytė, 2020).

Constructively aligning the learning around this single credit minimum weighting can be readily achieved through defining a learning outcome for the small amount of learning or achievement. Micro-credentials may be aligned to or even derived from existing modules, such as a lesser number of the existing module's total number of learning outcomes and in some HEIs may be stackable to accumulate module outcomes with or without Recognition of Prior Learning for complete module exemption.

This approach brings with it particular quality assurance demands, such as the validation process, which should be flexible and need not be as intensive as, for example a major award but nonetheless should be robust for the award not to be the source of future problems. For example, a key difference that will arise in the entry requirements for a student to be permitted to register on a micro-credential award. Entry requirements to a larger credit-bearing award are necessarily restrictive, in part to protect a student from selecting inappropriately and finding themselves wholly out of their depth. For the low credit-bearing micro-credential, relatively broad entry requirements are possible but must still be robust and credible.

There is also a logistical challenge to offering these awards from as low as 1 ECTS, as student record systems have been developed typically for larger credit weightings most often accumulating to a larger award, but this difficulty will not be explored further here.

2.1. Characteristics of Micro-credentials

Micro-credentials have specific characteristics (University of Melbourne, 2021) listed here:

Stackable credit: While some institutions offer stackable micro-credentials, whereby the individual credits may be accumulated to meet the outcomes of a higher award, in our HEI it is not proposed to offer this for micro-credentials of less than 5 ECTS. For micro-credentials of greater than 5 credits such accumulation may be offered subject to compliance with other institute regulations, including the Recognition of Prior Learning. This recognizes the existing approach to the QA of learning of 5 ECTS and higher.

Recognition of Prior Learning: Micro-credentials offer an excellent opportunity to gain a taster for a topic which may also be used to bridge an educational deficit in gaining entry to a major award by way of the Recognition of Prior Learning route.

Complementing graduate attributes: Often graduates are expected to have developed qualities outside of or more focused than their general award. Some of these qualities may be discipline specific, while others may be more related to soft skills, ethics or civic responsibilities. Micro-credentials by virtue of being small, discrete and focused can help graduates selectively upskill in similar fashion to the higher-weighted supplemental awards.

Professional bodies and accreditation: Professional bodies can be open to offering accreditation to graduates from disciplines outside of core identified areas, for example, where work experience means that candidates meet the bodies clearly identified characteristics of their members. Micro-credentials can be used by such applicants to overcome any concerns in relation to particular individual requirements.

3. Proposed Quality Framework Principles

The eight key features of our proposed micro-credential framework are drawn from the THEA Principles of Internal QA (Technological Higher Education Association, 2017).

1. **Academic and Student-centered:** Each HEI must offer an education that is relevant to students, staff and the wider public. This means including students in the award design, in the validation process, in student representation and in the periodic review panel.
2. **Academic Freedom and Accountability:** Every HEI values its right to offer its own awards. Hand in hand with such academic freedom comes the responsibility to maintain public faith in all of the HE's awards. Therefore, while a HEI is free to choose its own portfolio of micro-credentials, the micro-credential awards' process from creation, to oversight, to awarding, to review must be robust and transparent to all to view. External peer review should occur at the validation stage, with the evaluation report published on the HEI's website. Separate external peer review will occur at the assessment confirmation stage and in periodic reviews. While this form of external review is standard for larger credit-bearing awards, in the case of micro-credentials it makes more sense to review them as a portfolio.
3. **Quality Culture:** The HEI's micro-credentials should contribute to a HEI's quality culture being sustained, through the involvement of staff, students and stakeholders in their creation; contributing to a positive collegiate environment by offering awards of relevance; the awards being created and administered according to published quality assurance principles; and their contribution to the HEI's own community and other stakeholders' continuous professional and personal development, so that their value is obvious to all. These are essential criteria to be demonstrated by award proposers at the validation and periodic review stages.
4. **Informed Practice:** A HEI's micro-credential portfolio should be informed by the interests of all internal and external stakeholders, including the labor market. It should also be informed by the HEI's strategic, civic, regional and internationalization goals. The informed creation of these tiny awards introduce a dynamism and flexibility into the HEI's curriculum to help greatly in delivering key strategic goals. Informed Practice in the micro-credential awards should be demonstrated by award proposers at the validation and review stages.
5. **Proportional Implementation:** The creation, administration and validation of a micro-credential award should be proportionate, considering the volume of learning. This means the HEI offering validation and periodic review processes that are designed to be dynamic, flexible, and responsive to the needs of quality assurance and the ambitions of the credential proposers. Validation and periodic review feedback should be timely

in identifying key findings and afford appropriate scope to implement recommendations arising from micro-credential proposal evaluations.

6. **Comprehensive and Publicly Accountable:** The validation and awarding procedures for micro-credentials should be sufficiently comprehensive, transparent, and publicly accountable, which for example should mean that criteria and process for award creation, the external peer evaluations of micro-credential proposals and their periodic review, should all be published on a publicly accessible part of the HEI's website. Micro-credentials should also be clear in the learning, assessment mode, QA and student support offered.
7. **Measurement, reporting and academic governance:** Good academic governance in micro-credentials means that their performance should be monitored and relevant measurement data be collected through metrics including student retention figures; student engagement and satisfaction with the operation of and outcomes from, a micro-credential award; periodic evaluation of the awards portfolio; feedback from employers and comparisons with international benchmarks. These processes should not be arduous but sufficiently comprehensive to offer insights for inspiring confidence and fostering improvement. Finally, a HEI must be in a position to record for graduation and future record requests, all major-, minor- and micro-awards achieved by any student.
8. **Consistency with Policy and International Effective Practice:** Micro-credential policy should follow institute policy, including on affordability, inclusivity, and support for lifelong learning. It should also always be cognizant and mindful of international practice bearing in mind in particular how relatively new they are and the potential for policy and practice to change.

In terms of points 6 & 7, once fully established, the HEI should establish periodic peer review of the micro-credential QA system and portfolio by panels competent to make national and international comparisons.

4. Operation

As for any other HE award, micro-credential awards should be overseen by the Academic Council. Unlike major awards, it is proposed in our HEI that there be two distinct micro-credential approval windows per annum in September (for a January start) and March (for a September start), to allow for staff allocations, timetabling, marketing of the awards, etc.

All of our HEI's awards will be credit-bearing and will be aligned with the National Framework of Qualifications and should be constructively aligned. Therefore, normally each micro-credential award should have at least one clearly stated achievement/outcome. As they

are credit-bearing, the fundamental academic learning unit of achievement on a micro-credential award should be based on the HEI's implementation of the ECTS credit-model. Therefore, the effort hours for a micro-credential should be identified, in our case this would be 27 hours per 1 ECTS. These effort hours will generally include student independent learning, some academic input/delivery and assessment.

Applications to create a new micro-credential should clearly explain the rationale for the award, based on key stakeholder engagement and proposed benefits, alignment with HEI strategic goals, the entry requirements, the academic delivery and the assessment of achievement. Although it is expected that entry requirements would be broader than for major awards carrying much greater number of credits, nonetheless, to maintain the credibility of the award, these requirements should be clear and credible. All successful applicants should therefore have a realistic prospect of achieving the award.

Attainment of any micro-credential achievement/outcome of less than 5 ECTS should be on a Pass/Fail basis. The means of verifying this attainment must be clearly established at the new award validation stage. The academic responsible for delivery and assessment must be identified at the validation stage.

The HEI's micro-credential awards will be reviewed annually, and the awards should be overseen by a board, whose membership includes the academics responsible for the micro-credentials and chaired by the HEI's Registrar or their nominee. The micro credential portfolio should be reported on annually to Academic Council on delivery, retention/drop-out levels, Pass/Fail numbers and any other aspect that impacts the successful delivery of these awards.

Finally, micro-credentials are often associated with digital badges as the means of displaying a graduate's learning portfolio. It must be recognized, however, that HE's are more accustomed to exam results letters, European Diploma Supplement and award parchments. Furthermore, a graduate may have a mix of major, minor and micro-credentials from the same awarding institute. The HE must therefore be in a position to record and at any point subsequently confirm the entire combination of the graduate's learning achievements, (major-, minor- and micro-credentials).

5. Conclusion

This paper presents a quality framework for micro-credential awards that is comprehensive and offers both flexibility and appropriate academic governance. The framework is intended for use in HEIs, bearing in mind their existing experience in the Quality Assurance of major awards. Finally, the framework is independent of delivery mode so should be applicable for fully online, blended or on-campus delivery.

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