Background Paper

Understanding Micro-credentialing and Micro-credentials

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Version 1.0 (October 2026)

Introduction

The nature of learning and credentials is changing. Micro-credentials are becoming increasingly relevant to higher education, workforce development and lifelong learning. Alongside traditional qualifications such as full degrees and diplomas, learners can now receive recognition for shorter and more focused forms of learning. These may include short courses, certificates, digital badges, industry credentials and micro-credentials. However, the term is used in different ways across countries, institutions and sectors. Short courses, certificates, digital badges and other forms of learning recognition may all be described as "micro-credentials", even when they differ in purpose, quality assurance, recognition, and use.

For SEAMEO and its Centres, a common understanding of the term would provide a useful basis for regional cooperation. It would allow different Centres and their partners to discuss micro-credentials using the same academic and policy language while remaining aligned with global standards and still allowing individual countries and institutions to retain their own preferred systems and regulations. A shared working definition could help SEAMEO Centres and their partners to:

- communicate more clearly about what is meant by a micro-credential;
- distinguish micro-credentials from other forms of short learning, such as ordinary short courses or certificates of participation;
- support cooperation between institutions and countries;
- facilitate discussion on recognition and portability across institutions and borders; and
- provide a common starting point for future regional work on micro-credentials, credit transfer and lifelong learning programmes.

The growing use of micro-credentials presents opportunities for higher education institutions, learners, employers and governments. They can provide shorter and more targeted forms of learning, respond to changing skills needs, and allow learners to demonstrate specific knowledge and skills without necessarily completing a full

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qualification. The purpose of this paper is to propose a common working definition that can support discussion, cooperation and further development of micro-credential initiatives in Southeast Asia. This 6-page Background Paper presents an evidence-informed clarification of a concept, synthesises legal / policy sources and develops an analytical model to understand the meaning of "micro-credentials."

The absence of a shared understanding can create confusion. A short learning experience, for example, does not necessarily constitute a micro-credential simply because it is short or because a certificate is issued at the end. A micro-credential also relates to how the learning is recognised, evidenced and connected to other learning or opportunities. This can make it difficult to determine whether two programmes are comparable or whether a credential earned in one setting can be understood or recognised in another.

Understanding this wider context is therefore important when developing a common definition. Rather than relying only on the name given to a credential, the analysis in this paper considers the elements that give the concept of a micro-credential its meaning.

Understanding Modern Credentialing

Modern credentialing is not only concerned with the certification of learning, but also with how that learning is recognised, connected to further learning, understood across different contexts, and trusted by relevant stakeholders. In this context, a micro-credential needs to represent more than participation in a short learning experience. It needs to carry recognised value as a credential.

The analysis of the selected international approaches explained below identifies four core concepts that together distinguish a micro-credential from other forms of short learning and learning recognition: **Industry Recognition, Stackability, Portability,** and **Validation**.

Proposed Common Working Definition

> *"A micro-credential is a certified record of learning acquired through short learning courses, with specifically identified learning outcomes, and characterised by industry recognition, stackability, portability and validation."*

Explanation

To distinguish micro-credentials from standard non-formal certificates or short course attendance badges, a micro-credential must incorporate four core concepts:

1. **Industry Recognition**: The learning outcomes and competencies are recognised, valued, and sought after by employers and relevant industries.
2. **Stackability**: The unit of learning can be accumulated and combined over time toward larger credentials, qualifications, or formal educational pathways.
3. **Portability**: The certified record can be transferred, shared, and recognised across different institutions, learning sectors, and national borders.
4. **Validation**: The learning achievement is verified through authentic assessment and backed by robust quality assurance and recognised authority

The proposed working definition and their core concepts were identified through a conceptual analysis of selected approaches from Australia, [4] the European Union, [5] New Zealand,[6] [7] [8] and the United States.[9] While these systems differ in terminology, regulation and implementation, the comparison shows how these four concepts contribute to distinguishing micro-credentials from other forms of short learning and learning recognition. Different approaches place varying emphasis on industry and employment relevance, progression and accumulation of learning, recognition beyond the issuing context, assessment, and quality assurance.

Each of the four concepts contributes a distinct and essential part of the meaning of a micro-credential. **Industry Recognition** establishes the relevance and value of the

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[4] Department of Education, Skills and Employment. (2021). National Microcredentials Framework. Australian Government; PwC.

[5] Council of the European Union. (2022). Council Recommendation of 16 June 2022 on a European approach to micro-credentials for lifelong learning and employability (2022/C 243/02). Official Journal of the European Union, C 243, 10–25.

[6] New Zealand Qualifications Authority (NZQA) 2024, Guidelines for micro-credential listing, approval, and accreditation, NZQA, Wellington.

[7] New Zealand Qualifications Authority. (2026). Qualification and Micro-credential Listing and Operational Rules 2026. nzqa.govt.nz

[8] New Zealand Qualifications Authority. (2026). *Micro-credential Approval and Accreditation Rules 2026*. nzqa.govt.nz

[9] United States Training and Employment Notice (TEN), Understanding Postsecondary Credentials in the Public Workforce System United States, No. 25-19 by the

learning beyond the learning provider; **Stackability** establishes its capacity to connect with further learning; **Portability** establishes its capacity to be understood and recognised beyond its original context; and **Validation** establishes confidence that the claimed learning has been achieved. Removing any one of these concepts would therefore leave an important part of the meaning of a micro-credential unexplained.

At the same time, the four concepts work together. Individually, each explains one necessary part of a micro-credential; collectively, they provide a sufficient basis for distinguishing a micro-credential from ordinary short courses, certificates of participation, and other forms of short learning recognition. This does not mean that every micro-credential must have identical arrangements for industry recognition, stackability, portability, or validation. How these concepts are implemented may differ according to national regulations, qualifications systems, institutional policies, and agreements between organisations.

To examine how each core concept is expressed in practice, the proposed model applies four analytical dimensions. The four concepts identify the essential elements that constitute the meaning of a micro-credential, while the four dimensions provide the analytical perspective through which these concepts can be examined. These dimensions do not add further defining characteristics to the definition. Rather, they provide a common structure for examining the content and operation of each core concept across different credentialing systems:

- **Object**: What specific learning, competence, or value is being recognised?
- **Mechanism**: Through what systemic or institutional process does this occur?
- **Assurance**: What guarantees the quality, credibility, and trust of the claim?
- **Function**: What does this allow the learner or stakeholder to achieve?

The four core concepts are presented vertically in the following model, while the four dimensions are applied horizontally. The resulting matrix allows the selected approaches to be compared without assuming that every system must address every concept and dimension in the same way.

Proposed Core Concept & Dimension Matrix

Dimensions → Core Concepts ↓	**Object** (WHAT IS RECOGNISED?)	**Mechanism** (HOW DOES IT WORK?)	**Assurance** (WHY IS IT TRUSTED?)	**Function** (WHAT DOES IT ENABLE?)
Industry Recognition	Industry relevance and value of the learning or competence	How relevance and recognition by industry or the world of work are established	Evidence that the learning has recognised relevance beyond the provider	Relevance and recognition in employment or professional contexts
Stackability	Learning that can retain value and contribute to further learning	How learning can connect or accumulate with other learning such as through credit rules, modular structure and other recognised pathways.	Evidence that accumulated or connected learning retains recognised value	Progression, accumulation and further learning
Portability	Learning and credential value that can be understood and recognised across contexts	How the credential can be communicated, transferred or recognised across contexts	Evidence that other actors can understand and recognise the credential	Recognition and use beyond the original issuing context
Validation	Demonstrated learning achievement	How learning achievement is assessed and verified	Evidence supporting the credibility of the claimed learning achievement	Trust and confidence in the credential and its learning claim

Comparison with Selected International Approaches

The proposed model was examined against selected government and intergovernmental approaches to micro-credentials in Australia, New Zealand, the

European Union and the United States. The comparison demonstrates that the four core concepts can be expressed differently according to the structure, regulatory environment and purposes of each credentialing system.

For example, Stackability may be expressed through formal credit recognition and qualification pathways in one system, while another may emphasise the accumulation of credentials or progression toward further learning. Similarly, Portability may be supported through qualifications frameworks, common credential information, digital records or recognition arrangements. These differences concern how the concepts are implemented rather than the underlying concepts themselves.

The comparative matrices are presented in Appendix 1. A cell is populated only where the reviewed framework provides sufficient evidence relevant to that particular concept and dimension; the model does not assume that every system must address every intersection in the same way.

Conclusion

A common working definition can provide SEAMEO Centres and their partners with a shared language for discussing micro-credentials while allowing national and institutional systems to retain their own requirements. The proposed four concepts provide a common structure for further regional discussion, including future work on recognition, credit transfer, credit banking, quality assurance and cross-border learning pathways.

Appendix 1: Comparative Concept & Dimension Matrices

Core Concept & Dimension Matrix: Australia

Dimensions → **Core Concepts ↓**	**Object** (WHAT IS RECOGNISED?)	**Mechanism** (HOW DOES IT WORK?)	**Assurance** (WHY IS IT TRUSTED?)	**Function** (WHAT DOES IT ENABLE?)
INDUSTRY RECOGNITION	Industry-relevant knowledge, skills or competencies that meet industry needs, align with industry standards or professional requirements, or contribute toward industry/ vendor certification.	Recognition by a professional body; alignment with an industry standard or professional development requirement; or recognition toward industry/vendo r certification.	Explicit evidence that the micro-credential is recognised by a professional body, aligns with an industry standard or professional development requirement, or contributes toward industry/vendor certification.	Supports workforce needs, professional entry or development, and upskilling/ reskilling aligned with employer requirements.
STACKABILITY	Assessed learning that can contribute to credit, advanced standing, further qualifications or other learning when recognised by an education institution.	Credit recognition by education institutions; specified or unspecified credit or advanced standing; and explicit recognition where credit depends on stacking multiple micro-credentials.	Clearly stipulated credit recognition, including the nature of the credit, relevant qualification level and any any stacking requirements.	Credit advanced standing, progression toward qualifications and lifelong learning pathways.
PORTABILITY	[Blank]	Critical information requirements,	Consistent and transparent information	Enables micro-credentials to be better

		clearly stated learning outcomes and nationally consistent information through the Micro-credentials Marketplace enable credentials to be understood as a unit of exchange.	enables learners, employers, providers and recognsing bodies to understand the content and recognition status of the credential.	understood as a unit of exchange by learners, employers and recognising bodies.
VALIDATION	Assessed learning or competency, demonstrated through attainment of specified learning outcomes.	Assessment of learning outcomes; transparent assessment methods; certification; regulated standards where applicable; otherwise a statement of quality assurance.	Assessment provides evidence of attainment; learning outcomes must be clearly stipulated; assessment methods must be transparent; quality assurance processes and academic integrity arrangements provide confidence in the issuing authority and credential.	Provides confidence that the learner has achieved the stated learning outcomes and that the credential has been appropriately quality assured.

Core Concept & Dimension Matrix: New Zealand

Dimensions → Core Concepts ↓	**Object** (WHAT IS RECOGNISED?)	**Mechanism** (HOW DOES IT WORK?)	**Assurance** (WHY IS IT TRUSTED?)	**Function** (WHAT DOES IT ENABLE?)
INDUSTRY RECOGNITION	A discrete set of skills responding to identified learner, employer, industry, community and iwi needs.	Evidence of need and stakeholder support, including, where appropriate, the relevant Industry Skills Board.	Evidence of need and stakeholder support, including relevant industry stakeholders and, where appropriate, the relevant Industry Skills Board.	Response to specific skills needs, workforce upskilling and employment or industry needs.
STACKABILITY	[Blank]	NZQCF credits; credit recognition and transfer; recognition of prior learning; and arrangements connecting achieved learning with further learning.	Clearly specified credit value and formal credit-recognition, transfer and recognition-of-prior-learning processes.	Credit advanced standing, progression toward qualifications and lifelong learning pathways.
PORTABILITY	A formally listed learning achievement with specified level, credit value and learning outcomes.	Listing on the NZQCF; standardised credential information; formal reporting of achievement; and identified use or pathways.	NZQCF listing and standardised information make the nature and level of the achievement transparent and interpretable.	Enables micro-credentials to be better understood as a unit of exchange by learners, employers and recognising bodies.
VALIDATION	Achievement of specified	Approval and accreditation;	Assessment decisions must	Confidence that the learner

	learning outcomes, skills and knowledge.	assessment methods; fair, valid and consistent assessment; moderation; qualified staff and resources; regular review; NZQA or Universities New Zealand quality assurance.	be fair, valid, consistent and appropriate; moderation, approval, accreditation and continuing review provide assurance of integrity.	has demonstrably achieved the stated learning outcomes and that the credential is quality assured.

Core Concept & Dimension Matrix: European Union

Dimensions → Core Concepts ↓	**Object** (WHAT IS RECOGNISED?)	**Mechanism** (HOW DOES IT WORK?)	**Assurance** (WHY IS IT TRUSTED?)	**Function** (WHAT DOES IT ENABLE?)
INDUSTRY RECOGNITION	Knowledge, skills and competences responding to labour-market needs.	Collaboration between education and training organisations, employers, social partners and other providers/users to increase labour-market relevance.	[Blank]	Responds to labour-market needs and supports upskilling, reskilling, employability and labour-market transitions.
STACKABILITY	Micro-credentials that can be combined and logically built upon to form larger credentials.	Modular design; combination of different micro-credentials; recognition and stacking across systems; decisions made	Decisions to stack are made by receiving organisations and relevant authorities/ institutions in	Flexible learning pathways and the construction of larger credentials without automatically conferring

		by receiving organisations according to their practices.	accordance with their practices and awarding processes.	entitlement to a qualification or degree.
PORTABILITY	Learner-owned micro-credentials that can be stored, shared and understood by receiving parties.	Learner-controlled storage and sharing, including secure digital wallets; open standards and data models; interoperability and seamless data exchange.	Common European standard elements, verifiable authenticity, open standards and interoperable data support understanding and trusted exchange.	Storage, sharing, understanding and use of credentials across education and training sectors, the labour market and national
VALIDATION	Learning outcomes acquired through a small volume of learning and assessed against transparent, clearly defined criteria.	Assessment against transparent criteria; quality assurance according to agreed standards; validation of formal, non-formal and informal learning.	Transparent assessment criteria and quality assurance following agreed standards in the relevant sector or area of activity.	Trusted certification and recognition of achieved learning outcomes for academic, training or employment purposes.

Core Concept & Dimension Matrix: United States

Dimensions → Core Concepts ↓	**Object** (WHAT IS RECOGNISED?)	**Mechanism** (HOW DOES IT WORK?)	**Assurance** (WHY IS IT TRUSTED?)	**Function** (WHAT DOES IT ENABLE?)
INDUSTRY RECOGNITION	Occupationally specific technical skills and credentials sought, accepted, developed or endorsed by industry.	Development, endorsement or acceptance by recognised industry associations, organisations, companies or vendors; consultation with businesses to identify demand.	Industry association endorsement, employer demand /acceptance and evidence that employers value the credential.	Hiring, recruitment, occupational entry/ advancement, employability and alignment with business skill needs.
STACKABILITY	Credentials forming part of a sequence that can be accumulated over time to build an individual's qualifications.	Sequential accumulation of credentials; career pathways/ ladders; embedded certifications; academic credit toward degree completion; credit for prior learning.	[Blank]	Movement along career pathways or career ladders, accumulation of qualifications, degree completion and progression to potentially higher-paying jobs.
PORTABILITY	A credential recognised and accepted as verifying an individual's qualifications	Recognition and acceptance by other geographic areas, educational	Acceptance of the credential by other institutions, employers, industries or geographic	Use of the credential across employers, educational institutions,

	in other settings.	institutions, industries or businesses.	jurisdictions as verification of qualifications.	industries and geographic areas.
VALIDATION ***(MAPPED PRIMARILY FROM ACCREDITATION /ASSESSMENT)***	[Blank]	Independent accreditation; recognised accrediting bodies; valid and reliable assessment; examinations or competency assessments where applicable.	Independent quality review, accreditation, defensible standards, and valid/reliable assessment provide evidence of credential quality and competency.	Provides confidence that education/training meets acceptable quality levels and, where competency assessment applies, that required competencies have been demonstrated.

Appendix 2: Methodology for Developing the Proposed Definition

The proposed working definition was developed through two main research methods:

1. **Desk Research:** Systematic extraction and analysis of official policy frameworks and regulatory guidelines.
2. **Conceptual Analysis & Model Building:** Analysing established international frameworks to map their core concepts and build an internally consistent model of Southeast Asia.

The proposed working definition was developed through a conceptual analysis of existing definitions and descriptions of micro-credentials in selected official government and intergovernmental legislative documents from the Australian National Micro credentials Framework, the European Union Council Recommendation on micro-credentials, relevant New Zealand Qualifications Authority documents, and the U.S. Department of Labor's *Understanding Postsecondary Credentials in the Public Workforce System*. Legal and government regulatory documents were selected because they carry formal authority, are institutionally binding, and represent established policy consensus. Expert literature and professional opinions can provide valuable insight, but they may differ substantially depending on the author's discipline, country and purpose. For this initial working definition, established public documents therefore provide a more consistent starting point.

The conceptual review considered both the lexical meaning, particularly how key terms such as *credential*, *learning*, *short course*, *recognition* and *assessment* are defined or used; and the conceptual meaning which are the ideas and characteristics that different systems associate with a micro-credential. The analysis also considered whether each identified concept contributes an essential element to the meaning of a micro-credential and whether the concepts, when taken together, provide a sufficient basis for distinguishing micro-credentials from adjacent forms of learning recognition. This reasoning underpins the selection of Industry Recognition, Stackability, Portability and Validation as the four core concepts in the proposed working definition.

The purpose was not to select one existing definition and reproduce it. Instead, the exercise identified concepts that recur across established policy and regulatory frameworks and considered which combination of concepts could provide a practical working definition for Southeast Asian regional cooperation that is aligned with international models. Where possible, the requirements in this model have been created with a view to encourage interoperability with models in other countries.