

Advancing Free Trade
for Asia-Pacific Prosperity



Asia-Pacific
Economic Cooperation

Online micro-credentials toolkit

APEC Human Resources Development Working Group

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Note: The term “National” and names of public or private institutions used in the text are for purposes of this report and do not imply the political status of any APEC Member Economy.

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Acknowledgement

This toolkit was developed under the guidance and supervision of the Australian Government Department of Education and endorsed by APEC's Human Resources Development Working Group (HRDWG).

Three APEC workshops were organised to identify best practice to create online micro-credentials that would support addressing skills gaps in APEC economies. Approximately 50 stakeholders comprising government officials, higher education leaders, and industry experts across 11 APEC economies participated in the workshops and shared their in-depth knowledge, experiences, and insights to support the development of this toolkit.

The project team acknowledges the time commitment, and effort from the respective APEC economies which allowed the team to deliver the project, *Addressing Skill Needs through Online Micro-Credentials in Higher Education*, while simultaneously providing insights that shared, strengthened, and developed the knowledge, skills, and abilities of attendees.

Introduction



**Asia-Pacific
Economic Cooperation**

1. Introduction

1.1. Purpose of the toolkit

This toolkit has been developed to

- provide education providers with a resource to support them in developing their own micro-credentials, and
- help governments who are considering best practice policies around micro-credentials to address skill gaps in their respective APEC economies.

This toolkit is not intended to be exhaustive or prescriptive. Rather it provides an overarching approach, examples, and links to additional content to guide activity.

Overview of the toolkit



Proposed approach

The toolkit outlines a proposed approach with clear phases and sub-steps that support the design, development, and delivery of online micro-credentials. The approach might be considered in its entirety or used to supplement existing activity.



Global case studies

Case studies are included to provide insight into what is currently happening globally and how other economies are approaching the creation of online micro-credentials. It provides a reference for APEC economies to learn from.



Best practices

The toolkit provides a summary of best practices that are currently being demonstrated throughout the design, development, and delivery of online micro-credentials. These best practices illustrate that there is no singular way to create micro-credentials and provide examples of how the approach can be adapted to the local context.



Checklists and critical success factors

Non-exhaustive checklists and critical success factors are included for each phase and sub-step for consideration. They are intended to help guide the reader on the key elements to consider at each stage.

1.2. Introduction to the toolkit

Micro-credentials are short programs that people can take to learn specific skills to support their personal and professional development. They can be a standalone education offer or be a component of larger academic programs.

The concept of micro-credentials emerged in response to the growing global skills gap that has developed from the rapidly changing demands of the modern job market. Advancements in technology, shifts in the nature of work, and evolving employer expectations have led to a growing need for individuals to acquire specific, up-to-date skills quickly and efficiently. A 2023 [LinkedIn report](#) states that 25% of skills sets for jobs have changed since 2015 and this number is expected

to reach 50% by 2027. In line with this many APEC economies have identified reskilling in digital and other skills as a priority with many seeing the opportunity for an alternative qualification, such as a micro-credential, to fill this gap via focused, skill-based certifications.

As the demand for specialised skills grows, governments, educational institutions and industry stakeholders increasingly identify the value of online micro-credentials in addressing specific knowledge gaps. This has led to a proliferation of micro-credential programs being offered. However, there is currently not one universally accepted definition of a micro-credential, which can present a challenge to those wanting to create them. UNESCO'S 2022 paper *Towards a common definition of micro-credentials* provides useful background on the subject.

This toolkit is intended to offer some guidance, although not definitive, by setting out some of the best practices currently being applied to designing, developing, and delivering online micro-credentials. Although it is aimed at the online environment, many of the considerations and critical success factors are equally relevant to in-person / hybrid approaches.

1.3. What is a micro-credential?

Globally there are a broad range of definitions for micro-credentials. While some economies have made progress by developing a domestic framework to help regulate them, the global approach is currently not consistent.

Micro-credentials are largely agreed to be short certifications that provide a record of focused learning achievement. They are often defined as tailored, short, and targeted training that is outcome-based and deliver responsive learning in a more rapid way than other forms of traditional education. Some noteworthy attributes of micro-credentials include:

- They can have standalone value and may also contribute to or complement other micro-credentials to 'stack' towards a larger credential.
- Micro-credentials can provide recognition of skills outside formal qualifications and are perceived as an accelerated way of upskilling for sectors sensitive to an evolving and dynamic labour market.
- The skills and competencies acquired through the micro-credential can be recognised and shared through digital badges, certificates of achievement or alternative mechanisms.

Below are some best practice principles associated with online micro-credentials:

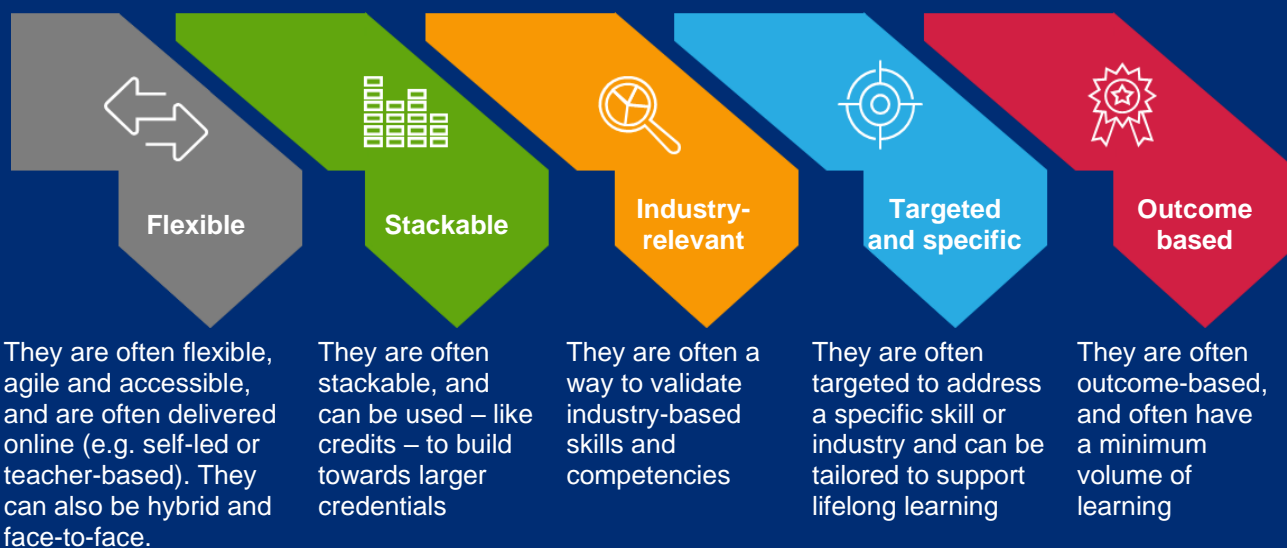


Table 1: A summary of how to determine what are and are not micro-credentials.

Micro-credentials are:	Micro-credentials are not:
<ul style="list-style-type: none"> • Shorter than a full degree or formal qualification • Flexible and readily accessible learner experiences • Credit-bearing or non-credit-bearing. They can be either; the decision should be based on the goals, audience and educational context • Industry focussed with assessments that involve re-world scenarios to support learners with retraining, upskilling and pursuing a career change • Recognised with some form of certificate or digital badge outlining the learning outcomes or competencies that learners achieved • An opportunity for continuous skills development, contributing to lifelong learning. 	<ul style="list-style-type: none"> • Intended to be delivered only using traditional face-to-face delivery, because their value is in offering flexible delivery modes (e.g. online or hybrid depending on the area being instructed) • A full degree program that is multi-year, encompassing a wide range of subjects • A substitute for traditional higher education programs. It does not replace the knowledge gained from a full degree • One-size-fits-all. They are designed to address specific skills or knowledge gaps, but will often be influenced by the operating context • Standardised. They can vary in format, content and assessment methods.

Micro-credential frameworks

Some APEC economies have created frameworks for guiding the creation and recognition of micro-credentials within their education systems. The following examples demonstrate the broad range of possible approaches to developing a framework.

A commonality across all three examples is that each have tried to provide a common definition or point of reference to anchor stakeholders to a set of key principles to encourage greater cohesion. It is not necessary to create a framework to start developing micro-credentials, however, there is value in having a common definition to ensure consistency and clarity.

Table 2: Micro-credential frameworks

	Australia's National Micro-credential Framework	Malaysia's Guidelines to Good Practice: Micro-credentials	New Zealand's Qualifications and Credentials Framework (NZQCF)
Overview	The framework is voluntary. It provides a definition of micro-credentials but there is currently no specific regulator. Currently, most micro-credentials delivered through Vocational Educational Training (VET) are regulated, however those in higher education are all unregulated	The Malaysian Qualifications Agency (MQA) regulates micro-credentials and provides guidelines to adhere to.	The New Zealand Qualifications Authority (NZQA) verifies and assigns micro-credentials to the qualification level, to be listed on the NZQCF. Education organisations (non-university tertiary sector) can choose to have a micro-credential evaluated through Te Hono o te Kahurangi framework .
Requirements	Outcome-based Requires assessment(s)	Outcome-based Have assessments aligned to learning outcomes	Have an assessment component
Role of industry	Responsive to industry need Where applicable, stipulate industry-recognition	Industry-driven	Demonstrate evidence of need with relevant support
Type of learning	Tailored to support lifelong learning Transparent and accessible	Personalised to learner needs Secure, shareable, and transparent	Not specified
Volume of learning	Minimum of one hour and less than that of an Australian Qualification Framework (AQF) award qualification	1 credit point = 40 hours of learning	1 to 40 credits in size

	Australia's National Micro-credential Framework	Malaysia's Guidelines to Good Practice: Micro-credentials	New Zealand's Qualifications and Credentials Framework (NZQCF)
Qualification level	There is no existing means of assigning micro-credentials to AQF levels, but they should outline the nature of the credit and the AQF level/s it leads to	Can align to all MQF levels except foundation and thesis or dissertation-based programmes	Can be taught at any level of the NZQCF (1 to 10)
Credit recognition	Where applicable, should stipulate credit-recognition and the AQF level/s of the qualifications that the micro-credential leads to	Must stipulate credit transfer policies and adhere to MQA Guidelines for Credit Transfer Can be standalone (e.g. no formal credits) or a set of courses from unbundled accredited programs (must have same curriculum)	To be listed on the NZQCF, requirements of the Qualification and Micro-credential Listing and Operational Rules must be met, and Approval and Accreditation Rules
Quality framework	Quality assurance is required through application of a regulated standard or a statement of assurance of quality	Quality assurance is delegated to Quality Verification Centres (QVC) Must have quality assurance processes	Quality assured by NZQA or Universities New Zealand Delivered by NZQA-recognised education providers

1.4. Case studies – Framework examples

Australia

Current Landscape

Australia published its domestic micro-credentials framework in 2021. The framework defines micro-credentials as “a certification of assessed learning or competency, with a minimum volume of learning of one hour and less than an AQF award qualification, that is additional, alternate, complementary to or a component part of an AQF award qualification”.

What’s New

The Australian Government Department of Education is testing the design and delivery of micro-credentials in domestic priority areas from 2023 to 2026 through the Micro-credentials Pilot in Higher Education. The scope of the pilot is informed by recommendations within the University-Industry Collaboration in Teaching and Learning Review.

Summary

Higher education providers in Australia have been creating micro-credentials that learners could ‘stack’ towards a qualification. They are advertised on the government-owned [Micro-credentials Marketplace](#) (MicroCred Seeker) and are based on the industry profiles listed on the National Skills Commission’s website.

New Zealand

Current Landscape

The New Zealand Qualifications Authority (NZQA), a government agency responsible for assessment and qualifications, established specific [criteria](#) for training schemes and micro-credentials in 2018.

What’s New

The NZQA individually reviews the micro-credentials provided by higher education institutions (HEIs), and approves and recognises those based on meeting their quality standards. The NZQA also evaluates their content offered by HEIs outside of New Zealand and provides statements on the credit value and level of learning against the NZQF.

Summary

Funding has also been made available to tertiary education organisations (TEOs) to develop micro-credentials. Education providers continue to be encouraged and led by the government to help meet employer and community demands.

European Union

Current Landscape

The European Massive Open Online Courses (MOOC) Consortium launched the Common Micro-credential Framework (CMF) in 2019, aiming to set [criteria](#) for alternative credentials.

What's New

This has resulted in some courses advertising CMF points and others mentioning other credit reference points such as UK or Australian. The CMF does require students to apply to their university for credit transfer for courses taken through other universities.

Summary

The CMF offers a way to allow students to earn academic credit through MOOCs, but some universities have reported that they feel the path is not as straightforward. Under CMF, it is up to the receiving institution to decide whether to recognise the micro-credential's credit.

United States

Current Landscape

The response to alternative credentials has been led by non-governmental organisations. For example, Credential Engine has developed an online registry presenting information on post-secondary credentials, including alternative credentials. The US Council for Higher Education Accreditation in 2019 also listed possible quality [criteria](#) for alternative credentials.

What's New

Many universities in the USA, such as [University of Colorado Boulder](#), have gone on to create their own micro-credential frameworks,

Summary

Universities, in the absence of a domestic policy framework, appear to have taken on the responsibility of ensuring that quality and integrity are maintained throughout the value chain, from the design of the micro-credential, its approval at institutional level, to its delivery and beyond. This means proposed quality criteria are strongly output-oriented.

South Africa

Current Landscape

The South African Council on Higher Education (CHE) [announced](#) in 2023 it will develop a broad framework for micro-credentials that is intended to inform and guide individual economies and institutions on developing economy-specific frameworks for the recognition of learning through micro-credentials.

What's New

The Council hope to deal with the issue of suitably defining micro-credentials in the South African context, including whether they should be registered on their relevant qualifications frameworks or other types of registers and whether they should be credit-bearing.

Summary

Reporting suggests some universities are a little more advanced in discussions as a result of international partnerships. Overall, there appears to be appetite for framework-building efforts akin to the African Continental Qualifications Framework project.

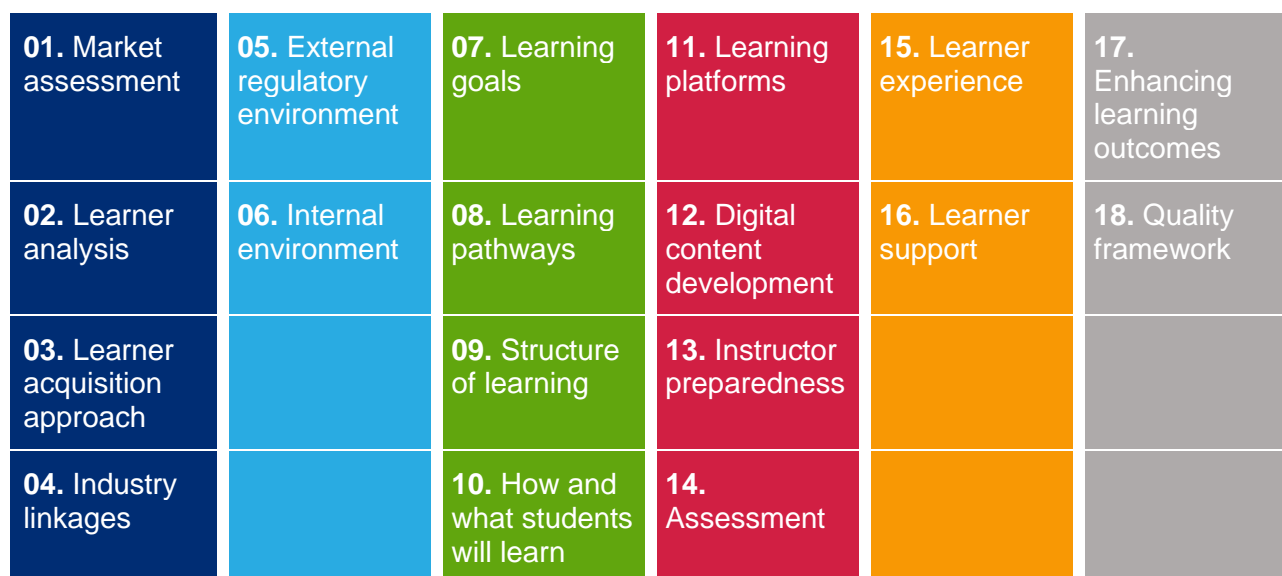
Overview of the approach to creating online micro-credentials

2. Overview of the approach to creating online micro-credentials

The toolkit is structured around 6 key phases, these are:



Within each phase, there are a number of sub-phases as outlined below.



The toolkit lists the phases in a sequential order. It is however expected that through the process of designing, developing, and delivering an online micro-credential, proponents will move back and forth between the phases to ensure the micro-credential is aligned to learner and market needs. In this way the approach allows flexibility to adapt to the local context of each APEC economy.

(I) New micro-credential strategy

Development of a new micro-credential strategy includes the steps taken at the start of the process to ensure the micro-credential addresses a genuine need and there is a clear understanding of the target learner and the size of the market. This evaluation of the market will in turn inform the approach to building awareness of the product and growing enrolments.

In this phase it is important to consider the role of industry and who are the key industry partners that will provide input into the micro-credential.

Analysis conducted in this phase will help ensure the commercial viability of the created online micro-credential.

(II) Operating Context

Analysing the Operating Context refers to the steps taken at the start of the process to ensure the developed micro-credential aligns and complies with both the internal and external environment.

It considers the policy and regulatory context, and the education institutions' requirements to ensure alignment with regulatory requirements, industry standards, university policies and educational frameworks.

This upfront assessment helps ensure that the developed micro-credential is compliant and can be recognised and accredited, if desired.

(III) Design

The Design Phase refers to the planning of specific learning outcomes, assessment methods, and overall structure of the micro-credential. In this phase instructional designers and subject matter experts (SMEs) collaborate to define the competencies or skills that learners should acquire, design the learning structure including the mode of learning and length of course, and define assessment criteria. This ensures the micro-credential is engaging and sufficiently meets the established learning outcomes and assessment criteria.

During the Design Phase, designers will often make key decisions based on the operating context, such as quality assurance frameworks, accreditation criteria, recognition policies and institutional guidelines (e.g. competency standards).

(IV) Develop

The Develop Phase is the stage where the actual creation of the micro-credential takes place.

Instructional designers, content creators, and technical experts work together to produce the learning materials and assessment components as defined in the Design Phase. Examples of content that may be created in this phase includes video clips, interactive content, quizzes, projects, and other formats deemed necessary to help facilitate the learning process and demonstrate or validate the learners' acquired skills.

The Develop Phase ensures that the micro-credential is well-structured, engaging, and sufficiently meets the established learning outcomes and assessment criteria.

(V) Deliver

The Deliver Phase refers to the stage where the online micro-credential is made accessible to learners for enrolment and completion.

The learning materials and assessment components created during the Develop Phase are integrated into the selected learning platform or system (e.g. Coursera / Udemy etc). It is expected that necessary support and guidance throughout the learning journey is provided, ensuring a seamless and effective learning experience that will allow learners to demonstrate their mastery of the specified skills or competencies.

This phase also includes the process of evaluating the learners' performance and awarding the micro-credential for those who have successfully met the assessment criteria.

(VI) Continuous improvement

Continuous improvement refers to the ongoing process of assessing, analysing, and enhancing the micro-credential to ensure its effectiveness, relevance, and quality. This includes ensuring alignment to evolving industry trends.

This process should involve a feedback collection mechanism, data analysis and reviewing the relevance of content and approach to assessing outcomes with industry and other stakeholders.

Activity is also carried out to ensure the technology platforms used are reliable and user-friendly and to evaluate instructor effectiveness.

Continuous improvement efforts contribute to the overall quality and impact of the micro-credential in the education and professional development landscape.

(II) New micro-credential strategy

3. (I) New micro-credential strategy

Developing a strategy for a new online micro-credential that considers the market, the learner, the approach to student recruitment and the role of industry is a critical first stage to strengthen the commercial proposition for the micro-credential. It can provide the foundation for informed decision-making and learner centric design of the online micro-credential. Key elements in this phase will be returned to throughout the Design, Develop and Deliver Phases.

01 Market assessment

Market assessment involves analysing what the market needs and understanding the skills gap the micro-credential will address. This helps ensure it is targeted, industry-aligned and career relevant. Assessing the market is a key step to justify investment and often informs pricing strategy, marketing strategy, and partnership models.

- What skills gap are you addressing?
- How have you validated this?
- How big is the market and what share do you think you can obtain?
- What are competitors doing in the market?
- Who will pay: learner, employer, government?

02 Learner analysis

Learner analysis involves understanding the target learners' existing experience and preferences. It considers their education and industry background so that the micro-credentials are targeted, effective and aligned with the needs and expectations of the target learner.

- Who is the learner?
- How do they like to learn?
- Where does the micro-credential fit into their lifelong learning journey?

03 Learner acquisition approach

Based on the market assessment and learner analysis, the learner acquisition approach considers the activities from raising awareness of the micro-credential through to enrolment. The online micro-credential market is significantly more crowded than that of traditional higher education hence brand plays a more important role and proactive acquisition models are normally required.

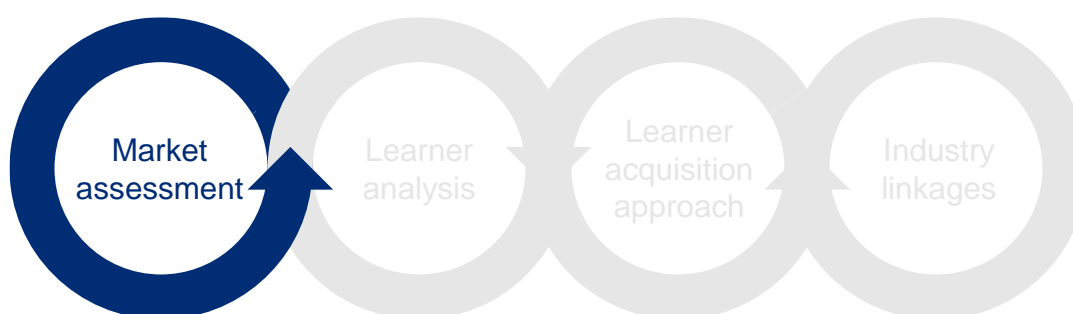
- What are the key elements of your acquisition strategy to drive awareness, support decision making and maximise conversion from enquiry to enrolment?
- What new capabilities or partners do you need?
- What is your budget?

04 Industry linkages

Lifelong learners value industry voice within their learning. Industry partners can inform the skills gap, co-design the curriculum including providing relevant case studies, support delivery of the course and provide ongoing input to ensure the micro-credential remains relevant. Industry endorsement can increase the attractiveness of a micro-credential in the market.

- Who are your key industry partners – do they represent the spectrum of the industry e.g. larger and smaller operators?
- What role will industry partners play in designing, developing, delivering and improving the micro-credential?

01 Market assessment



Purpose

Conducting a market assessment enables organisations to develop online micro-credentials that are relevant to the evolving job landscape. This involves having a clear understanding of the skills gap that the micro-credential will address, for example, is it to respond to an industry demand for a specific skill, or for employees to build their non-technical skills. Defining and clearly articulating the strategic intent will help communicate the value proposition to stakeholders which is critical in identifying and understanding who will pay for the micro-credential, and how much – all of which will inform the design, develop and deliver efforts. It is worth considering different demographics, geographical regions, learner types and industries, as there will be varying cost appetites for different stakeholders. An example of this is when Malaysian Qualifications Agency developed its Good Practice Guidelines to ensure quality and effectiveness of its micro-credentials (see end of section).

Best practices

1. **Needs assessment:** Gathering data on what the market needs will help ensure the micro-credential addresses a genuine demand for specific skills or knowledge. This assessment should inform the learning goals of the micro-credential.
2. **Market research:** Understanding the existing market landscape, including identifying gaps and similar offerings, will help with developing market positioning. Assessing market size will help determine the potential impact and reach of the micro-credential and will aid strategic decision-making related to design, marketing efforts and resource allocation.
3. **Target market position:** Considering factors such as market demand, perceived value, competitive pricing, and the return on investment for learners will inform the design, develop, and deliver efforts. When deciding a target market position, it is worth considering different demographics, geographical regions, learner types and industries, as there will be varying cost appetites for different stakeholders. It may also be worth considering making it an international offer if the micro-credential is portable across borders.

Checklist

- Do you have evidence that the micro-credential addresses real-world challenges?
- Do you know the number of potential learners / size of market appetite?
- Do you know what industries or sectors will want people with the micro-credential?
- Is there an existing micro-credential that could be adapted instead of creating a new one?
- Have you assessed the growth rate of the industry or field to which the micro-credential is related to?
- Do you know who else is doing something similar (the competitive landscape) and can you articulate what sets the micro-credential apart?
- Do you know who is likely to pay for the micro-credential and how much?

Malaysian Qualifications Agency Good Practice Guidelines

Situation

The Malaysian Qualifications Agency recognised the significance of micro-credentials in meeting the evolving needs of its workforce. To ensure quality and effectiveness, the Malaysian Ministry of Education developed comprehensive Good Practice Guidelines on micro-credentials.

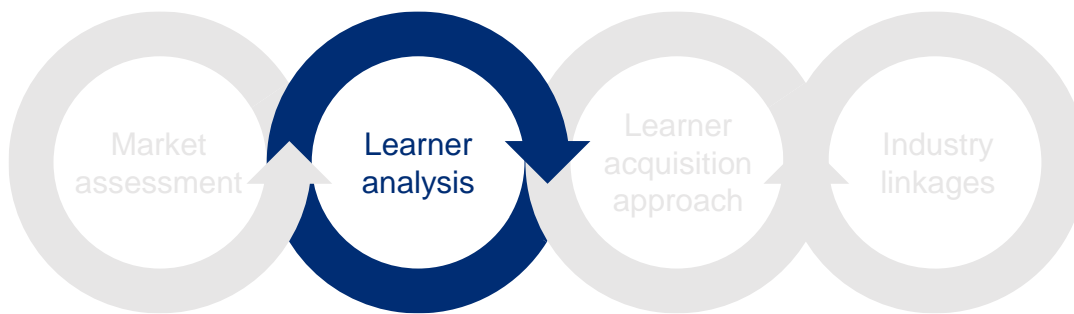
Critical success factors

- Prioritisation of micro-credentials in areas with high job opportunities and skills gaps.
- Incorporation of inputs from industry leaders and associations.
- Emphasis on accessibility to learners from diverse backgrounds, including helping learners with digital content.
- Emphasis on the need for robust technological infrastructure, including ensuring compatibility with different devices.
- Establishment of rigorous quality assurance processes, outlining best practices for assessment methods.
- Provision of insights on sustainable financial models (e.g. encouraging public-private partnerships).

Result

As a result of the Guidelines published in 2020, there are 12,446 micro-credential courses registered to the Malaysian Qualifications Agency online portal as of December 2023. The Guidelines serve as an example of thoughtful consideration of the operating context. This case study highlights the importance of proactive and context-driven approaches to micro-credential development.

02 Learner analysis



Purpose

The online micro-credential should be learner-centred, relevant, and designed to meet the specific goals and preferences of the target audience. Analysing what different cohorts want and need helps ensure a more engaging and successful learning experience. Focus should be on how to deliver in areas such as learner satisfaction to help ensure greater potential for success and completion, better retention rates and yield a positive return on investment.

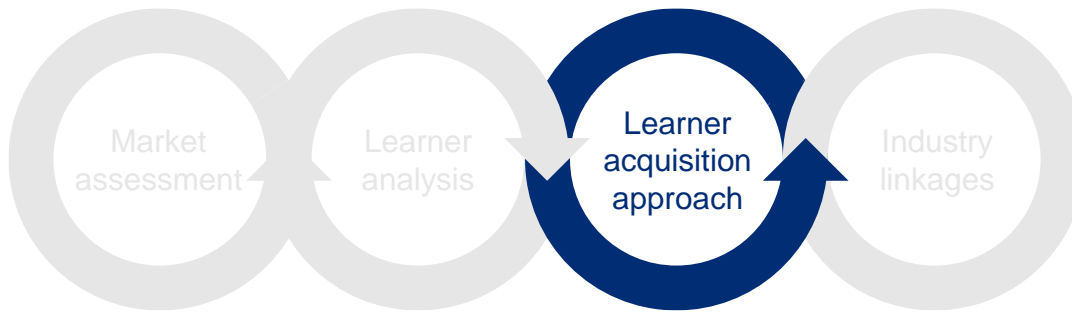
Best practices

1. **Define the target audience:** Identifying the specific group(s) of learners the micro-credential is intended for is a crucial step to guide the rest of the process. Factors to be considered include industry, job roles, experience levels and educational background.
2. **Consider learning styles and preferences:** Recognising different learning styles (visual, auditory, kinaesthetic) will help inform the way that content is developed to meet the needs of the learner.
3. **Assess accessibility needs:** Identifying potential barriers to learning, such as language proficiency, is necessary to ensure inclusive access to the micro-credential. It is also important to assess technological proficiency and whether reasonable adjustments need to be made (e.g. subtitles).
4. **Evaluate motivation and learning goals:** Understanding what learners are interested in and what specific goals they hope to achieve will help guide the design of the micro-credential so that it is meeting learner needs.

Checklist

- Have you identified who the micro-credential will be developed for?
- Have you considered specific regions or demographics worth targeting and their differing needs?
- Are there different learning formats to suit the variety of preferences and learning styles considered?
- Does the micro-credential satisfy the goals and aspirations of the target audience?
- Have you accounted for language proficiency, technology access, digital literacy and accessibility needs?
- Have you considered cultural and diversity considerations?

03 Learner acquisition approach



Purpose

The learner acquisition approach needs to consider the range of activities to build awareness, and tools to support the learners throughout the acquisition process including managing enquiries and enabling enrolments. This may involve in-person or automated engagement activities and will be enhanced by brand strengthening activities. Industry and government partners can help drive brand awareness and credentialise the micro-credential in the market.

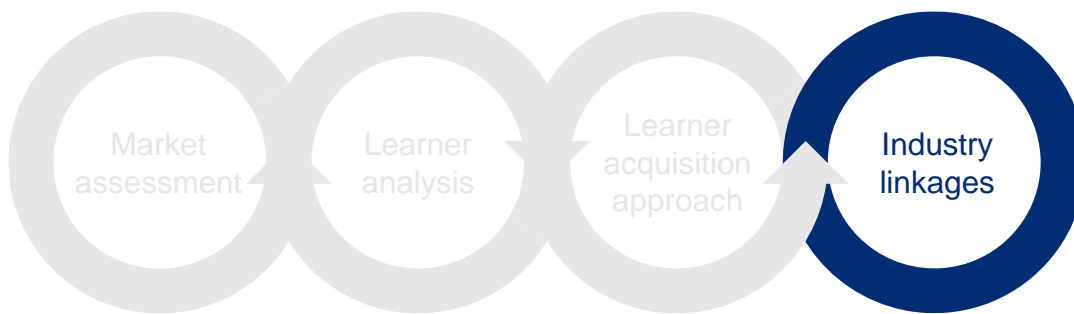
Best practices

1. **A multi-channel acquisition strategy:** Using a range of different mechanisms including targeted digital marketing, phone-based sales, active communications and an up-to-date website, will maximise your ability to build enrolments.
2. **Targeted digital marketing approach:** Digital marketing is a key enabler of enrolments in online courses in most economies. While significant investment may be required it generally delivers a positive return on value to justify the commitment.
3. **Brand awareness:** Leverage industry and government partnerships and use thought leadership to boost awareness of you and your products in the market.

Checklist

- Have you considered your key learner segments in building your acquisition strategy?
- Have you identified required capabilities and partners to help deliver your acquisition strategy?
- Do you have an agreed budget for learner acquisition activities?
- Have you considered how industry could support your acquisition activities?

04 Industry linkages



Purpose

Industry partners play a key role in ensuring that online micro-credentials enable learners to build useful skills. Education institutions can partner with one strategic partner to embed their input across the design, development and delivery of the micro-credential, or partner with a range of organisations to bring in different perspectives. The relative merits of each option will depend on the breadth and variance within the industry. The New Education and Training Model in New South Wales Australia, as outlined at the end of the section is a useful example of partnering with industry to build targeted micro-credentials.

Best practices

1. **Engage industry partners at the outset:** Involving industry partners to validate the market need and requirements before starting to design the micro-credential will help ensure the relevance of the micro-credential.
2. **Industry endorsement or co-branding:** Industry recognition of the micro-credential through endorsements and co-branding can help attract learners and help the micro-credential stand out in a crowded market.
3. **Utilise a broad range of industry partners:** Partnering with different types of organisations to develop and refine the curriculum can provide a broader range of perspectives and examples that will better prepare learners to apply their new skills.
4. **Structure commercial arrangements to deliver benefits to both parties:** To manage expectations and interest of both parties, it is critical to develop commercial agreements to ensure confidentiality of background and developed intellectual property (IP), conditions of licensing agreements and define any payment terms.

Checklist

- Has the role of industry partners been clearly defined?
- Have you identified key industry partners that will span the full lifecycle of the micro-credential?
- Do you have commercial agreements with your industry partners in place to ensure both parties' interests are protected?

New South Wales (NSW) New Education and Training Model (Australia)

Situation

The skills needed to fill jobs in emerging industries are rapidly changing. With such fast-evolving technology, our world-class education and training system can't always keep pace. The NSW New Education and Training Model (NETM) was developed to fill this gap by working in partnership with industry and leading education providers to deliver micro-credentials – short, targeted training courses of about 40 hours each – that allow workers to quickly build the knowledge, skills, and experience that employers need.

Critical success factors

- Work directly with industry to make sure education programs are designed for business, by business.
- offer learners key skills that are in high demand – as validated with industry.
- micro-credentials are delivered through a partnership model where vocational education, higher education and workplace learning come together to deliver training.

Result

NSW New Education and Training Model currently has 43 micro-credentials available. This case study serves as an example of utilising industry partners to ensure market relevance.

3.1. Critical success factors

Critical success factors in the new micro-credential strategy phase include:

- **Knowing market demand and relevance:** Ensure the micro-credential addresses a genuine need or issue so that it will hold value to employers / industry and learners by working with these stakeholders from the beginning.
- **Having a clear value proposition:** Have a strong value proposition for the micro-credential so that the communication of the benefits to the market is clear.
- **Multi-channel acquisition approach:** Develop an approach to building awareness, managing enquiries and supporting enrolments that maximises enrolments in your micro-credential.
- **Recognition:** Seek wider recognition by collaborating with professional bodies in industry. A current example of a globally recognised industry body is the Project Management Institute, which recognises and endorses the Digital Project Manager micro-credential.

(II) Operating context

4. (II) Operating context

Mapping the operating context will inform decision-making and learner-centric design of the online micro-credential. This means the micro-credential will likely be more relevant, valuable, and impactful for learners and the broader community.

05 External regulatory environment

Understanding the external environment involves assessing the policy and regulatory context. The accreditation criteria, credibility and recognition policies, transferability stipulations and quality assurance policies are explored. It is also a chance to assess policies relating to funding, grants or subsidies for the micro-credential.

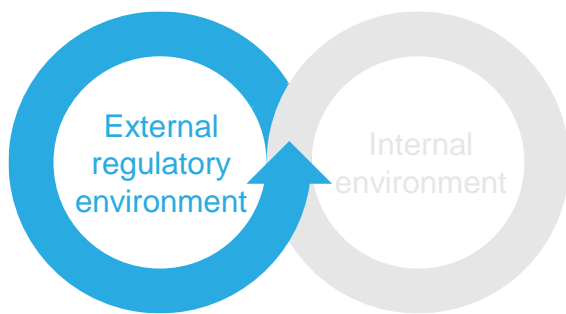
- What are the regulatory policies?
- What quality framework - economy-wide or institution - will you align to?
- Are there specific quality standards that the micro-credential must meet to be recognised?

06 Internal environment

Internal environmental analysis involves looking at the government agency or education institution requirements and existing resources. This includes gathering information on areas such as alignment with the business goals and mission, navigating internal processes including allocation of resources, and leveraging existing resources including existing technical infrastructure, quality frameworks and channels to market. It is also worth considering what sector-led efforts from other educational institutions or bodies have been taken to create economy-wide standards / guidance, for example the American Association of Collegiate Registrars and Admissions Officers (AACRAO) [Best Practices Guidelines](#).

- What resources are available (budget, personnel, technology)?
- Is there existing faculty / expert knowledge?
- How will it fit into the current offerings / curriculum?

05 External regulatory environment



Purpose

The goal is to produce a micro-credential that is trusted, of high-quality and complies with the operating context in which it will exist in. An example is RMIT Online's strategic approach to online micro-credentials (see end of section). Conducting a rigorous assessment of the external regulatory environment helps enhance the credibility of the micro-credential.

The six common areas relating to standards are:

- accreditation rules set by the qualifications authority;
- economy-wide training and education standards set by the relevant body;
- guidelines on micro-credentials that may have been developed by the government / relevant agency;
- regulations around delivering online;
- industry-specific recognition requirements; and
- quality assurance standards set by the relevant agency.

Best practices

1. **Identify relevant regulatory bodies and documents:** Being fully across the information produced by governmental or industry bodies that oversee education and credentialing in the target region or industry will help with compliance and recognition of the micro-credential. In the absence of governmental efforts, it is worth considering what other educational institutions have done to help guide consistency and quality of micro-credentials.
2. **Review accreditation standards:** Aligning the micro-credential to the domestic accreditation criteria will be vital if it is decided that it will be credit-bearing and recognised against the relevant qualification / credit-awarding framework.
3. **Understand quality assurance standards:** Reviewing any industry-specific standards or guidelines that apply to educational programs is critical to ensure the micro-credential meets industry expectations and ensures transferability of credits can occur if relevant.
4. **Understand broader business operating rules:** Applying the local or economy-wide laws related to education, online learning, data privacy and accessibility from the start is essential to ensure operability. Understanding licensing and certification requirements (e.g. intellectual property management and copyright laws) will enable you to leverage content and protect developed Intellectual Property (IP).

Checklist

- Is there a domestic framework or guidelines that guides micro-credential creation?
- If credit bearing, does the micro-credential satisfy the domestic standards set around accreditation?
- Has reporting against quality assurance requirements been considered and mechanisms been put in place to ensure compliance?
- Does the micro-credential meet standards set by the relevant regulatory bodies (both education and industry-specific bodies e.g. domestic training and education standards)?
- Have you checked regulations around delivering online?
- Have you confirmed compliance with business operating requirements?

RMIT Online's strategic approach to online micro-credentials (Australia)

Situation

RMIT Online wanted to provide micro-credentials but found it challenging to maintain academic integrity whilst serving business expectations. For example, the skills and topics covered in the current curriculum needed to address industry problems and opportunities using non-discipline-based frameworks and language. It was also technically challenging to align the industry-driven changes to the Australian Qualification Framework educational learning outcomes. RMIT Online overcame this by building micro-credentials around the needs of the audience.

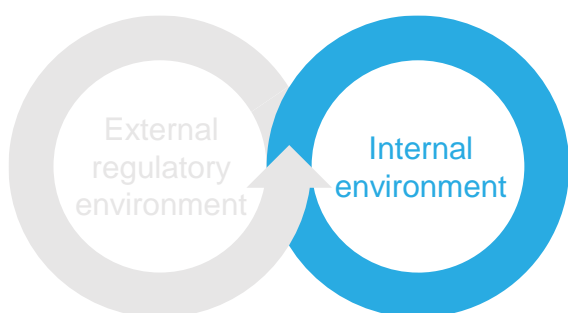
Critical success factors

- Integration of Industry partners and mentors across the value chain to ensure employer needs are met.
- Conducted robust Business Case development including financials.
- Recruitment and coaching of online facilitators.
- Management of the course lifecycle and conducted periodic refreshes where appropriate.
- Collaboration with RMITO product team to consider academic pathways.
- Sought approvals through a credential committee.
- Creation of an integrated student experience across different platforms.
- Careful consideration of brand positioning with the intended audience.

Result

RMIT Online currently has over 80 leading industry partners, more than 50 credentials on offer, and over 24,000 enrolments. This case study serves as an example of a higher education institution aligning its offerings with domestic skills development priorities and education standards.

06 Internal environment



Purpose

Assessing the internal environment in which the online micro-credential would operate within ensures that resources are allocated efficiently, goals are aligned, and the micro-credential upholds the values of the organisation / institution. Institutional or organisational support and buy-in is crucial, and taking time to consider the internal factors will help streamline the internal approval processes allowing for the effective design, development, and delivery of the micro-credential. Activities in this stage will vary depending on the experience the organisation has in delivering online courses and therefore the process, systems and resources that are available to support further development.

Best practices

1. **Understand organisation goals and internal approval processes:** Articulating how the micro-credential aligns to the organisational goals and preparing early for internal approvals helps gain support and resources for the micro-credential.
2. **Identify available resources and capabilities:** Assessing the budget, personnel, technology and expertise available provides necessary guard rails to the design, development and delivery of the micro-credential.
3. **Evaluate existing expertise and faculty:** Understanding whether existing knowledge and expertise is available, or if it needs to be sourced elsewhere, will determine the overall approach (e.g. build from scratch or curate from existing material).
4. **Align to internal quality assurance processes and standards:** Knowing and aligning to internal quality frameworks from the start will help streamline internal approvals. Establishing governance and accountabilities frameworks, if not already present, will support subsequent phases. For example the [Universities Australia Guidance for portability of Australian Micro-credentials](#) case study at the end of the chapter.
5. **Assess current offerings:** Considering how the online micro-credential fits with the existing portfolio can inform decisions on stackability, including seeing if there is an existing micro-credential / skill set that could be adapted.

Checklist

- Does the micro-credential align with the organisational goals?
- Are there any sector-led initiatives around standards and/or best practices that would be useful to consider?
- Do you have buy-in from the key leaders of the organisation?

- Is it clear where it sits in the context of the existing curriculum?
- Are there enough resources to carry out the initial plan (e.g. a budget / available funds, personnel to design, develop and deliver)?
- Has the expertise and knowledge been sourced?
- Does the micro-credential stack towards other programs on offer?

4.1. Critical success factors

Critical success factors in the Operating context phase include:

- **Compliance:** Comply with standards and regulations that are applicable to the micro-credential to foster trust and recognition in the market, including internal and external regulations.
- **Institutional commitment:** Obtain senior management support and leverage in-house resources to ensure alignment and to drive downstream activities. Consider whether the faculty could be incentivised to create micro-credentials.
- **Risk preparation:** Identify potential risks associated with the micro-credential design, development and delivery and implement strategies to mitigate them to ensure a smoother implementation process. This should be continuously referred to throughout the process to ensure risks are proactively mitigated.

(III) Design

5. (III) Design

The Design phase is where the foundation is laid for the creation of a high-quality, effective online micro-credential. Activity focuses on planning and structuring the micro-credential to ensure it meets the intended learning outcomes and provides value to learners, whilst taking into consideration the operating context.

07 Learning goals

Learning goals involves deciding the objectives or outcomes the learners will achieve through completing a micro-credential. Defining learning goals helps educators focus on what they want to cover in the micro-credential. At this point educators should ensure that the learning goals align to the quality framework and other internal or external standards.

- What learning outcomes will be obtained?
- How will you validate these with industry experts and university stakeholders?
- Do the goals adhere to quality frameworks?

08 Learning pathways

Learning pathways involves setting out the structured educational routes or sequences of modules that learners will follow to achieve the specific learning outcomes. The learning pathway should take into consideration whether the micro-credential will combine with, or lead to, other qualifications to achieve a larger credential, or whether it will be standalone. This includes considering academic records, both in terms of recognised prior learning, but also how the credit will link to the learner's record once completed.

- Are there any prerequisites?
- Is the micro-credential stackable with other qualifications?
- How will the credit be logged in the academic record?

09 Structure of learning

Structure of learning involves the organisation and sequencing of content, activities, and assessments to create a coherent and effective learning experience. A logical flow of modules / units within the micro-credential is established, ensuring a progressive approach to developing skills. It is important to create micro-credentials in a way that allows them to be both portable and transferable so that learners and institutions can display, share, and utilise digital credentials.

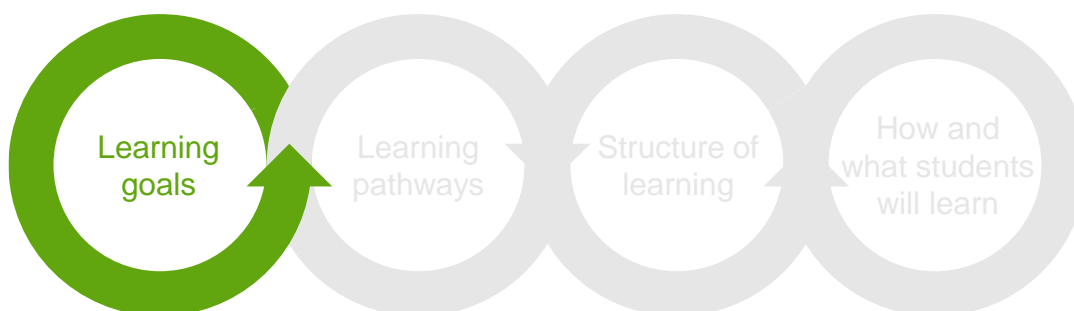
- How many hours is the micro-credential?
- Is it bite-sized, achievable and an appropriate volume of learning?
- Will the learning be structured towards a formal assessment or not?

10 How and what students will learn

How and what students will learn involves deciding what is to be developed and curated based on the design and structure that has been established so far. It will be important to define the time the student will need to invest to obtain the micro-credential.

- Where will you get content from?
- How will you involve industry experts?

07 Learning goals



Purpose

The first step in designing a micro-credential involves setting specific objectives or outcomes that learners will seek to achieve.

Clear learning goals will help learners focus on what they want to learn and provides direction for their educational journey within the micro-credential. Having clearly articulated learning goals can empower learners to take ownership of their learning journey, enhances their learning experience, and facilitates skill development in specific areas of interest or professional growth. Clear learning goals also provide focus for educators during the development and delivery of the micro-credential, as demonstrated by Singapore's SkillsFuture Series team included at the end of the section.

Best practices

1. **Aligned with purpose:** Aligning learning goals with the overall purpose of the micro-credential helps ensure the specific skills or knowledge that learners need to acquire is addressed. Learning goals should be anchored in a decision on what the micro-credential is intended to achieve / solve.
2. **Outcome-focused:** Focusing on outcomes and what they might do afterwards helps ensure measurability of success.
3. **SMART:** Ensuring learning goals are Specific, Measurable, Achievable, Relevant, and Time-Bound is important so that they can be measured against the gaining of the skills, knowledge or competencies that the micro-credential intends to impart.
4. **Milestone-based:** Including smaller, manageable milestones as part of the learning goals helps to make the learning process more achievable and trackable.
5. **Validated with industry:** Developing learning goals in collaboration with industry experts and employers helps validate the relevance of the goals, ensuring that the micro-credential meets the current and future needs of the job market.

Checklist

- Have the specific learning outcomes and competencies that learners would acquire upon completing the micro-credential been defined?
- Have the learning goals been validated with industry experts to ensure the learning goals are relevant and up-to-date, and reflect the latest industry trends and best practices?
- Are the learning outcomes measurable and do they seamlessly transfer into a larger credential program?
- Has the assessment type been considered so that learners can demonstrate competencies gained and learning outcomes achieved?

Singapore's SkillsFuture Series

Situation

The SkillsFuture Series is an economy-wide initiative aimed at upskilling Singaporeans to meet the evolving needs of industries.

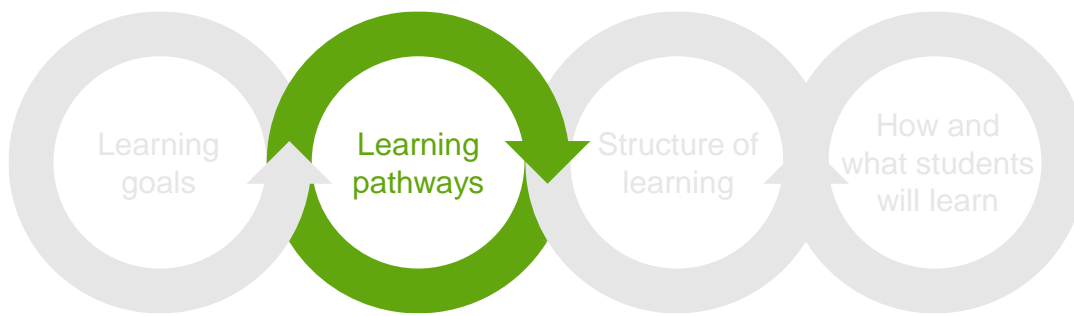
Critical success factors

- Clear learning objectives set by the designers that are specific and measurable.
- Clear industry alignment as a result of extensive consultations with experts, employers and professional associations during the Design phase.
- Emphasis in the design on the practical application of skills via hands-on projects and simulations.
- Purposeful choice to design the micro-credential to be as interactive as possible by including virtual labs, group discussions and peer collaboration.
- Execution of extensive market research on market size and testing of design with small groups along the way.
- Recognition of the need to include specific considerations relevant to Singapore, such as including ethical considerations in the structure of the course (data privacy, compliance with industry regulations and professional conduct).

Result

The program receives high enrolment rates and many employers recognise and value the micro-credentials. This case study shows how the SkillsFuture Series team effectively navigated the Design phase by incorporating industry, practical application of material and learner engagement to provide an effective learning experience that aligns with the overall goals of the micro-credential.

08 Learning pathways



Purpose

Learning pathways consider the educational routes that learners follow in the micro-credential. The learning pathways often take into consideration whether to create a route through a series of ‘stackable’ or interconnected micro-credentials, allowing learners to acquire a comprehensive set of skills and knowledge. As each learner will have a different purpose for undertaking the micro-credential, the learning pathway should offer flexibility and customisation options.

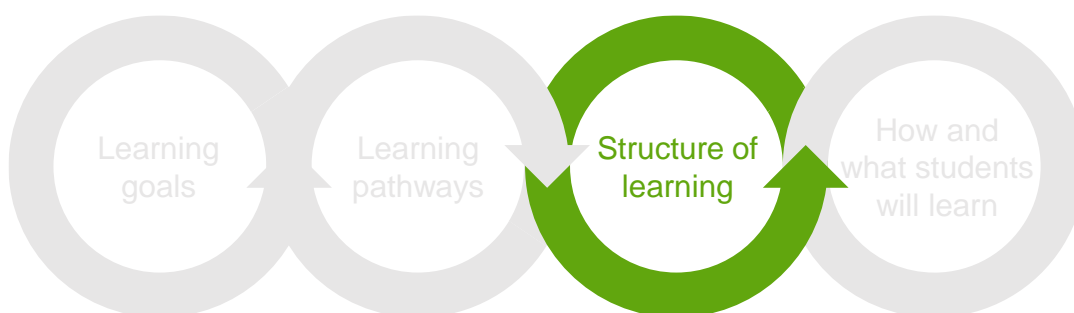
Best practices

1. **Alignment with learning goals:** Aligning learner pathways with specific learning goals helps guide the sequence of modules within the micro-credential. For learners it is important to understand upfront the logical progression of their learning journey and clear achievement of goals.
2. **Stackable credentials:** Designing micro-credentials with stackability in mind to ensure that learners can, if they want, accumulate certifications and credits is important. Micro-credentials can be designed to be bundled with a larger credential. They can also be designed for ‘levelling up’ purposes to advance a skill / linear progression in one area, or ‘clustered’ around different skills to accumulate a ‘build-your-own’ credential. Stacking can maximise the learners’ educational achievements. It offers opportunity for personalisation of learning pathways and can contribute to lifelong learning ambitions.
3. **Credit vs non-credit bearing credentials:** Considering whether or not there is integration of the micro-credential into an existing credit system is important, so that achievement of the learning outcomes leads to credit towards at least one formal qualification, if that is the design decision taken. This means it must meet academic standards required in the target qualification(s). Not all micro-credentials need to be credit-bearing.

Checklist

- Does the learning pathway align with the agreed learning goals?
- Have considerations been made towards stackability of the micro-credential to provide a pathway for learners to gain higher-level qualifications?
- Will the stackability lead to credit-bearing outcomes, and therefore has the qualification system credit rules been embedded?
- Have different learning pathways or routes been considered and developed for learners to pursue the micro-credential (e.g. recognised prior learning)?
- Have the learning pathways considered entry requirements and the personalisation options for entry-level learners versus continued learning / existing learners?

09 Structure of learning



Purpose

Structure of learning is the organisation and sequencing of content, activities, and assessments. It is important to structure the content taking into account the sequential nature of the learning goals and the overall learning experience that delivers the objectives of the micro-credential, as demonstrated by the Universidad del Desarrollo in Chile (refer to end of section). Flexible modular units can be used to accommodate different learning styles and schedules and can enable learners to customise their skill development. During this stage course prerequisites, duration, delivery format, and assessments are defined.

Best practices

1. **Curriculum architecture:** Deciding the overall structure of the micro-credential will influence the value of the micro-credential to the learner. Building the table of content for the micro-credential with an instructional designer or educational developer provides shape to the learning plan and content that will be developed.
2. **Modular design:** Organising the micro-credential into modular units allows learners to choose modules relevant to their individual goals and prior knowledge. This requires thought around the number of modules, volume of learning and size of each unit, their duration and sequencing.
3. **Assessment strategies:** Considering the balance of formative and summative assessments that will be used to evaluate the learners' knowledge is important. Formative assessments are often used to provide ongoing feedback to learners, and the summative assessments are often used to evaluate the learners' overall achievement and mastery of the micro-credential's content.
4. **Evidence of learning:** Structuring the micro-credential should consider what will be earned by the learner at the end; what the micro-credential is building up to. The design needs to take into account what will learners gain once they demonstrate achievement of the competencies (e.g. a digital badge). For example, alternative credentials issued using open badge technology means the issuer can make metadata uploads or link to evidence artifacts which demonstrate how a learner succeeded in meeting the badge criteria.

Checklist

- Has consideration been given on the scaffolding of the learning (e.g. the progression within the table of contents)?
- Has the micro-credential been structured and organised to facilitate comprehension and progression?
- Is it bite-sized, achievable and an appropriate volume of learning (e.g. not akin to a full course or qualification)?

- Will the learning be structured towards a formal assessment or not?
- Will the structure of the micro-credential lead towards the earning of a certificate or badge?
- Has the micro-credential been structured in a way that caters to the varying time constraints and availability of its learners?

Universidad del Desarrollo – Chile

Situation

The Universidad del Desarrollo recognised that the labour market needed reskilling in areas such as self-leadership and digital skills. The institution built an educational platform dedicated to fostering the skills demanded in the job market, with a strong focus on enhancing employability. The platform, Zigna UDD, offers short, asynchronous, and self-guided courses so that students can choose their own learning path.

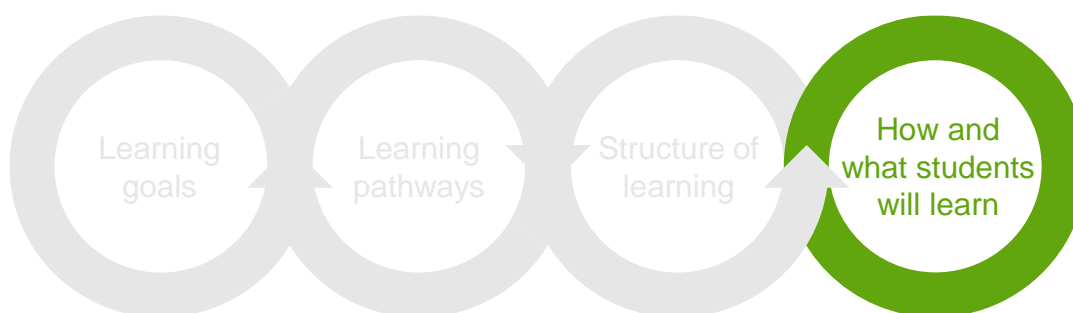
Critical success factors

- Design decisions factored in student preferences (e.g. self-contained courses with a time commitment of 20 to 45 hours).
- Took the time to understand what the market wants, and therefore what the design needs to lead to (e.g. a digital badge).
- Consideration of different technology platforms and how they would integrate e.g. Credly for issuing badges, Wordpress as the Ecommerce website with the course catalogue and login, Open edX as the learning management system containing the course content and a standalone customer relations management platform).
- Utilisation of different strategies, including using AI, to reduce micro-credential development time and effort.
- Consideration of providing different information to meet the needs of different user types (e.g. a tailored website displaying information based on user type).

Result

As of August 2023, there were 4,300 registrations, 1479 completed users and 972 certified users. This case study demonstrates the value in knowing your market well and using different online platforms and strategies to help with the overall efforts of creating a micro-credential.

10 How and what students will learn



Purpose

How and what students will learn is about determining what will be developed and curated with the student in mind. By putting learners at the centre of the design and considering what it is they will learn, how they will learn, their perspectives and expectations, will ensure that the micro-credential being offered will meet learner needs and encourage enrolments.

Best practices

1. **Content curation / expert input:** Planning ahead regarding who will help curate and inform the content will help inform the level of effort that will be needed and will likely shape design decisions, such as whether to build content from scratch, curate from existing content or license content from elsewhere.
2. **Online / hybrid:** Deciding how a learner will take part in the micro-credential will require a decision on whether delivery will be online or hybrid, which may be informed by learner preferences, standards and requirements set at the industry and / or qualification level and available technology platforms.
3. **Learner preferences:** Applying knowledge of the target learner and their preferences as identified in the market analysis to inform the type of content and learning format will increase the relevance of the micro-credential.
4. **Industry validation:** Working closely with industry experts and employers to validate the relevance of the micro-credential's structure and content will help ensure alignment with current job market demands and industry expectations. This will result in better outcomes for learners who successfully complete the micro-credential and make the micro-credential more useful.

Checklist

- Is the planned content sufficient to achieve the learning goals?
- Does the content need to be built from scratch, curated or licensed, and what intellectual property and licensing requirements need to be considered if so?
- Do you have the experts in-house to help curate content and how does this impact budget?
- Have considerations been made towards how the micro-credential will align with industry or educational standards?
- Does the micro-credential design include contextual considerations such as learner preference, availability of internet / technology and feasibility of delivery?

5.1. Critical success factors

The critical success factors in the Design phase include:

- **Governance:** Establish effective governance structures to oversee the development and design of the micro-credential, including rigorous approval processes. Set up robust and ethical procedures to ensure alignment across different teams and have clear roles and responsibilities for design, development, and delivery of the micro-credential.
- **Market research:** Complete market research before undertaking the Design Phase to understand the size of the market and the characteristics of the target audience. This will ensure the micro-credential is designed with the learner in mind and investment is aligned with market potential.
- **Cost-benefit analysis:** Evaluate the cost associated with design choices against the anticipated benefits early on. This will inform the resources required to progress from design into delivery.
- **Scalability and flexibility for growth:** Design the micro-credential with scalability in mind (e.g. expansion into other markets or subject areas) to ensure ongoing return on investment.
- **Partnerships:** Seek out strategic partners for collaboration.
- **Credibility:** Ensure the micro-credential demonstrates trust in the credential, it is immutable, and the issuer and authority behind the credential is easily discerned.
- **Learner-centred:** Have a learner-centred design approach that prioritises the needs, preferences and expectations of learners to ensure a more effective learning experience.

(IV) Develop



6. (IV) Develop

In the Develop phase the focus of activity is on ensuring the micro-credential is well-structured, effective and meets the needs of the target learner. This includes developing high-quality learning materials in a range of formats e.g. written content, videos, and interactive exercises.

11 Learning platforms

Learning platforms involves considering the digital environments or online systems that facilitate the creation, delivery, and management of the micro-credential. Some learning providers use more than one platform to create the optimal learning experience. Cost will be a key consideration when selecting a platform(s).

- What functionality will you need to enable the desired learner experience?

12 Digital content development

Digital content development involves creating the educational materials, resources and assets that are used to deliver the micro-credential. This may include developing video lectures, interactive modules, quizzes, assignments, readings, and simulations that align with the learning goals from the Design phase. The content should be structured and organised in a way that effectively conveys the knowledge or skills to the learner. It may require building from scratch, curating from existing content and / or licensing material.

- What format will the content take?
- How will it be interactive and user-friendly?
- How will you meet quality standards?
- How resource-intensive will it be?

13 Instructor preparedness

Preparedness of instructors involves ensuring they are adequately equipped and ready to effectively deliver the micro-credential learning experience. Instructors should have subject knowledge, as well as an understanding of the course structure, be familiar with the technology that is to be used and have deep knowledge on the assessment and feedback mechanisms.

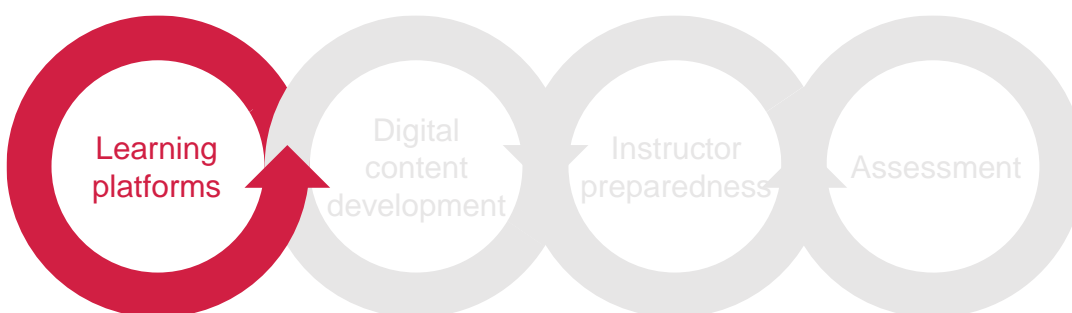
- What is needed to ensure effective andragogical approaches for online and micro learning?

14 Assessment

Assessment involves considering how to measure how well learners have understood and applied content covered in the micro-credential. This means deciding the type of assessment(s), how often assessment occurs, whether it is formative or summative, how it mirrors real-world tasks, how feedback is provided and how validity and reliability of the learner results can be ensured. The assessment approach should consider how to ensure academic integrity.

- Does the assessment criteria clearly outline expectations for performance?
- How will you ensure validity of results in an online, self-paced environment?

11 Learning platforms



Purpose

Learning platforms involves selecting and implementing appropriate digital platforms to deliver the online micro-credential. Careful consideration is required to select the learning management system or other online platforms that support various content formats, interactive activities, and assessment tools. Consideration should be given to how different platforms might interface with each other, so that the online micro-credential can offer a learner-centred end-to-end educational experience. For example, Chile's [Zigna](#) UDD learning platform referenced in section 5.3 and BCdiploma (a platform dedicated for issuers to create credentials), which are referenced at the end of chapter.

Best practices

1. **User-friendly interface:** Designing / procuring a learning platform with an intuitive and user-friendly interface will make it easier for all learners to navigate and access course content. It may be necessary to consider how to harmonise different digital platforms if more than one is being used (e.g. the digital badge might be on Credly, whilst the modular content is delivered elsewhere). This includes ensuring technology platforms are compliant with digital standards that enable them to be interoperable and exchangeable among and between credential providers.
2. **Security and privacy measures:** Implementing robust security measures and data privacy protocols to protect learners' personal information and ensure a safe and secure learning environment is critical to ensure the credibility of the course. The protection of intellectual property will also need to be considered as well as cyber security measures.
3. **Learning analytics:** selecting a platform that provides learning analytics enables continuous improvement, personalisation, and evidence-based decision-making.
4. **Scalability and reliability:** The learning platform needs to have capacity for expected number of learners and provide reliable performance, even during peak usage periods.
5. **Easy updates:** Selection of the platform should also consider how to facilitate easy content updates and revisions, so that instructors can keep the learning material current and relevant.

Checklist

- Has an appropriate learning management system / online platform that can support the specific content formats and interactive elements to host the micro-credential been selected?
- Has cost been considered in the selection of the system(s)?
- Have considerations been made towards the platform accessibility for different devices?

- Has the selected learning platform been evaluated in terms of how it will facilitate communication between learners, instructors, and support staff, especially if on a different platform?
- Does the learning platform offer features for learner tracking, progress monitoring, and performance analytics?

BCdiploma

Situation

BCdiploma is a French project, launched by an Initial Coin Offering (ICO) technology in early 2018. The project was initiated by EdTech experts who recognised that there was a multi-billion-dollar market when it came to applicants inflating their experience or lying about their diplomas. This in turn causes a significant strain on human resources.

Consequently, the BCdiploma team decided to address this challenge by facilitating and automating the verification of the authenticity of diplomas using Ethereum technology.

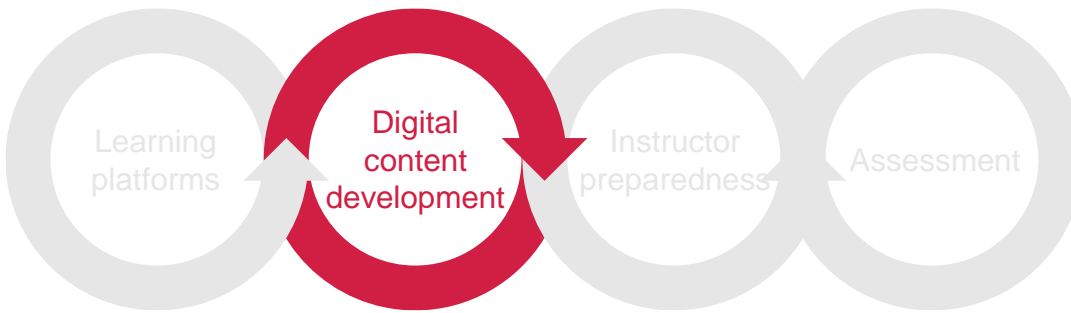
Critical success factors

- Addressed a challenge which provides quantifiable benefits to its users (i.e., time savings from not needing to conduct research).
- Utilised advanced technology (blockchain) to store diplomas ensuring that they can no longer be lost or destroyed.
- Designed an encryption solution that is carried out with three keys, one for the institution, one for the network, and the last one belonging to the student and so the data even if readable on the blockchain, is not actually accessible without the three different keys of the system's actors. This provides an additional layer of security to further protect the information from tampering.
- Protected the value of the learners' diplomas.

Result

BCdiploma uses its technology expertise to provide a safe and secure environment and assure the credibility of the credentials in an environment where data privacy and security is a significant concern. As of today, BCdiploma has partnered with over 170 institutions from 22 economies. This demonstrates the value that can be created in addressing a market gap.

12 Digital content development



Purpose

Digital content development involves the creation of high-quality and engaging educational materials delivered through learning management system(s) / online platforms. These should align with the learning objectives decided in the Design phase. The content developed should consider diverse learning styles and preferences and incorporate different multimedia elements to continuously engage the learners throughout their education journey. An example of this is Harvard and edX’s “Data Science MicroMasters” program (see end of section). Cost will be a large factor in what multimedia and interactive options are selected at this stage.

Best practices

1. **Alignment with learning objectives:** Aligning digital content to the micro-credential’s learning objectives will help ensure the learner acquires the specific skills and knowledge. Different formats are better suited to different objectives, so it is worthwhile spending time considering the pros and cons of each format.
2. **Alignment with pedagogy:** Aligning content with sound pedagogical principles will help support active learning and critical thinking.
3. **Responsive design:** Optimising the digital content for various devices and screen sizes will help provide a seamless learning experience across different digital tools such as desktops, tablets, and smartphones.
4. **Accessibility and inclusivity:** Designing digital content with accessibility features to accommodate learners with diverse abilities ensures inclusivity in the learning experience.
5. **Interactive elements:** Incorporating interactive elements, such as videos, simulations, short questions within an educational resource and audio help enrich the learners’ experience.

Checklist

- Have materials in different formats been developed to cater to varying learning styles, backgrounds, and preferences?
- Has consideration been made to ensure content will be presented in a clear, organised, and user-friendly manner?
- Has consideration been made for updating digital content?
- Has robust analysis been done around the cost to develop, deliver and upkeep the content?
- Does the digital content address the milestones in the learner journey?

Harvard and edX’s “Data Science MicroMasters” program

Situation

Harvard University, in collaboration with edX, [created a micro-credential](#) designed to advance a learner’s data science skills. It is aimed at a global audience and offers a flexible, online experience.

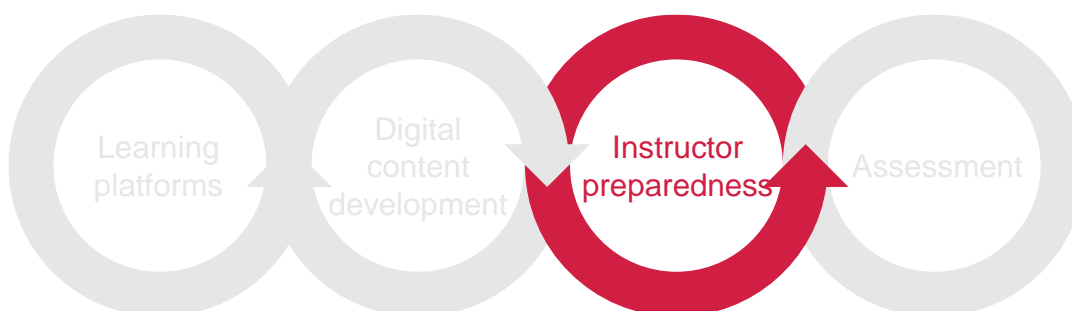
Critical success factors

- Provision of engaging content and instruction via a mix of videos lectures, interactive exercising and hands-on coding projects.
- Provision of world-class content inputted by Harvard’s School of Engineering and Applied Sciences, renowned for their expertise in data science.
- Selection of a robust technology infrastructure, provided by partnering with edX.

Result

The program attracts thousands of learners worldwide. The success of the micro-credential is attributed to the combination of a renowned faculty, engaging content and a flexible online environment. This case study exemplifies the importance of considering high-quality content with how it will be delivered online, putting the learner experience at the centre of developing the micro-credential.

13 Instructor preparedness



Instructor preparedness involves equipping instructors and facilitators with the necessary skills, knowledge, and resources to effectively deliver the online micro-credential. This includes information on the micro-credential’s content - learning objectives, course material, and assessment strategies - and the chosen learning management system to ensure the instructors are well-equipped to create a positive and conducive learning environment.

Best practices

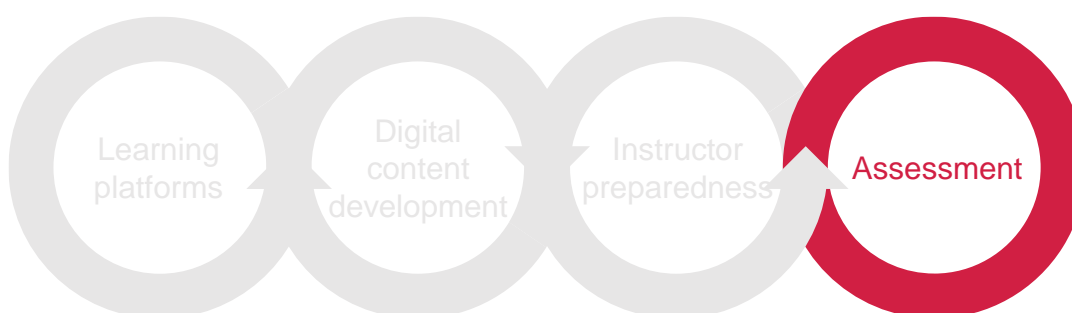
1. **Comprehensive training programs:** Providing instructors and facilitators with comprehensive training that covers technical and non-technical skills and effective online teaching methodologies contributes to the learner experience and market perception.
2. **Supportive resources:** Offering access to instructional resources such as lesson plans, teaching guides, multimedia assets, and examples of best practices to aid in course preparation and delivery will help contribute to teaching standards.
3. **Feedback and assessment techniques:** Providing training around giving constructive feedback will help support learners’ progress and growth and help them understand where they have made mistakes.

4. **Quality assurance measures:** Embedding quality assurance measures to monitor and assess instructors' performance will help ensure consistency in the delivery of the online micro-credential and maintain credibility in the market.
5. **Community building:** Providing instructors with a common platform to facilitate collaboration, allowing them to share experiences, exchange ideas and co-design course content, will be necessary in the online learning environment.

Checklist

- Have qualifications, expertise and experience requirements for instructors been clearly articulated?
- Has consideration been given as to how instructors will be trained and prepared to deliver the content and assessments in a consistent manner in an online environment?
- Are there guidelines for instructors on fostering an interactive and engaging learning environment online?
- Has consideration been given as to how instructor performance will be evaluated and supported?

14 Assessment



Purpose

Assessment involves designing and implementing effective evaluation methods to measure learners' progress, mastery, and achievement of learning outcomes. The assessment stage is particularly critical to maintain the integrity and credibility of the micro-credential. Well-designed assessment ensures that learners' accomplishments are accurately measured and enables learners to receive tangible recognition for their newly acquired skills (e.g. a digital badge), which enhances the value of the micro-credential in their academic or professional journey.

Best practices

1. **Alignment with learning objectives:** Aligning assessment with the micro-credential's learning objectives ensures there is adequate testing of the specific skills and knowledge acquired.
2. **Varied assessment methods:** Developing different assessment methods such as quizzes, practical projects, case studies, and peer evaluations helps ensure a robust and comprehensive evaluation of the learners' capabilities.
3. **Clear rubric and guidelines:** Providing clear assessment rubrics and guidelines that outline the criteria for evaluation helps ensure transparency and consistency in grading. This helps maintain the integrity and credibility of the micro-credential.

4. **Real-world assessment design:** Developing assessments that mirror tasks or challenges learners would encounter in professional settings helps enhance the micro-credential's practical relevance and value to the industry.
5. **Secure assessment environment:** Developing secure assessment practices, such as online proctoring or plagiarism detection tools, help maintain the integrity of the assessment process.

Checklist

- Have you considered any requirements in domestic education standards and / or industry standards around assessment or mastery of the specified skills?
- Have the assessments been designed to align with the specific learning outcomes, in a measurable and observable way?
- Is the selected format the best way to convey the skill / competency?
- Have the assessments been designed in a way that allows learners to confidently apply their knowledge and skills to real-world scenarios?
- Have assessments been designed with accessibility considerations?
- Have reasonable security measures been considered to ensure assessments are conducted with integrity?

6.1. Critical success factors

The critical success factors in the Develop phase include:

- **Clear learning objectives:** Start the Develop phase with clear learning objectives (as defined in the Design Phase) to provide focus for content development.
- **Focus on learner-centred approach:** Prioritise the needs and preferences of the learner, such as providing opportunities for self-directed learning.
- **Relevance of content to industry needs:** Ensure what is being developed aligns with industry trends and demand, as well as local context (for example, Rwanda's healthcare initiative at the end of the section).
- **Expertise of instructors and facilitators:** Leverage the expertise of different professionals including education designers, subject matter experts, content developers and instructors to curate an engaging learning experience.
- **Robust technology infrastructure:** Use a reliable and secure learning management system that enables analysis of learner journeys.
- **Continuous quality assurance:** Embed mechanisms that monitor and ensure the quality of the micro-credential as this streamlines the continuous improvement process.

Rwanda's healthcare initiative

Situation

The Rwandan government partnered with international healthcare organisations and educational institutions to access expertise and resources to help [create an online micro-credential](#) that bridges a gap in healthcare management and administration.

Critical success factors

- Partnerships, to ensure access to expertise and resources.
- Provision of localised content so that the curriculum is tailored to address specific healthcare challenges in the economy, incorporating local case studies and examples.
- Selection of accessible technology and infrastructure, with efforts made to ensure learners in remote area had access to the internet and necessary technology.
- Provision of instructor training and support, including training in online pedagogy and a team of educational technologists to provide additional support.
- Emphasis on accessible and inclusive design as a result of efforts to ensure the micro-credential is accessible to a diverse group of learners, including those with limited English proficiency.

Result

The program successfully trained a cohort of healthcare professionals to address an identified skills gap. This resulted in improved job performance. This case study exemplifies that when developing a micro-credential, local context and market relevance are crucial to its success in resource-constrained settings. It also demonstrates how partnerships can provide valuable expertise and resources for content creation.

(V) Deliver

7. (V) Deliver

The Deliver phase focuses on providing an effective and engaging learner experience for participants. This includes consideration of clear learning pathways as well as support and resources to deepen learner understanding.

15 Learner experience

Learner experience involves all aspects of engagement from enrolment and onboarding to completion, and the personalisation of pathways. The experience that will be delivered often depends on various factors such as complexity of the content, goals of the micro-credential and expectations of the learners. As a minimum, the learner experience should consider user interface and ease of use, content presentation, communication, collaboration between students, assessment, and credit recognition.

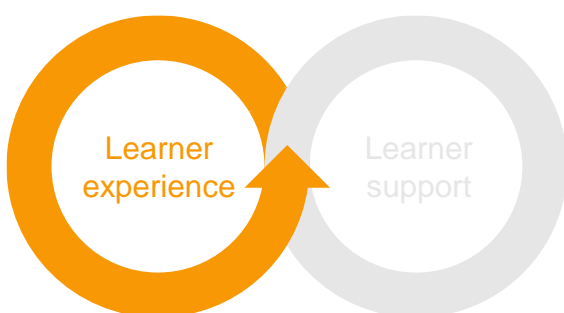
- How user-friendly is the enrolment process?
- Are there learning paths that align with the learner's goals?
- What distinguishes the micro-credential from other learning opportunities (value proposition)?

16 Learner support

Learner support involves the resources, services and assistance provided to learners throughout their journey to enhance their experience and help them succeed in the micro-credential. Learner support typically includes, but is not limited to, access to course materials and instructions, technical assistance to navigate online platforms, and community interaction to talk to peers. The level of learner support can vary based on the nature of the micro-credential, the target audience, and the learning goals. It is important to strike a balance between providing adequate support and maintaining the flexibility and convenience a micro-credential aims to offer.

- Is there a dedicated support team or helpdesk?
- What resources or activities will help learners get acquainted with the micro-credential?
- Will learners be able to access an instructor?

15 Learner experience



Purpose

Learner experience relates to the end-to-end journey that learners go through while participating in the micro-credential. Every interaction with the online micro-credential is considered from enrolment to completion and receiving recognition. The learner experience will be shaped by the activities conducted in the Operating context analysis, Design and Develop phases. Key considerations for the user experience include interface design, content accessibility, learning activities, assessments, communication channels, and support mechanisms. It also includes wellbeing aspects. The learner experience should be crafted so that learners feel valued throughout their educational journey, leading to greater learning outcomes and a positive perception of the micro-credential experience. An example of this is the work of the National Skills Development Corporation (NSDC) in India, which is included as a case study at the end of the section.

Best practices

1. **Alignment with market needs:** Providing a cohesive end to end experience informed by market analysis will enhance learner engagement and outcomes.
2. **Orientation and onboarding:** Delivering orientation and onboarding sessions are necessary to familiarise learners with the digital platform, resources, and support services available. It helps learners seamlessly navigate the online micro-credential.
3. **Focus on the whole student:** Learning experience should also focus on student wellbeing, along with access and equity issues. In many economies there are regulations on this that need to be complied with.
4. **User-friendly interface:** Providing a learning platform that is intuitive and user-friendly is important, so that it is easy for all learners (including learners with diverse abilities and accessibility requirements) to navigate and access content.
5. **Predictive learning suggestions:** Embedding analytic capabilities that predict learning pathways can provide personalised recommendations and guide learners towards resources and credentials that lead to other skills advancement programs.
6. **Recognition of achievement:** Providing a format of achievement that is desired by the learner and that can be available on the learner's academic record is important. Micro-credentials should be portable and transferable. Recognition such as digital badges or certificates that hold industry credibility provide tangible evidence of learning achievements and can also be used to enhance professional profiles. An example is IBM's Digital Badge Program included at the end of the section.

Checklist

- Are the components of the learning journey informed by the market analysis?
- Has the onboarding process been developed and structured in a way that is user-friendly and straightforward?
- Has the selected learning management system or platform been tailored in a way that is intuitive and easy to navigate for learners of varying technical / digital literacy?
- Has the learner experience been curated in a way that promotes lifelong learning and upskilling?
- Has market analysis been conducted to understand what type of recognition holds the most value?
- Has consideration been given regarding what the learner would do next?

The National Skills Development Corporation (NSDC) in India

Situation

The NSDC is a public-private partnership organisation in India that developed an initiative to deliver a Digital Marketing micro-credential. The course includes online self-paced modules accessible via a dedicated platform and mobile learning through an App to reach learners in remote areas.

Critical success factors

- Selection of diverse delivery modes that recognises the varied learning preferences and access to resources in India.
- Emphasis on language localisation by including content in multiple Indian dialects to cater to a wider audience and improve accessibility.
- Involvement of employer partnerships and job placement support, which saw the NSDC collaborating with industry partners, to ensure content and delivery of the micro-credential remains relevant as well as provide job placement support for successful learners.

Result

The micro-credential reached a broad audience in both rural and urban areas. Learner feedback emphasised the effectiveness of the different delivery modes as learners welcomed the option to choose what best suited their learning preferences and circumstances. This case study exemplifies the power in offering diverse delivery modes to allow for greater accessibility and inclusivity, especially in a diverse economy like India with varying levels of technological access. Being able to accommodate the unique learning needs and context within the economy contributed to the success of NSDC's micro-credential.

IBM's Digital Badge Program

Situation

IBM launched a [digital badge program](#) which focused on the outcome learners would gain. The aim was to provide a credential that would be industry recognised globally.

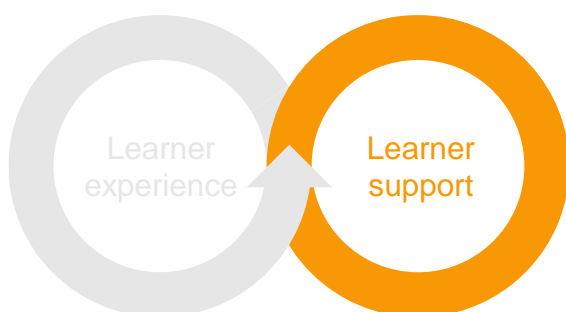
Critical success factors

- Determination to ensure global Industry recognition and credibility.
- Decision to validate one specific skill, focusing delivery of the micro-credential on the learner being able to provide clear evidence of expertise to an employer.
- Integration with online profiles, delivered via badges that are designed to be easily shareable on professional platforms like LinkedIn.
- Emphasis on continuous learning and upskilling by ensuring a link to ongoing learning and skill development. Learners can earn additional badges to advance their levels of expertise.

Result

The program is applauded for its focus on providing a visual representation of skills via digital badges, allowing professionals to stand out in a competitive job market. The clear alignment with industry needs and application of a well-known brand provides credibility to the digital credential(s). This case study demonstrates the importance of delivering an experience that allows the learner to display their achievements and encourages lifelong learning opportunities that can be tailored to their learning experience and job requirements.

16 Learner support



Purpose

Learner support involves creating a responsive system to assist learners. This includes providing technical assistance, academic guidance, and educational resources to learners, to ensure that they have the necessary tools to succeed. It is necessary to consider contexts such as time zones that can impact availability of learner support, especially if the micro-credential is asynchronous. A supportive environment that prioritises learners' needs may boost the learners' confidence in completing the micro-credential, and hopefully encourage lifelong learning. It is also worthwhile considering what student well-being provisions are available, as it will be vital to have student services in place.

Best practices

1. **Responsive support:** Providing responsive support channels for both IT systems and course content will help address learners' questions and keep them engaged. These are often in the form of discussion forums, chat, email and help centres. Leveraging existing support channels where they exist will minimise cost. Support might also include providing information regarding

progress in the micro-credential and sending reminders to students who have not progressed as expected.

2. **Inclusivity and accessibility:** Offering dedicated support that can accommodate learners with disabilities / accessibility issues, or diverse abilities and backgrounds is important. Technology and data analytics can help personalise learning experiences and embedding adaptive learning to improve accessibility.
3. **Learning resource library:** Curating a resource library that includes supplementary materials and further reading to support deeper exploration of topics will help improve the learner's chance of success.
4. **FAQ landing page:** Creating a landing page that learners can access answers to common queries can remove pressure on other support channels.

Checklist

- Has an appropriate support system been created or developed to ensure that learners are supported throughout their micro-credential journey?
- Have various communication channels been developed and embedded to ensure that learners can seek support or ask questions?
- Has sufficient consideration been made in regard to support required for learners with disabilities / accessibility issues, or diverse abilities and backgrounds?
- Has a well-being service been provided?

7.1. Critical success factors

Critical success factors in the Deliver phase depend heavily on the work done in the earlier stages. They include:

- **Delivery structure:** Break down the delivery of the content into manageable units or modules to allow learners to progress at their own pace.
- **Delivering an outcome the learner wants:** Have a clear achievement offer (e.g. a digital badge) so that learners and relevant industries know what will be gained from the outset.
- **Alignment with sound pedagogical principles:** Apply sound instructional design principles to create effective learning experiences.
- **Time management and resource allocation:** Create a realistic timeline for the develop and design process and allocate resources effectively so that delivery is a success.
- **Pilot testing and iteration:** Conduct pilots with a small group to gather feedback and adjust.
- **Continuous quality assurance:** Implement mechanisms to monitor and ensure the quality of delivering the micro-credential so that it can be adapted and refined.

(VI) Continuous improvement

8. (VI) Continuous improvement

In the continuous improvement phase, focus is on regularly evaluating and refining the online micro-credential to improve the overall effectiveness of the learning experience. It is a chance to improve the way in which it is delivered and to adapt to changing needs arising from industry and technology advancements. This process helps preserve the relevance and value of the online micro-credential to the market.

17 Enhancing learning outcomes

Enhancing learning outcomes involves activities undertaken to keep the micro-credential up to date and responsive to learner needs. It includes content updates based on industry trends, technology upgrades, assessment enhancements, learner feedback integration, instructor training and development, review of learning objectives and quality assurance checks.

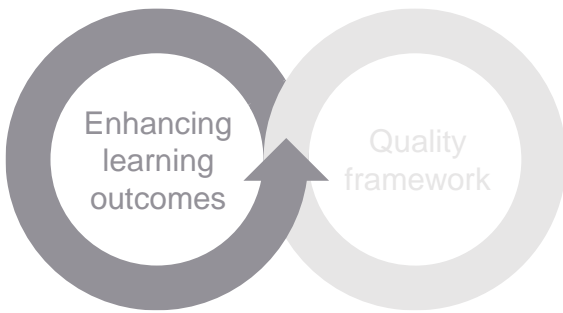
- How often will formal reviews be conducted?
- How often will the micro-credential be updated?
- What data are you collecting to analyse effectiveness?
- How are instructors kept up to date with changes in the content and delivery methods?
- How will you incorporate faculty development and support instructors in adapting to changes and improvements?

18 Quality framework

Quality framework involves having a structured and systematic process that outlines the standards, processes and strategies used to ensure the micro-credential consistently meets high-quality standards and evolves over time. Continuous improvement needs to be anchored to a quality framework. There may be a local quality assurance process and / or one set by the institution creating the micro-credential. The framework provides a roadmap for maintaining and enhancing the quality, effectiveness and relevance through ongoing assessment, analysis and adjustments.

- How often are you checking back against the quality framework?
- What is the process for maintaining accreditation, if applicable?

17 Enhancing learning outcomes



Purpose

Enhancing learning outcomes involves regular evaluation and refinement of the online micro-credential to improve the overall impact and lead to better outcomes for the learner. Best practice involves data-informed decision-making to help ensure the micro-credential can evolve to maintain a competitive edge in the online education market. An example of this is the University of Toronto's online micro-credential in Blockchain Technology (see end of section).

Best practices

1. **Learner feedback and surveys:** Establishing mechanisms that gather input from participants will help identify areas for improvement.
2. **Performance data analysis:** Enabling data collection from a) learners, b) the learning management system, and c) industry helps identify trends, areas of strength and areas that need addressing.
3. **Benchmarking and comparative analysis:** Comparing the micro-credential's performance and outcomes against industry standards or similar education offerings helps identify areas that need strengthening.
4. **Pilot testing improvements:** Conducting pilots with smaller groups provides useful, actionable feedback ahead of full-scale implementation.
5. **Content updates and revisions:** Regularly reviewing and updating content to incorporate industry trends, technologies and best practices is important. Given their shorter shelf life it is necessary to have a more frequent cadence of assessing industry relevance and whether enrolment targets and student needs are met
6. **Continue stakeholder collaboration:** Continuing to bring in industry partners, SMEs and learners (as done in the previous phases) into the process provides valuable input and insights.

Checklist

- Has a process been established that clearly sets out how often the micro-credential will be reviewed and the mechanisms to be used?
- Is there appropriate data coverage in order to inform all the elements of the online micro-credential?
- Has consideration been made to ensure monitoring of industry trends to inform content updates (e.g. subscriptions to industry publications)?
- Are the relevant stakeholders and subject matter experts appropriately involved?
- Is there a current inventory and frequent assessment of the micro-credential meeting the expected targets and needs (e.g. its viability)?

University of Toronto's online micro-credential in Blockchain Technology

Situation

The University launched a micro-credential in blockchain technology to address the rising demand for expertise. While it was well received, there was a need for continuous improvement to remain competitive in the rapidly evolving industry.

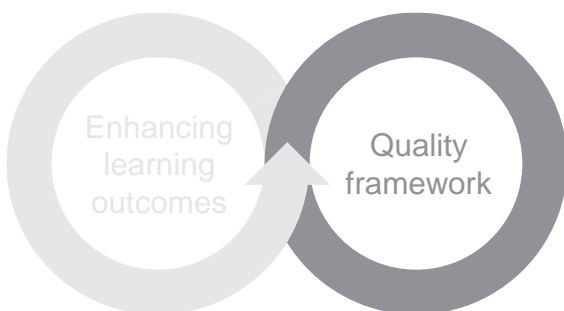
Critical success factors

- Establishing a quality framework to guide the improvement process.
- Involving industry experts, blockchain developers and professionals to ensure alignment with latest trends.
- Integrating learner feedback captured from surveys, focus groups and discussion forums.
- Establishing a process for continuous data collection and analysis, producing regular reports to track progress against predefined KPIs.

Result

The University implemented a number of changes including integration of practical labs so that learners could build and deploy their own blockchain applications, addition of real-world use cases and case studies in the curriculum, and collaboration with blockchain startups to provide access to live projects and mentorships. The University also engaged an external panel of blockchain experts to do a thorough assessment of content, practical applications and learner outcomes. These continuous improvements activities resulted in a significant increase in learner satisfaction. This case study demonstrates how a structured approach, including a quality framework, stakeholder engagement and data-driven decision-making, can have a positive impact.

18 Quality framework



Purpose

Applying a quality framework involves continuous checking back against clear standards and criteria for the design, development, and delivery of the micro-credential to guide improvements. It provides a structured foundation for evaluating performance and identifying areas for adjustment. Often there will be an existing quality framework, either established by the institution and / or the economy-wide education system that should be applied throughout the entire approach. An example of this is the United Kingdom's Micro-credentials Characteristics Statement (see end of section).

Best practices

1. **Consider existing quality frameworks:** Looking at all applicable frameworks by accreditation bodies, education providers / bodies, government education departments, international organisations, professional associates, or internal standards set by the institution will help ensure compliance with necessary standards. This will also contribute to whether the micro-credential fits accreditation requirements and can be classified as 'recognised'. It is also worthwhile ensuring the selected framework is of quality, allowing for a consistent approach and for the authority behind the credential to be easily discerned.
2. **Key performance indicators:** Defining specific metrics and key performance indicators (KPI) within the quality framework helps measure the effectiveness and impact of the micro-credential. These could include completion rates, learner satisfaction scores and assessment performance.
3. **Quality audits:** Conducting regular audits based on the quality framework will help decide whether the micro-credential aligns with established standards and criteria.
4. **External review:** Engaging external experts and evaluators to review and validate the quality of the micro-credential will help boost the credibility of the micro-credential.

Checklist

- Is there an applicable existing framework that guides the quality and standards for the online micro-credential that would need to be adhered to?
- Are there quality assurance checkpoints at various stages of the micro-credential creation lifecycle and ongoing review process?

United Kingdom's Micro-credentials Characteristics Statement

Situation

The UK recognised the need to have high-quality online micro-credentials to meet evolving needs of learners and the job market. In collaboration with universities and industry stakeholders, the Government developed a dedicated [Characteristics Statement](#) which also established requirements for collecting learner feedback and conducting program evaluations.

Critical success factors

- Having a clearly set out, structured process for gathering input from learners.
- Setting expectations around oversight and monitoring by establishing a body responsible for ensuring adherence to the established characteristics that also provides support and guidance for improvement efforts.
- Establishing a set of standards for technology infrastructure and accessibility to encourage investment in upgrading and monitoring technological capabilities.

Result

The Statement serves as a comprehensive guide that encourages and sets expectations on continuous improvement of online micro-credentials by setting clear standards, promoting industry alignment, and establishing mechanisms for ongoing feedback and evaluation. This case study is exemplary of the necessity and value in having a well-structured overarching framework to ensure effectiveness and relevance of the micro-credential.

8.1. Critical success factors

Critical success factors in the Continuous Improvement phase include:

- **A quality framework:** Have a continuous improvement process that clearly aligns to the guiding framework on quality.
- **Data:** Collect and analyse relevant data to inform decisions.
- **Strategic partnerships and industry collaboration:** Collaborate with stakeholders to gather valuable insights, resources, and real-world experiences to enhance the micro-credential quality and relevance.
- **Alignment with organisational goals:** Align the continuous improvement plan for the micro-credential with the broader goals and mission of the institution or organisation to help maintain strategic focus and direction.
- **Culture of continuous improvement:** Establish a culture throughout the organisation that embeds continuous improvement efforts and encourages innovation and experimentation.
- **Regular assessment of viability:** Commit to more regular reviews of the micro-credential against the agreed Key Performance Indicators (e.g. enrolment targets, industry relevance etc) to ensure what is being offered remains viable.

Conclusion



9. Conclusion

Globally the demand for specialised skills is growing. Governments, educational institutions, and industry stakeholders are increasingly seeing the value of online micro-credentials in addressing specific knowledge gaps. As such, there is now a recognised need and demand for faster and shorter courses to support learners to rapidly gain skills in an ever-changing world. However, the complexity lies in the fact that there is no single definition or approach as a reference.

This toolkit has been developed with the aim of helping those who are about to embark on this journey. Specifically, it is intended for education providers who are seeking support with developing their own micro-credentials and to help governments who are considering best practice policies around micro-credentials to address skill gaps in their respective APEC economies.

It outlines a proposed approach with clear phases and sub-steps that support the design, development, and delivery of online micro-credentials. It leverages best practices from around the world to illustrate that there is no singular way to create micro-credentials and provides examples of how the approach can be adapted to the local context.

We encourage collaboration within and between APEC economies to support the advancement of micro-credentials and to make significant progress in addressing local skill gaps and thank the APEC economies for contributing to the development of the toolkit.

Tools

10. Tools

The following pages are templates with prompting questions which may be useful to use as part of your own micro-credential creation process. It is advisable to look back at the checklists provided in each chapter.

01 Product strategy template

Intended to support understanding of the market and learner.

02 Operating context template

Intended to help map out the environment that the online micro-credential will exist in so that Design, Develop and Deliver phases are informed by key considerations.

03 Learner value proposition template

Intended to help centre the creation of the micro-credential around the key audience(s), so that it delivers the desired learning outcomes.

04 Design template

Intended to help with the sketching out of the overarching design of and rationale for the online micro-credential.

05 Continuous improvement template

Intended to help map out key elements that will need to be monitored and updated over time.

06 Advert

Intended to provide a summary of the key market facing information to ensure they have been covered and are consistent.

The use of these is not compulsory. They are intended as aids to help kick-start the process and begin some critical thinking around the process of creating a micro-credential.

01. Product strategy

This template might be useful when thinking about the broader market.



Market assessment

- What skills gap are you addressing?
- How big is the market?
- How have you validated the need?
- Who will pay (the learner, the employer, the government)?



Product positioning

- How will the micro-credential be positioned in the market and how will it differentiate itself?
- How does it satisfy market needs?
- How does it align with and boost your brand?



Target market

- Who is the specific audience or customer segment the micro-credential is intended for?
- Have you defined the positioning of micro-credentials to a target audience (e.g. current students, new students, lifelong learners or businesses)?



Go to market

- How will the micro-credential be launched and promoted, including messaging and target audience?
- What is your marketing capability?
- What is the pricing strategy?

02. Operating context

This template might be useful to think about market conditions, the regulatory requirements and other relevant factors that will shape the micro-credential. Working through these questions should provide a view of the environment you operate within.



External environment

- What are the regulatory policies? Are there any other regulations you need to consider (e.g. online requirements)?
- Do you need to comply with any domestic education and training standards?
- What quality framework - economy-wide or institution - will you align to? Are there specific quality standards that the micro-credential must meet to be recognised?
- Will it be credit bearing?



Internal environment

- How will it align to goals and the mission of the organisation / institution?
- What resources are available (budget, personnel)?
- How does the micro-credential fit with current curriculum / offerings?
- What is the online system / technology infrastructure that is going to be used?
- How will the micro-credential meet any internal compliance requirements?
- What is the internal approval process?

03. Learner value proposition canvas

This template might be useful when thinking of the potential learner(s).



Audience

- Who is the learner?
- What are their specific needs, challenges and goals?
- What industries or sectors will want people with the micro-credential?
- Where does the micro-credential fit in their learning journey?



What will they do afterwards?

- How will it enhance the learner's employability or career prospects?
- How will learners benefit from completing the micro-credential?



Experience

- Are there prerequisites or entry requirements that the learner needs to have prior to engaging the selected micro-credential?
- What is the learner experience?
- How does the value learners gain from the micro-credential compare to the investment of time and money (ROI)?
- How flexible is the micro-credential (learning pace, format, scheduling)?



What are their alternatives?

- What sets the micro-credential apart from similar offerings?

04. Design canvas

This template might be useful to help with the sketching out of the overarching design of, and rationale, for the online micro-credential.



Micro-credential vision

What is the objective for the micro-credential?

- Are the learning goals SMART (Specific, Measurable, Achievable, Relevant, and Time-Bound)?
- Do the goals adhere to quality frameworks?



Learner goals

- What is the objective for the micro-credential?
- What are the learner goals?
- How will you validate these with industry experts and university stakeholders?



Learner pathways

- What is the learner pathway (pre-requisites, recognised prior learning)?
- Is the micro-credential stackable with other qualifications?



Learning format

- What formats will you use and why have you selected them (advantages and disadvantages)? When will they be used?
- How will you test learner mastery?
- How much will it cost to deliver? What about maintenance?
- What about the ease of access / accessibility?
- Where will the micro-credential be hosted (do you own the platform or a third party, and is access free)?
- Is the format the best way to convey the skill / competency?

05. Continuous improvements

This template might be useful to help map out key elements that will need to be monitored and updated over time.



Learner impact

- How will you monitor the impact of the micro-credential?
- How often will you do this?
- What metrics will you track?
- How will you capture learner and instructor experiences?
- What feedback mechanisms will you use?
- How will you apply the learnings?
- Will you regularly review the micro-credentials goals and objectives? How will you do this and how often?



Content upkeep

- How will you incorporate advancements, emerging concepts / technology and updated information into your content?
- How will you ensure the micro-credential remains relevant and responsive to industry needs?
- How will you incorporate faculty development and support instructors in adapting to changes and improvements?



Operations maintenance

- What is required to maintain the micro-credential?
- How will you maintain and update the assessment? How often will you do this?
- How will you test improvements (e.g. pilots)?
- How will you ensure the technology is up to date?
- How will you deal with user issues?
- How will you maintain the certificate / badge / credit?
- How will the learner access their achievement / record?












Ensuring quality throughout

- How will you ensure improvements align with quality frameworks to guarantee consistency?
- How will you use data to make decisions?
- Who is involved, including external scrutiny, in reviewing content to ensure quality?

06. Advert

This template might be useful to provide a summary of the key market facing information to ensure they have been covered and are consistent.

 Title	
<ul style="list-style-type: none">• What will you name your micro-credential that is standalone from other courses / qualifications?	
 Purpose	
<ul style="list-style-type: none">• What are the clear objectives of the micro-credential?	
 Delivery	
<ul style="list-style-type: none">• How will learning be delivered (e.g. online or hybrid)?	
 Micro-credential topics	
<ul style="list-style-type: none">• What are the units / components / topics that make up the micro-credential?	
 Learning experience	
<ul style="list-style-type: none">• What kind of learning experience will the student have? Is it self-paced? Asynchronous?	
 Cost	
<ul style="list-style-type: none">• What is the price? Are there any subscription-style options?	
 Learning type	 Prerequisites / recognised prior learning
<ul style="list-style-type: none"><input type="checkbox"/> Novice<input type="checkbox"/> Advanced beginner<input type="checkbox"/> Competent<input type="checkbox"/> Proficient<input type="checkbox"/> Expert	<ul style="list-style-type: none">• What must the applicant have done prior in order to succeed in the micro-credential?
 Other factors	
<ul style="list-style-type: none"><input type="checkbox"/> Credit may be available<input type="checkbox"/> Stackable with other micro-credentials<input type="checkbox"/> Assessments	

References

11. References

Frameworks

Australia's National Micro-credential Framework <https://www.education.gov.au/higher-education-publications/resources/national-microcredentials-framework>

Malaysian Qualifications Agency's Guidelines to Good Practices: Micro-credentials <https://www2.mqa.gov.my/qad/v2/qaris panduan/2020/GGP%20Micro-credentials%20July%202020.pdf>

New Zealand's Qualifications and Credentials Framework <https://www2.nzqa.govt.nz/qualifications-and-standards/about-new-zealand-qualifications-credentials-framework/>

United Kingdom's Quality Assurance Framework for Online Micro-credentials https://www.qaa.ac.uk/docs/qaa/quality-code/micro-credentials-characteristics-statement.pdf?sfvrsn=32bda081_4

Other useful publications

Deakin University Micro-credentials: A learner value framework | Journal of Teaching and Learning for Graduate Employability

<https://ojs.deakin.edu.au/index.php/jtlge/article/view/1456/1403>

European Training Foundation: Guide to Design, Issue and Recognise Micro-credentials

<https://www.etf.europa.eu/sites/default/files/2023-05/Micro-Credential%20Guidelines%20Final%20Delivery.pdf>

OECD's Micro-credentials for lifelong learning and employability

<https://www.oecd.org/publications/micro-credentials-for-lifelong-learning-and-employability-9c4b7b68-en.htm>

World Economic Forum 'Future of Jobs' Report 2023

https://www3.weforum.org/docs/WEF_Future_of_Jobs_2023.pdf