

Micro-credential Planning Framework

Technical summary document

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A HEFCW-funded QAA Cymru Collaborative Enhancement Project



Cyngor Cyllido Addysg Uwch Cymru Higher Education Funding Council for Wales



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1 Introduction

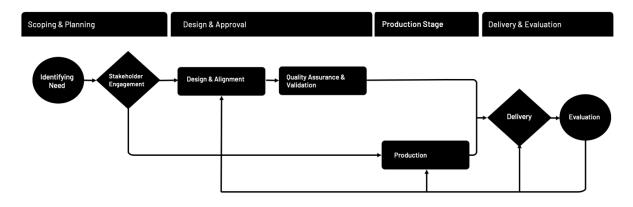
The QAA (2022) outline that micro-credentials are credit-bearing against a recognised level of the national qualifications frameworks, should have no upper or lower limits on the amount of credit, but should not usually be a full macro-credential award. Global agencies and governments are advocating the use of stackable micro-credentials as a solution to promote access to life-long learning opportunities. Through this provision, learners should have more control over their education and skills development by combining credentials to align with their personal and professional goals. Micro-credentials can tackle barriers such as affordability and flexible engagement with specialist knowledge, making them accessible to a broader range of learners. The QAA (2022) in their guidance suggest that micro-credentials may be standalone or combined into more extensive macro-credentials via a stackable approach. This stackable model is focused on allowing learners to acquire knowledge, skills, and competencies in coherent pathways of learning that can lead to a recognised university degree qualification in a subject discipline over time.

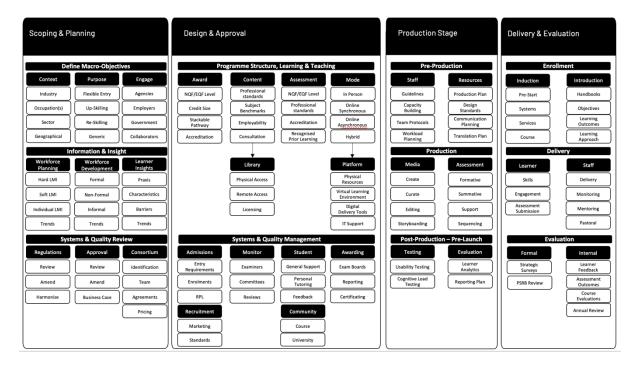
As stackable micro-credential certificates and stackable programmes become more widely recognised, trusted and respected, they can transform national and international higher education by offering learners more flexible and tailored pathways to learning success. However, without robust quality assurance, there is a risk that micro-credentials are viewed as diluted versions of traditional degrees and that industry leaders and employers may not understand the value of these credentials. National governments and higher education quality assurance institutions such as the UK's Quality Assurance Agency (QAA, 2022) are starting to address this challenge by producing clear definitions and guidance on the standards needed to develop, implement and review micro-credentials (e.g., Varadarajan et al. 2023; Brown and Nic-Giolla-Mhichil, 2022, Shapiro et al., 2020). Whilst the terminology of micro-credentials may be new, the concept is not, as smaller formal and non-formal training bundles and short courses have been an essential part of adult education, and HEIs have a long history of offering short courses aimed at various audiences (Hudak and Camilleri, 2021).

2 Micro-credential Planning Framework:

This micro-credential technical document has been built from the experience of developing a stackable micro-credential pilot level 4 Certificate of Higher Education pathway as part of a funded project completed to assist the Higher Education Funding Council for Wales (HEFCW) to understand where micro-credentials could support economic recovery in Wales. Cardiff Metropolitan University, with the support of several higher education and industry stakeholders, led a pilot project to address how to develop and scale micro-credential provision whilst adhering to the QAA quality guidelines (QAA 2022). The project aimed to progress the understanding of the systemic issues that impact the development of micro-credential provision in higher education. Through further QAA Cymru funding the design team have developed a micro-credential planning framework (MCPF - Figure 1) developed to support subject leaders and institutions in the scoping, design, approval and production. This technical summary document will outline the fundamental issues and decisions programme design teams and institutional managers can consider when approving and delivering isolated or stackable micro-credential programmes.

Figure 1: Micro-credential Planning Framework (MCPF)





Osborne & Thirlaway (2023)

3 The MCFP Scoping & Planning Phase

Higher education institutions aim to respond effectively to industry needs by developing micro-credentials, balancing these with learner aspirations such as upskilling, career change, and reskilling. The planning phase for micro-credentials or stackable micro-credentials programmes should entail robust research and data gathering into the industrial context and occupational domains these credentials aim to serve. Establishing partnerships with industry experts and academics for co-design is critical to ensure that proposed micro-credentials can supplement, not replace, traditional macro-credential programmes, adhere to professional standards, and align with national and European qualification frameworks. Early scoping should incorporate extensive data gathering, including hard, soft and individualistic Labour Market Information (LMI) from various sources, to inform the design, ensuring it meets target learner demands while aligning with industry standards and trends.

Expert Engagement

In the initial phase of the MCFP implementation, the Programme Design Team (PDT) should initiate engagement with diverse external expertise, including external subject specialist academics, senior industry advisors and employer panels of senior industry professionals, ensuring a broad perspective on professional and academic standards for the microcredential program. Consequently, universities need to consider if initiating an approval process for a stackable pathway and appointing a single external examiner is more effective than approving isolated courses. This decision-making should also consider the application for external accreditation from a PSRB.

Partnerships

The UK Quality Code distinguishes partnerships as collaborative engagements among multiple entities for teaching, learning, assessment, and student support. While these partnerships can encompass entire courses or individual modules, including varied delivery modes and settings, Henderikx et al. (2022) emphasise that when initiating micro-credential programs, design teams should consider if the provision should include partnerships with one or more institutions. Such partnerships should prioritise partners with synchronised aims and harmonised policies to foster mutual trust and clear pathways for learners. Design teams should consider a balanced, risk-based approach for micro-credential development, emphasising the importance of safeguarding institutional reputation and harmonising legal, financial, and academic policies before formalising collaboration agreements.

Quality Systems, Policy, and Procedure Review

Any future partnership arrangements will require partner organisations to be subject to quality procedures that are at least as rigorous, secure, and open to scrutiny as those used for the approved provision (QAA, 2018). Programme design teams should engage as early as possible with internal professional service experts such as quality enhancement, registry, libraries, careers service and student support services to inform and validate the appropriate design principles of individual or stackable micro-credential proposals. When engaging internal experts, design teams must ensure that existing quality management policies, procedures, and systems can accommodate micro-credential provision and avoid impractical retrofitting to existing macro-credential policies, processes, and systems.

Applying the MCFP Design and Approval Phase - Example Design Questions and Decisions

Quality Issue	Design Questions and Decisions
	Design micro-credentials to be agile, catering to industry needs, target learner requirements, like upskilling, reskilling, and career transitions.
Design Principles	Prioritise the development of specific industrial and occupational areas the micro-credentials will serve. Engage in collaborative partnerships with industry stakeholders, academics, and other providers early in the planning phase to inform design
	and delivery Micro-credentials should complement traditional programmes without replacing them
	Ensure micro-credentials design aligns with existing UK and European Qualifications Frameworks.
	Consult with industry professionals and subject matter experts to set initial objectives.
	Balance the needs of learners, employers, and institutions.
	Perform strategic workforce development reviews to gauge micro-credential viability in the education sector.
	Utilise both 'hard' (quantitative) and 'soft' (qualitative) Labour Market Information (LMI) for insights into supply-demand trends and target learner
External Experts, Data	profiles.
Gathering & Analysis	Consider initiating additional ethically approved research to collect non-traditional learners' user feedback.
	The gathered data is vital for ascertaining the micro-credentials need relevance and sustainability in the medium to long term.
	Invite impartial, independent external experts during the initial MCPF phase.
	Construct a diverse panel of senior industry advisers to provide insights on the program's objectives, skills, knowledge, design, and
	pedagogical approaches
	The course approval process should formally record input from the external advisors.
Course Approval &	Consider options for approving an entire stackable pathway instead of individual micro-credentials, ensuring efficient use of internal and external expertise.
Accreditation Processes	The program development team can consider securing PSRB professional accreditation alongside primary approval.
	PSRB annual monitoring will reinforce quality assurance through reviews of assessment standards, evaluation of resources and analysis of learner feedback.
	Degree-awarding bodies may validate or franchise micro-credentials or stackable courses.
Partnerships	Ensuring partners have aligned goals and harmonised institutional policies is paramount for building mutual trust.
	Safeguarding institutional reputation and harmonising policies should be emphasised before finalising collaboration agreements.
	Partnerships must uphold quality procedures that are rigorous, secure, and open to scrutiny, on par with approved provisions (QAA, 2019).
Quality Systems, Policy,	Design teams to initiate discussions with internal professional service experts, including quality enhancement, registry, and student support services.
and Procedure Review	Ensure quality management policies and procedures can accommodate micro-credentials without impractical changes to existing macro- credential systems.

4 The MCFP Design and Approval Phase

In this phase, institutions must ensure programme approval and quality assurance processes must be fit-for-purpose, clearly documented and accessible and meet the needs and expectations of learners and stakeholders (Shapario, 2020, QAA 2022). The QAA (2022) asserts that providers should remain cognisant of their legal and moral obligations to ensure high-quality learning and assessment are accessible and do not disadvantage learners with specific needs or characteristics. QAA (2022) suggests that providers should consider a proportional approach to implementing approval mechanisms without compromising robustness, external scrutiny, and feedback. The QAA (2022) also requires Higher Education providers to plan how they design and quality assure programmes, implement fair, appropriate admissions criteria, and provide appropriate and proportional support for micro-credential learners to enable them to succeed.

Teaching & Course Design

In designing micro-credentials, the QAA (2018) emphasises the importance of a consistent and transparent strategic oversight of course design, development, and approval processes. At this stage of the design process, new micro-credential development should consider the delivery modalities, learner needs, professional accreditation standards, and broader programme outcomes. Practical issues, such as remote access to library resources, student support and personal tutoring, should also influence design decisions. Embracing pedagogical principles, design teams must also recognise non-traditional learners' distinct challenges, such as situational, dispositional, and institutional barriers. Design teams should emphasise that course design, along with teaching and assessment methods, should address these barriers faced by non-traditional learners to enhance engagement. Course design teams should be innovative and guided by learning theory rather than dominated by campus-based or technology-driven agendas.

Assessment

Assessment methods should cater to learner needs while grounded in clear criteria and cognisant of professional accreditation requirements. Assessment for micro-credentials, as outlined by QAA (2022), should be learner-centred and aligned with institutional and professional accreditation assessment guidelines. Importantly, assessment literacy, which aids students in understanding academic judgments, is essential for non-traditional learners, and design teams should consider an extended induction unit in each micro-credential that focuses on academic skills assessment systems and personal tutor support sessions. The compact nature of micro-credentialing requires thoughtful design of formative and summative assessments, with criteria introduced early to aid understanding.

Admissions

Henderikx et al. (2022) advocate for open admission criteria in micro-credential programmes, allowing learners to demonstrate their readiness through prior experiences, work, or learning portfolios. While aiming to broaden accessibility, institutions and design teams should ensure that transparent admissions processes mirror existing university's policies, especially for non-traditional and mature learners. Traditional admissions windows can be utilised with a transparent application process and systems guidance. Institutions can also consider how they can recognise and credit the experiential attributes of mature students using recognised prior learning regulations.

Student Engagement

The QAA (2022) emphasises the centrality of student engagement in credit-bearing provisions, advising that micro-credentials may require a tailored engagement strategy. This strategy should involve micro-credential students in quality assurance, decision-making, and the design, approval, and review stages. Micro-credential students will need representation in quality committees and working groups and be part of existing internal feedback mechanisms. Specialised support and training must be available for these student representatives designed to streamline student involvement without overloading the learner or over-engineering a system for a large portfolio of micro-credential courses. Evaluations should be conducted twice a year for each micro-credential using asynchronous forums and synchronous mechanisms, and students completing stackable pathways should participate in the National Student Survey upon completing their final micro-credential for a formal award.

Concerns, Complaints & Appeals

The QAA (2018) emphasises the significance of concerns, complaints, and appeals in refining the student experience, urging institutions to document formal outcomes, accumulate informal issues, and share review findings with student representatives to further improve educational provision. Each micro-credential must provide upfront information on complaint and appeal processes both prior to enrollment and within the course's induction unit, detailing the procedure, timelines, and involved parties. Crucially, every learner's right to fairness, dignity, and respect during these processes must be upheld. Design teams will need to consider if micro-credential provisions should align and apply current concerns, complaints and appeals policies universally to all micro-credentials without adjustments based on scale.

Applying the MCFP Design and Approval Phase - Example Design Questions and Decisions

Quality Issue	Design Questions and Decisions
	Strategic oversight should remain transparent and consistent across course design, development, approval processes, and outcomes.
Strategic Oversight	Course approval processes should be robust, flexible, and responsive.
and Course Approval	Approving micro-credentials within stackable pathways may be preferable to isolated development due to resource efficiency and learning continuity.
	Existing macro-credential course approval processes should be flexible enough for stackable micro-credential approval.
Target Learners	Consider the needs of target learners, especially if they are non-traditional adult learners.
Target Learners	Review and modify assessment strategies to cater for specific learner profiles
	Institutional micro-credential programs should explore a range of pedagogical principles and be inclusive.
Pedagogic Principles	Course design should consider adult learners' specific challenges and barriers.
	Address issues non-traditional learners face in traditional settings, such as situational, dispositional, and institutional challenges.
	Ensure micro-credentials maintain academic rigour by using Qualifications Frameworks and Subject Benchmark Statements.
	Course design should cater to why learners engage with micro-credentials and their unique needs.
Content, Structure,	Consider the "right" educational praxis for diverse learner groups.
and Stackability	Ensure stackable pathways give learners agency over the sequence of study.
and Stackability	Each micro-credential should undergo a constructive alignment exercise, ensuring proper academic and, where relevant, professional standards
	alignment.
	Micro-credentials should be measurable, comparable, and transparent regarding learning outcomes, workload, and content.
	QAA (2022): Micro-credentials can be delivered online, in-person, or in a hybrid model, offering flexibility in timetabling.
	Prioritise the understanding and consideration of diverse learning theories.
Modality and Delivery	Emphasise building a learning community to reduce learner isolation (Kauffman, 2015).
	Course designers should go beyond content aggregation and focus on meaningful, purposeful online learning activities.
	Scaffold independent guided study, directing learners to critical resources, reading materials, and digital library engagement.
	Assessment criteria should be transparent, and learner centred. QAA (2022) recommends that assessments are tailored to the course's needs.
	Micro-credential assessment should align with institutional assessment and marking guidelines.
	Micro-credential learners should have direct and transparent access to university assessment policy documents.
	QAA (2019) underscores the importance of fostering shared understanding between staff and all students about academic judgements.
	Induction Units should be developed to ensure learners develop academic skills and understand assessment submission systems.
	Each micro-credential programme should include a personal tutor support session, emphasising feedback and feedforward.
Assessment	Design teams must consider how formative assessment opportunities can be vital for developing assessment literacy in non-traditional learners.
-556551116111	QAA (2019) emphasises that assessments should align with qualification frameworks, credit frameworks, and Subject Benchmark Statements.
	Timely reassessment opportunities are essential and should be planned for micro-credential learners.
	Adherence to existing university feedback protocols ensures learners comprehend their performance strengths and areas for improvement.
	Using the existing institution VLE for submissions ensures the confidentiality and security of student information.
	Micro-credential design teams should adhere to existing assessment regulations to ensure fairness in marking and moderation.
	QAA (2019) emphasises the significance of examination boards in credit and qualification award decisions; senior managers and design teams
	must consider if existing boards or specialist boards are required to manage micro-credentials and stackable awards.

Quality Issue	Design Questions and Decisions
Admissions	Aim for transparency and consistency with the university's existing admissions policies, focusing on inclusive admissions for non-traditional
	learners
	Consider if candidates can showcase readiness through work, voluntary experiences, formal/non-formal education awards, and professional certificates.
	Criteria should reflect course requirements, relevant experiences, subject knowledge, competence standards, and prior academic performance.
	Consideration of visa restrictions where relevant.
	Emphasis on eliminating unnecessary admission barriers
	Staff involved in admissions must be aware of academic and non-academic requirements, including regulations set by professional bodies, visa
	rules, language and health requirements, and potential unconscious biases.
	Ensure transparent financial support information for all micro-credential learners.
	Consider alignment with current admissions periods, minimising disruption to internal services.
	Clear and explicit information must be available for application and selection during these windows.
Student Engagement	Traditional engagement strategies may require adjustments for micro-credentials; engagement mechanisms should be embedded in course delivery.
	Engage senior student body to craft alternative engagement strategies for micro-credential learners during design/approval stages.
	Involve micro-credential learners in quality assurance and enhancement.
	Commitment to provide specialised support and training to micro-credential student representatives.
	Micro-credential students to be involved in annual monitoring and action plan development with emphasis on partnership culture.
	Institutions should prioritise student involvement in evaluating their educational quality.
	Design teams should consider consistent communication about the importance of feedback throughout short-cycle learning.
	Induction units to incorporate past evaluation results and responsive actions.
	Encourage feedback using both asynchronous forums and synchronous tutorials, ensuring anonymity where possible.

5 The MCFP Phase Production

The programme design team should consider established institutional parameters for curriculum design that are inclusive and accessible but identify the need for teaching techniques tailored to adult learners. Programme design teams should plan the resource production phase as a vital stage in the micro-credential planning framework. The preproduction phase focuses on several parameters, including identifying the target audience, determining project milestones, and setting the course's structure with learning outcomes and assessments (formative and summative). The programme design team must explore various learning theories and plan for non-traditional learner challenges ranging from technological anxieties to fostering a learning community. The programme team and institutional management must consider the delivery platform and modality for delivering content, and whether to integrate with an existing LMS system or utilise a specialist thirdparty platform. This decision-making should consider scalability and cost-effectiveness. An essential aspect of this phase of planning micro-credentials should include testing learning tasks, platforms and user experiences, gathering feedback through structured research studies, cognitive load questionnaires, and UEQ e-surveys to refine the design parameters. Comprehensive testing and feedback before launch will support the refinement of effective micro-credential delivery.

6 The MCFP Delivery, Monitoring and Evaluation Phase

Institutions should ensure that micro-credential courses include regular feedback in line with policies for traditional provision, but must consider the application of informal in-module and whole cohort evaluations. Feedback mechanisms, like asynchronous forums and synchronous tutorials, can promote appropriate student feedback and facilitate ongoing evaluation for continuous improvement. This evaluation process and the programme enhancement review should feed into the standard central monitoring system, aligning with any established periodic programme reviews. Periodic reviews should encompass the entirety of a stackable micro-credentials pathway, rather than individual courses, and conducted with relevant academic stakeholders. External examiners should be appointed following the QAA guidelines, and institutions will need to consider if externals are to oversee individual micro-credentials or entire pathways, ensuring all associated assessments and reporting processes align with the standard university protocols. Institutions must consider ongoing staff development and succession planning, committing to establishing the necessary competencies for a micro-credential programme's success.

Applying the MCFP Production Phase - Example Design Questions and Decisions

Quality Issue	Design Questions and Decisions
	Consider institutional inclusive and accessible design principles.
	Consider institutional online and hybrid delivery design principles.
	Calculate project parameters: costs, staff capacity and duration.
	Allocate sufficient time for learning resource design and development.
	Explore multiple learning theories for course content, design, and delivery.
Pre-production,	Consider how to integrate institutional, technical support functions and services
Production and Testing	Collaborate with expert learning developers to explore suitable platforms and options to develop learning communities.
	Explore if delivery platforms integrate into existing university and Learning Management Systems (LMS).
	Explore if any planned digital delivery solutions and the current LMS exacerbate digital poverty issues for non-traditional learners
	Invest in academic capacity building for working with non-traditional learners and if prioritising digital and online learning mechanisms.
	Ensure programme teams allocate appropriate time for material preparation, copyright issues, and digital material prep.
	Ensure programme teams allocate appropriate time for testing and analysing course materials.

Applying the MCFP Delivery, Monitoring and Evaluation Phase - Example Design Questions and Decisions

Quality Issue	Design Questions and Decisions
	Ensure programmes teams demonstrate how they will prioritise student feedback in line with standard institution policies and procedures.
	Ensure programme teams plan for effective Annual Monitoring.
Delivery and Evaluation	Annual Reporting should be aligned with internal timelines and integrated into the school or faculty-level Student Engagement Plans.
Delivery and Evaluation	External examiners should be appointed per QAA Quality Code guidelines and standard institutional policies and procedures.
	Examination processes and boards will need consistent application and should be integrated into standard processes with appropriate
	adaptions.

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