



White Paper: Action Plan for Micro-credentials adoption in Higher Education for Southeast Asian countries

In the framework of the project MICROCASA: MICRO-credentials for life-long learning and employability: Building Capacities for Developing Agile Educational Interventions in Southeast Asian Universities

www.microcasa.eu



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Glossary

AI	Artificial Intelligence
AQAN	ASEAN Quality Assurance Network
ASEAN	Association of Southeast Asian Nations
ASEM	Asia-Europe Meeting
EHEA	European Higher Education Area
ENIC-NARIC	European Network of Information Centres National Academic Recognition Information Centres in the European Union
GGP-MC	Guidelines to Good Practice: Micro-Credentials
HEI	Higher Education Institution
ID	Indonesia
IDREN	Indonesian Research and Education Networks
KMMI	IProgram Kredensial Mikro Mahasiswa Indonesia - Indonesian Student Micro-Credentials programme
MBKM	Merdeka Belajar-Kampus Merdeka
MCA	Micro-credential Certificates of Achievement
MY	Malaysia
MQA	Malaysian Qualification Agency
NQF	National Qualifications Framework
PDP	Philippines Development Plan
PH	The Philippines
PQF	Philippines Qualification Framework
SEA Countries	Southeast Asian Countries
TESDA	Technical Education and Skills Development Authority
TVET	Technical Vocational Education and Training
UNESCO-ICHEI	UNESCO International Centre for Higher Education Innovation

Executive Summary

Southeast Asia has experienced significant growth and transformation over the past 25 years, with rapid industrialization, urbanization, and digitalization. As the countries of this region adapt to these changes, their educational systems are also evolving. In this context, micro-credentials are emerging as a flexible, complementary solution to traditional qualifications, designed to meet the needs of a dynamic labour market.

The current state and challenges of the adoption of micro-credentials in the target countries, Indonesia, Malaysia, and the Philippines, have been analysed through a comparative study conducted in cooperation between European and Southeast Asian (SEA) partners within the MICROCASA project. This study reveals diverse approaches to the adoption of micro-credentials across the three targeted countries. While each country has implemented policies to incorporate micro-credentials into its educational system, challenges still remain in standardizing such aspects as a definition of micro-credentials, quality assurance practices, and recognition procedures.

The main findings of the comparative study have been further discussed with the SEA partners and relevant stakeholders during three roundtables with the aim of further deepening aspects related to policy, regulations, developments, and recognition of micro-credentials in the target countries.

The first Roundtable took place on October 3, 2023, in Malang, Indonesia. It initiated discussions on the regional and national development of micro-credentials in Southeast Asia, focusing on three key areas: policy, regulation, and development and recognition.

The second Roundtable, held online on February 28, 2024, aimed to explore potential regulatory frameworks, practices for recognition and mutual recognition, and additional capacity-building measures related to micro-credentials in the SEA region.

The third roundtable, organized in Manila on October 28, 2024, was aimed to deliver the final version of this document, based on the contribution collected through the direct involvement

of key stakeholders from Indonesia, Malaysia, and the Philippines. This was designed to ensure the participation of all the interested parties for the future implementation of the action plan in the SEA countries.

Based on the results of the comparative study and the three roundtables, this White Paper synthesises the current state and challenges of the implementation of micro-credentials in the SEA country, presenting an action plan for micro-credentials adoption which emphasizes the need for effective regulatory frameworks and policies to facilitate the development, implementation, and recognition of micro-credentials.

1 Background

This White Paper is the result of several cooperation activities conducted in Indonesia, Malaysia, and the Philippines, in the framework of the EU co-funded Project “[MICRO-credentials for lifelong learning and employability: Building Capacities for developing Agile educational interventions in Southeast Asian Universities - MICROCASA](#)” (Erasmus+ ERASMUS-EDU-2022-CBHE-STRAND-2, Project n. 101081924). Started in March 2023, the project brings together eleven partners: six Southeast Asian universities (Universiti Sains Malaysia, Universiti Malaysia Sarawak, Universitas Brawijaya, Universitas Sam Ratulangi, University of the Philippines System, Ateneo de Manila University), three European universities with complementary competences (Universitaet des Saarlandes, Universidad Carlos III de Madrid, Università Europea di Roma), the Italian ENIC-NARIC Centre (CIMEA) and a quality assurance expert company (Giraf PM e.K). Several associated partners support the initiative such as the Philippine Department of Health, Health Human Resource Bureau, Santa Cruz, City of Manila, the Philippine Department of Agriculture, Agriculture Training Institute, Diliman, Quezon City, the Indonesian Research and Education Networks (IDREN), and the Malaysian Qualifications Agency (MQA).

MICROCASA is the first international project aimed at sharing the European experiences and building institutional capacities in Southeast Asia to co-create, promote, and deliver short

competence-oriented educational units leading to micro-credentials with the goal of solving various economic and social problems. Economic development has triggered fundamental educational reforms in all countries of Southeast Asia. In this regard, their education systems have to adapt quickly, to provide effective solutions to tackle globalization, development, and rapid modernization. One of the main avenues of this adaptation is the uptake of micro-credentials as a tool to diversify the educational offer and flexibly react to the changing labour market demand.

In this context, the overall objective of the MICROCASA project is to contribute towards further modernization and improving responsiveness of the system of Higher Education in the three countries. Focusing on different aspects of micro-credentialing such as course content co-creation, educational technology, transparent quality assurance, technologies for issuance and verification, and recognition of digital micro-credentials, the MICROCASA project builds a comprehensive set of competences and technical capacities in Southeast Asian Universities. The higher education institutions are the main target group beneficiaries for the MICROCASA project results. However, several relevant stakeholders are actively involved in the process for the implementation of micro-credentials, at national and regional level, as detailed earlier. Indeed, leveraging on the partner networks, as well as on the links to the national educational authorities and regional initiatives, MICROCASA has the ambition to have a systemic impact on the ASEAN region.

The content of this document is aimed to precisely position the project activities into the SEA regional context, summarizing the major conclusions of the discussions concerning the necessary regulatory frameworks to facilitate the adoption of micro-credentials in the targeted countries. It also suggests measures enabling comparability and recognition of micro-credentials granted by different universities in the SEA region and outlines further capacity building and other supporting mechanisms needed to stimulate the adoption. It contributes towards building initial awareness of the project and initiates a lasting dialogue between Southeast Asian and European countries about policies and standards regarding micro-credentialing in HE.

In the Asia-Pacific Region, the topic of micro-credentials can be seen as an important element in the framework of both, the [Tokyo Convention](#) and [Global Convention on the recognition of qualifications concerning Higher Education](#), which are complementary policy tools to advance fair, transparent, and non-discriminatory recognition of qualifications. In this regard, during the 4th Committee Session and 2nd Plenary of the Asia-Pacific Network of National Information Centres in December 2022, the topic of micro-credentials was directly addressed as one of the main topics to discuss in the field of recognition of qualification in the Asia-Pacific region, as stated by Mr TIAN Xuejun, Vice Minister, Ministry of Education, China, and Chairperson of China's National Commission for UNESCO, *"Following the devastating impacts of the pandemic, now is the time to come together in Asia-Pacific to strengthen international recognition policies and practices. This includes recognition of online and blended learning and work-ready micro-credentials"*¹.

Considering the work done in the last months of 2024 in the field of lifelong learning and skills development, it is important to mention the [6th Asia-Pacific Meeting on Education 2030](#) (APMED 6) on the SDG4 monitoring. Among the recommendations highlighted and discussed, the co-development of online and offline flexible learning pathways for youth and adult learners is seen as an important step to *"ensure gender-transformative access to formal, non-formal, and informal learning, through online or offline micro-credentialing platforms and community learning programmes, that provide relevant skills development especially for disadvantaged and underrepresented groups"*. Moreover, the recommendation suggests supporting the fair recognition of skills, micro-credentials, and qualifications across academic and professional domains, promoting greater transparency and alignment in recognition practices and policies. Considering its background, the present White Paper is targeted to the wide range of stakeholders identified by SEA partner countries in the framework of project activities. By involving the interested parties in the development of micro-credentials at

¹ <https://apnnic.net/news/the-tokyo-convention-a-commitment-to-enduring-and-sustainable-collaboration-to-improve-mobility-in-asia-pacific/>

national and regional levels, the process can be more inclusive, relevant, and responsive to the needs of both learners and the labour market. They can be listed as follows:

- **Government Agencies:** government bodies responsible for education, labour, and workforce development are crucial stakeholders in establishing policies and frameworks for the recognition and accreditation of micro-credentials.
- **International organisations and initiatives:** ASEAN Quality Assurance Network (AQAN), the International Centre for Higher Education Innovation under the auspices of UNESCO (UNESCO-ICHEI), UNESCO Office Bangkok, ASEAN Committee on Science Technology and Innovation (COSTI), Jakarta Indonesia and Regional Bureau for Education in Asia and the Pacific, the ASEM (Asia-Europe Meeting) Education Process. They can support international cooperation and mutual recognition of micro-credentials.
- **Educational Institutions:** universities, community colleges, vocational schools, and other educational providers are integral in designing and offering micro-credential programmes that meet industry needs and standards.
- **Quality Assurance Bodies:** organisations responsible for maintaining educational standards and ensuring the quality of educational programmes play a critical role in validating and accrediting micro-credentials.
- **Industry and Employers:** employers and industry leaders play a vital role in identifying the skills and competencies required in the workforce, guiding the development of relevant micro-credentials.
- **Professional Associations:** organisations representing specific industries or professions can provide expertise in developing micro-credentials that align with industry standards and best practices.
- **Labour Unions and Workforce Development Agencies:** these organisations can advocate for the recognition of micro-credentials in career advancement and workforce development initiatives.

- **Technology Providers:** tech companies and learning platforms that deliver online and digital learning experiences are important stakeholders in the development and delivery of micro-credentials.
- **Students and Learners:** individuals seeking to acquire new skills and advance their careers are fundamental stakeholders in the demand for and uptake of micro-credentials.

2 Micro-credentials in the context of this White Paper

Small learning experiences², such as short courses leading to micro-credentials, allow for a targeted acquisition of skills and competences adapted to a fast-changing society and labour market in addition to traditional qualifications. Micro-credentials can be delivered by different providers such as universities, vocational and educational providers, and professional organisations.

For green and digital transitions, as well as following COVID-19 recovery, a growing number of people needed to update their knowledge, skills, and competencies. Nowadays, micro-credentials are becoming increasingly popular worldwide, as a way to continuously upskill, reskill, cross-skill, and showcase proficiency in a rapidly changing job market.

In Europe, micro-credentials are not a new concept as such, as short learning courses have been offered by higher education institutions and other providers for a long time. The novelty resides in the willingness to share common approaches and standards of quality, transparency, cross-border comparability, recognition, and portability at the EU and international level. This can also help to build trust in micro-credentials for the benefit of the learners, employers, and education and training institutions.

² Within the work done during the [Thematic Peer Group A on Qualifications Frameworks for trust, transparency and diversity \(TPG A\)](#) “Recommendations and Guidelines on Micro-credentials” (2023), the term “small learning” or “small unit of learning”, encompassed various terms such as short programmes, modules, courses, trainings, used for organized teaching and learning, distinct from degree programmes.

There are a multitude of definitions of micro-credentials. In the framework of the MICROCASA project two main definitions were taken into consideration, one included in the [EU Council Recommendation on a European approach to micro-credentials for lifelong learning and employability](#) and one defined by [UNESCO “Towards a common definition of micro-credentials”](#):

‘Micro-credential’ means the record of the learning outcomes that a learner has acquired following a small volume of learning. These learning outcomes will have been assessed against transparent and clearly defined criteria. Learning experiences leading to micro-credentials are designed to provide the learner with specific knowledge, skills and competences that respond to societal, personal, cultural or labour market needs. Micro-credentials are owned by the learner, can be shared and are portable. They may be stand-alone or combined into larger credentials. They are underpinned by quality assurance following agreed standards in the relevant sector or area of activity.

EU Council Recommendations on a European approach to micro-credentials for lifelong learning and employability (2022)

A micro-credential (1) is a record of focused learning achievement verifying that a learner knows, understands or can do; (2) includes assessment based on clearly defined standards and is awarded by a trusted provider; (3) has stand-alone value and may also contribute to or complement other micro-credentials and/or macro-credentials including through recognition of prior learning; (4) meets the standards required by relevant quality assurance.

UNESCO, Towards a common definition of micro-credentials (2022)

Considering that micro-credentials are a global phenomenon, in the framework of the MICROCASA project the discussion should be shared with the representatives of the existing thematic networks in the SEA countries. The most relevant networks at regional level were identified as follows:

- [ASEAN Quality Assurance Network \(AQAN\)](#)
- [The International Centre for Higher Education Innovation under the auspices of UNESCO \(UNESCO-ICHEI\)](#)
- [UNESCO Office Bangkok and Regional Bureau for Education in Asia and the Pacific](#)
- [The Asia-Europe Meeting \(ASEM\) Education Process](#)

Furthermore, the [Updated guidelines for development of Regional Model Competency Standards](#) (2016) were identified as a useful tool to support the process to develop micro-credentials in the SEA Countries. The [ASEAN Qualification Reference Framework](#) was a relevant reference for the development of the guidelines.

All in all, micro-credentials can serve dual purposes: they can function as standalone qualifications, providing targeted skills for specific job roles or tasks, or they can complement traditional qualifications by filling gaps in knowledge or skills. For example, a professional with a degree in engineering might earn a micro-credential in project management to enhance their employability. Conversely, a learner without a formal degree might use a series of micro-credentials to demonstrate competency in a specific field. The choice between standalone and complementary use depends on the learner's goals and the requirements of the labour market.

3 White Paper methodology

As outlined above, the MICROCASA project lays its foundations in the various international policy documents, agreements, and conventions regarding micro-credentials. The aim of the following paragraphs is to discuss the development of the principles and concepts expressed in those policy documents within the context of the project. In detail, an overview on how they have been implemented in the framework identified by the SEA countries in the project will be given, in order to define the contents and recommendations of this White Paper.

This document is grounded in both qualitative and quantitative research, incorporating national data collected through a Comparative Analysis and three roundtables. The “[Micro-credentials in Southeast Asian Universities: Comparative Study](#)” was informed by desk research targeting

MICROCASA Southeast Asia (SEA) countries, Indonesia, Malaysia, and the Philippines, and an online survey conducted via the EU Survey platform.

The starting point for these activities was the European experience coming from the project [MICROBOL – Micro-credentials linked to the Bologna Key Commitments](#). The project supported ministries and stakeholders of the European Higher Education Area (EHEA) in exploring the possible application of the tools and practices designed in the context of the Key Commitments of the Bologna Process³ (Qualifications Framework and ECTS⁴, Recognition, Quality Assurance) to the fast-emerging phenomenon of micro-credentials. In the framework of the MICROBOL project, a survey was launched at national level in the 49 EHEA countries with the aim to gain a picture on the state of play of micro-credentials at the EHEA level and to encourage national discussion as well as to build a way forward on a common understanding on this topic.

The MICROBOL methodology was presented to the MICROCASA partners and adapted to the needs of the SEA countries, in compliance with the ASEAN developments on the topic of micro-credentials. Specifically, as previously mentioned, in order to adapt it to the contexts expressed by the three target countries, the MICROCASA Consortium carried out three parallel activities (see figure 1):

³ “The Bologna Process, launched with the Bologna Declaration of 1999, is the main voluntary process concerning higher education at European level. It is nowadays implemented in 49 States, which define the European Higher Education Area (EHEA). For more information on the EHEA, the Bologna process and its Thematic Peer Groups, please see the following references: EHEA, How does the Bologna Process work?, <https://ehea.info/page-how-does-the-bologna-process-work>. ENIC-NARIC, The Bologna Process and European Higher Education Area (EHEA), <https://www.enic-naric.net/page-bologna-process>.

⁴ European Credit Transfer and Accumulation System. For more information, please see the following reference: European Commission, European Credit Transfer and Accumulation System (ECTS), <https://education.ec.europa.eu/education-levels/higher-education/inclusive-and-connected-higher-education/european-credit-transfer-and-accumulation-system>.

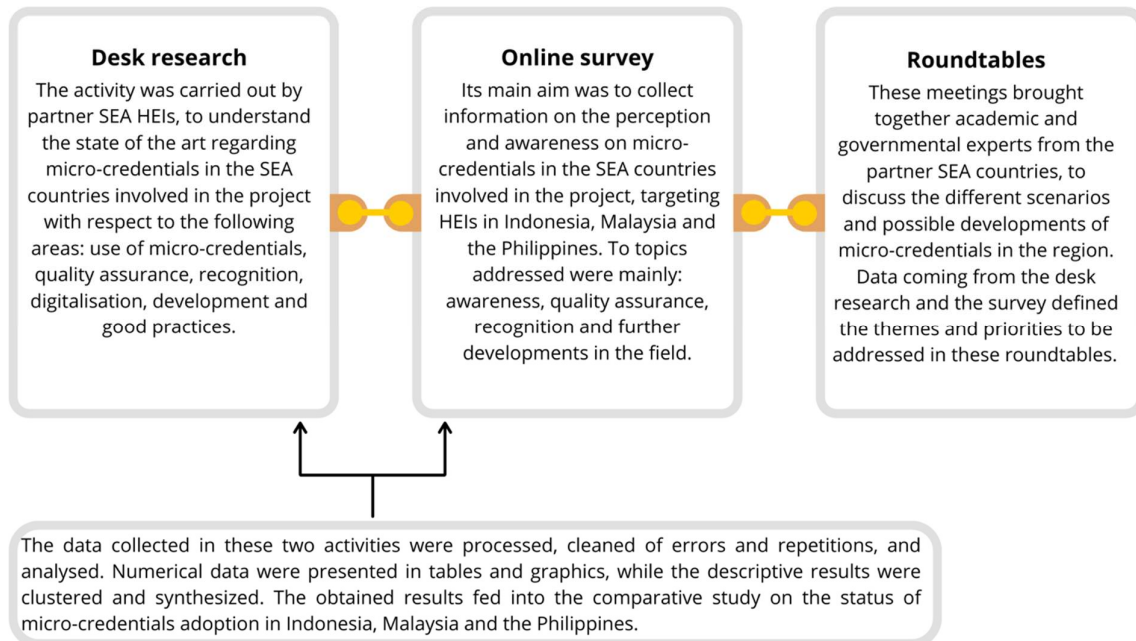


Figure 1 WP1 MICROCASA main activities

The following paragraphs will elaborate into these three main activities and outline how they were instrumental for the purpose of drafting this White Paper.

4 Comparative study: main results

The primary goal of this research was to explore and identify the current state and level of awareness of micro-credentials in the SEA region, starting from Indonesia, Malaysia, and the Philippines. To collect information on the adoption of micro-credentials in the three countries, an online survey was designed and distributed among the six MICROCASA SEA partner institutions: Universitas Brawijaya and Universitas Sam Ratulangi (ID), Universiti Sains Malaysia and Universiti Malaysia Sarawak (MY), the University of the Philippines Open University and Ateneo de Manila University (PH). The analysis included sections on the definition of micro-credentials, existing policies and programmes, quality assurance processes, recognition, and digitalisation policies. An Online Survey was conducted to complement the legislative state-of-play of micro-credentials in these countries. The survey, targeting HEIs' professionals in the three countries, played a crucial role in understanding the level of awareness of HE staffs on

this topic. Responses were received from 89 HEIs' staff representatives, including Directors, Deans, Deputy Deans, Heads of Departments, Coordinators, Lecturers/Professors, Researchers, and Quality Management Managers.

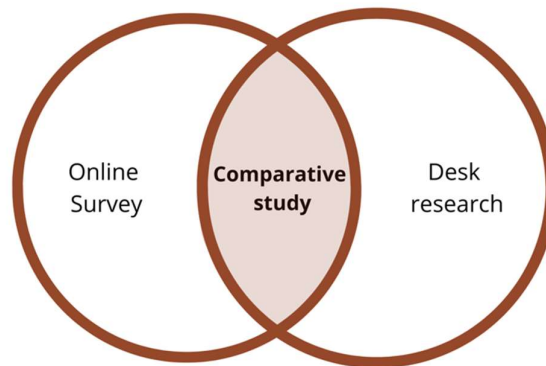


Figure 2 Comparative Study Methodology

The compiled results from these two tools were analysed and incorporated into the "Micro-credentials in Southeast Asian Universities: Comparative Study". This study presents a comparative analysis of the current state of micro-credential adoption in HEIs across Indonesia, Malaysia, and the Philippines (Desk Research), combined with the assessed level of awareness of HEI professionals on the topic (Online Survey). The main results are presented below.

At **policy level**, Malaysia, Indonesia, and the Philippines have implemented distinct policies to integrate micro-credentials into their education systems, focusing on enhancing workforce readiness and lifelong learning.

- In Malaysia, the Malaysian Qualifications Agency (MQA) and the Human Resource Development Corp (HRD Corp), an agency under the Malaysian Human Resources Ministry, play key roles. The [MQA's Guidelines to Good Practices: Micro Credential \(GGP-MC\)](#) provides a formal reference for higher education institutions to implement micro-credentials, allowing each HEI to develop its own guidelines. Meanwhile, HRD Corp offers industry-based micro-credential courses for private sector workers to facilitate training, upskilling, and reskilling. Starting from August 15, 2022, most of HRD

Corp Claimable Courses had to include micro-credentials. The HRD corps are considered as a bridge among higher education institutions and industries in Malaysia.

- Indonesia's approach is centred on the [Merdeka Belajar-Kampus Merdeka \(MBKM\)](#) policy, issued by the Ministry of Education and Culture in 2020, which encourages students to gain broader learning experiences and competencies through activities outside their study programmes. The activities in the MBKM programme includes micro-credentials where students are prepared with the learning that is designed to bridge the gaps between university and industrial world. This policy, supported by the [Ministerial Regulation No. 3](#) of 2020 concerning the National Standards of Higher Education, aims to align the students' competencies with the needs of the labour market.
- In the Philippines, the Commission on Higher Education (CHED) released last 6 December 2024 the draft CHED Memorandum Circular (CMO) on the "[Guidelines for Microcredential Development, Approval and Accreditation on Higher Education](#)". The said guidelines are still in the draft stage but will be the defining policy for higher education in the Philippines once officially issued. The Philippines integrates micro-credentials into Technical Vocational Education and Training (TVET) and lifelong learning, guided by the [Philippine Development Plan \(PDP\) 2023-2028](#) and [TESDA Circular No. 048, Series of 2021](#). These guidelines recognize micro-credentials as alternative assessment methods and provide a framework for issuing Micro-credential Certificates of Achievement (MCA) for TVET programmes.

Together, these policies reflect each country's commitment to leveraging micro-credentials to improve education and training outcomes, preparing individuals for the evolving demands of the workforce.

When considering the **Quality Assurance** of micro-credentials, the different approaches implemented by the three countries reflect their educational priorities and frameworks.

- In Malaysia, the Malaysian Qualifications Agency provides detailed guidelines in its "[Guidelines to Good Practices: Micro-Credentials](#)" document, particularly in Section 9, which outlines critical aspects such as market needs assessment, competency-based outcomes, learning assessment, delivery systems and resources, monitoring and review, learner experience, quality assessment for higher education providers, and learner data management.
- In Indonesia, while there is no single comprehensive guideline on quality assurance for micro-credentials, related regulations exist at both, the national and at the university levels. The Ministry of Education's Regulation No. 3 of 2020 addresses higher education standards and supports learning activities outside traditional university settings, such as internships and independent studies under the Merdeka Belajar initiative, which aligns closely with micro-credentials. Additionally, the [Indonesian Student Micro-Credentials \(KMMI\)](#) programme launched in 2021 provides grants to universities to develop online short courses that address skill gaps. Also, the programme encouraged collaboration with industrial partners in selecting the course topics and developing the course materials. As an update, during the third roundtable the contents of the Indonesian Minister of Education, Culture, Research, and Technology Regulation Number 53 of 2023 on Higher Education Quality Assurance were added as relevant resources for the ongoing process for the inclusion of micro-credentials in the Indonesian higher education system.
- The Philippines leverages the Philippine Qualifications Framework to guide the quality assurance of competence-oriented courses leading to micro-credentials. This framework, especially within the TVET system, focuses on competency-based education designed to meet labour market demands and facilitate lifelong learning. The TVET system emphasizes modular programmes that are flexible, adaptable to changing needs, and capable of recognizing prior learning outcomes from various educational modalities.

Regarding the **recognition** of micro-credentials, different approaches reflect each country's strategy to formally recognize micro-credentials and integrate them into their educational systems, enhancing access to education and aligning competencies with labour market needs.

- In Malaysia, it is guided by the already mentioned *Guidelines to Good Practices: Micro-Credentials (GGP-MC)* document, which provides a framework but allows higher education institutions a degree of autonomy to complement these guidelines with their own policies. Although there is no official legislation for the recognition of micro-credentials at national level, the GGP-MC from MQA and the HRD Corp micro-credential Guidelines serve as formal recognition for any micro-credential awarded by HEIs.
- In Indonesia, the Ministry of Education and Culture has issued regulations on the recognition of micro-credentials, particularly in Regulation Number 3 of 2020 concerning the National Standards for Higher Education. This regulation, especially Article 18, allows students to earn up to 40 semester credit units from micro-credential programmes taken outside their university. HEIs are required to establish specific guidelines to implement the evaluation, recognition, grade conversion, and reporting process.
- The Philippines has the above-mentioned CHED Memorandum Order (CMO), as a draft guideline for the development of micro-credentials in the higher education and an existing policy for the development of micro-credentials at for the Technical Vocational Education and Training (TVET) programmes. These policies generally follow the principles included in the Philippine Qualifications Framework (PQF) for recognizing prior learning, including micro-credentials.

In combination with these, the results collected on the awareness level, provide a valuable understanding of HEIs' awareness of micro-credentials, as well as a general understanding on the topics on which more attention is needed. Specifically, what was mainly underlined is the need to further explore Quality Assurance mechanisms in all the three countries, by also ensuring robustness and credibility of micro-credentials within their academic frameworks.

5 Roundtables

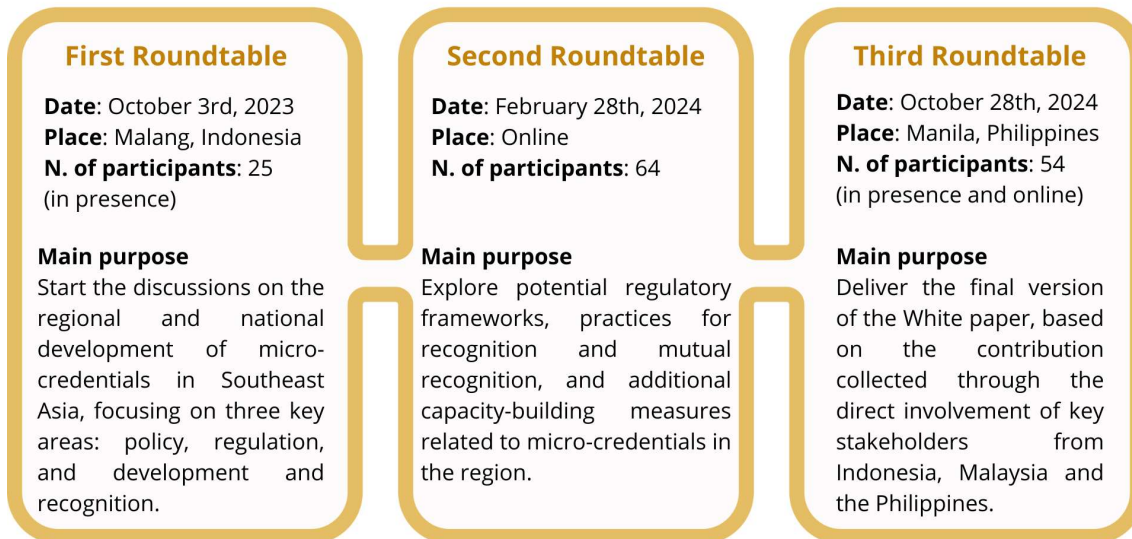


Figure 3 Roundtable summary

As mentioned in the paragraphs above, the three roundtables were organized between October 2023 and October 2024, two were managed in presence and one online. The collected results were incorporated in this White Paper.

The first two roundtables were built on the basis of the results collected in the preparatory phase of the Comparative Study, with the aim to assess the needs and priorities for promoting the development and adoption of micro-credentials in the region.

The programme underpinning the whole roundtable series was designed to gather information to draft this White Paper with a special focus on the four main pillars for the future implementation of micro-credentials: policy, regulation, development, and recognition.

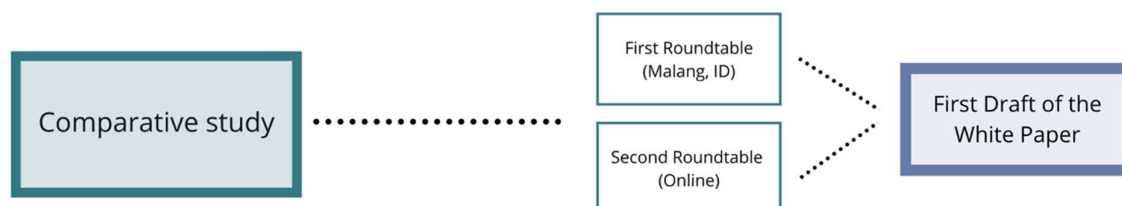


Figure 4 First and Second Roundtable Methodology

The first roundtable was held in Malang, Indonesia, on October 3, 2023, with 25 participants coming from the MICROCASA SEA partner HEIs. Participants were divided into three groups, ensuring a balanced representation from each country. Each group discussed one of the three above-mentioned pillars using the platform Kahoot to facilitate discussion and information sharing.

The second roundtable was held online on February 28, 2024, via the Microsoft Teams platform. This virtual meeting included 64 participants representing different higher education institutions in Indonesia, Malaysia, and the Philippines. The discussion was built using the online tool Miro Board and based on the results of the first roundtable. In fact, the aim was to dig deeper into possible regulatory frameworks, recognition and mutual recognition practices, and further capacity-building actions related to micro-credentials in the region.

Therefore, the two MICROCASA roundtables aimed to reach the following sets of objectives:

Policy

1. How to develop a plan of what to do in the micro-credentials sector that has to be agreed by the governments in the SEA region;
2. Highlight the elements to take into consideration for a general policy on micro-credentials in the SEA region;
3. Identify the current challenges to consider, in order to foster a policy on micro-credentials in the SEA countries involved in the project.

Regulation

1. Identify the good practices and further analyse the context and requirements of partner SEA higher education institutions to be addressed within a regulatory framework to facilitate the adoption of micro-credentials;
2. Identify the elements needed to consider for a regulation on micro-credentials;

3. Identify the main challenges to consider when designing a regulatory framework on micro-credentials;
4. Identify stakeholders to promote awareness for a normative framework on micro-credentials.

Development and recognition

1. Find elements, challenges, good practices and supporting mechanisms for the development and recognition of micro-credentials within the SEA region;
2. Identify the elements to be taken into consideration for the development and fair recognition of micro-credentials;
3. Identify the current challenges to be considered for the development of practices and procedures for the recognition of micro-credentials;
4. Identify what are the main characteristics that micro-credentials should have to be recognised at national level;
5. Identify which are the most relevant characteristics to facilitate mutual recognition of micro-credentials among partner SEA countries.

Moreover, for each of the above-mentioned frameworks, case studies from SEA partner countries were presented to share good practices at national level related to these three pillars and to identify the aspects for which there is room for improvement. In fact, starting from this activity, participants were asked to identify further capacity building activities that could be useful to improve policies on micro-credentials; to indicate the mechanisms that should be normed by legislators when building a regulation on micro-credentials; and to highlight how to support the cooperation both at national level and at the international level regarding mutual recognition of micro-credentials among the SEA countries involved in the MICROCASE project.

During the third roundtable, held in Manila, the Philippines, on October 28, 2024, the contents of the draft White Paper (V0.2) were discussed and fine-tuned, on the basis of the feedback

from the stakeholders. During the event, the contributions from SEA stakeholders involved in the document feedback process were presented by the SEA MICROCASA Project partners and further discussed among participants. The final version of this document includes the main findings, comments, and highlights that arose during the 3rd Roundtable discussion in Manila.

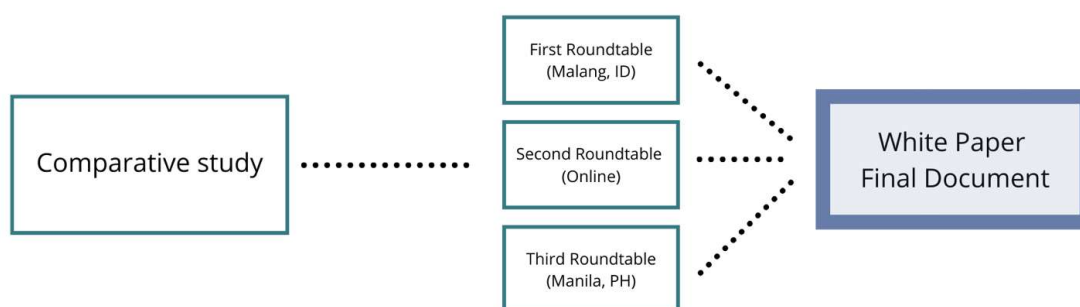


Figure 5 White Paper Methodology

6 Micro-credentials adoption in SEA region: recommendations for an action plan

The following recommendations are based on data coming from the Online Survey, Desk Research, and roundtable discussions, highlighting key points raised by involved representatives from Indonesia, Malaysia, and the Philippines. These recommendations are directed towards the relevant SEA regional stakeholders in the higher education sector.

These recommendations aim to provide an overview of a possible action plan for the progressive implementation of policies, regulations, and recognition frameworks for micro-credentials in Indonesia, Malaysia, and the Philippines, with the intention of fostering a systemic impact on the SEA region. The recommendations below, according to the work carried out by the Project Consortium, reflect different steps considered fundamental in this developing process.

6.1 Awareness

It is recommended to foster enhanced awareness and collaboration, especially between industry and universities. Industries that offer courses should effectively communicate these opportunities to higher education institutions to ensure improved recognition and alignment with industry demands. In this process, the support of decision-makers is essential for developing a micro-credential policy. This policy should align with various sectors, including higher education, training, enterprises, the labour market, and youth, addressing diverse interests such as education, upskilling, reskilling, lifelong learning, recognition of prior learning, and employment. Inter-ministerial or inter-agency national collaborations represent the best way to generate dialogue, agreement, and shared awareness. It involves coordinating various stakeholders to drive the process forward, utilizing best practices and champions to facilitate understanding and utility. Additionally, needs assessment on local societies should be conducted to address learners' professional and educational necessities. Emphasis should be placed on skills relevant to local industries, with regular updates to course content to improve its appeal and relevance to higher education institutions.

6.2 Cooperation, capacity building, and supporting mechanisms

To stimulate the adoption of micro-credentials in Indonesia, Malaysia, and the Philippines, it is recommended to implement several capacity-building and support mechanisms. These mechanisms should facilitate the sharing of commonly applicable activities among the countries, considering their varying levels of micro-credentials development. Although national governments recognize the benefits of micro-credentials, they must establish instruments to effectively orient sectoral policies. Enabling legislation is an essential element to guide the development and functioning of capacity-building actions.

In this regard, emphasizing collaboration at national and regional level among educators, industry professionals, and learners, supported by governments and institutions, is crucial to ensure the development and recognition of high-quality micro-credentials, as well as its policy

development. Furthermore, higher education institutions should be supported in developing and implementing processes for micro-credentials. This includes facilitating instructional design processes, defining clear criteria, and aligning with efforts to establish a comprehensive definition to ensure consistency and quality. National and regional authorities should define regulations on micro-credentials to plan a concrete set of actions including capacity-building activities. These activities should target a wide range of stakeholders, including accrediting bodies, professional authorities, higher education institutions, lecturers, and researchers, to foster human capital development and a unified approach.

Another important element is the collaboration with key thematic networks in Southeast Asia, such as the EU Support for Higher Education in the ASEAN Region (SHARE), ASEAN Quality Assurance Network (AQAN), the International Centre for Higher Education Innovation under UNESCO (UNESCO-ICHEI), the UNESCO Office Bangkok and Regional Bureau for Education in Asia and the Pacific and the ASEM Education Process.

Considering the importance of regional cooperation, it is recommended to promote it starting from the formulation of national-level incentives, such as funding, grants, and recognition awards for both HEIs and industries. In this regard, and in accordance with the importance to collaborate among different sectors, professional development programmes in the public and private sectors can be promoted and supported by specific national funding and human resources. The appointment of an *ad hoc* Agency can support this process using a top-down approach, ensuring it is participative and inclusive of all stakeholders by creating a joint learning platform that can be used by the involved countries. This approach will facilitate the comparison and recognition of competences among Indonesia, Malaysia, and the Philippines and can serve as a model of good practice for the entire SEA region.

To ensure the long-term viability of micro-credential programmes, the following funding and sustainability mechanisms are recommended:

- **Government funding:** National governments should allocate dedicated budgets for micro-credential initiatives, including grants for higher education institutions (HEIs) and TVET providers to develop and deliver programmes.
- **Public-private partnerships:** Encourage collaboration between HEIs, industry, and private sector organizations to co-fund micro-credential programmes. Industry partners can provide financial support in exchange for tailored training programmes that address their specific skill needs.
- **International funding:** Seek funding from international organizations and development agencies, such as the European Union, UNESCO, and the Asian Development Bank, to support regional capacity-building and digital infrastructure projects.
- **Cost-sharing models:** Implement cost-sharing models where learners, employers, and educational institutions contribute to the cost of micro-credential programmes. Income-based repayment schemes or employer-sponsored training programmes can make micro-credentials more accessible.
- **Sustainability plans:** Each micro-credential programme should include a sustainability plan outlining how it will be funded beyond the initial pilot phase. This could include revenue generation through course fees, partnerships with industry, or integration into existing degree programmes.

6.3 Official definition

At the moment, the definition of micro-credentials is not homogenous in the targeted countries. Having a shared understanding of micro-credentials would help their development and consequent implementation.

A common national-level definition of micro-credentials should be developed in each of the three countries. This would establish clear shared standards and promote the development, regulation and recognition of micro-credentials within and among these countries.

Starting from the existing definition at EU and UNESCO levels, the micro-credential definition should be crafted with elements considered essential at national level and aligned with the National Qualifications Frameworks (NQFs) of Indonesia, Malaysia and the Philippines.

As stated in EU and UNESCO definitions, micro-credentials should involve assessments that are based on clearly defined standards and criteria: they should have standalone value and may also contribute to or complement other micro-credentials or full degree courses. They should be owned by the learners, who should be able to share them, in order to showcase their achievements. They should also be structured by taking into account the value of credits associated with the time invested to reach their learning outcomes.

6.4 Providers

Micro-credentials are offered by diverse entities: private providers, professional bodies, traditional education and training institutions and other types of organisations. Competent authorities should design regulations to support the development and recognition of micro-credentials, to meet workforce development needs, and improve the overall quality of education and training. They should provide funding programmes for educational institutions and organisations to develop and offer micro-credential programmes, as well as to support the development and maintenance of quality assurance standards.

Hereby, employers would be encouraged to value micro-credentials as a way to verify the knowledge, skills, and competences of job candidates or employees.

Technical and vocational education and training (TVET) providers play a critical role in the micro-credentials ecosystem. To fully leverage their potential, the following actions are recommended:

- **Integration with TVET Programmes:** Develop micro-credentials that complement existing TVET qualifications, allowing learners to acquire specific skills that enhance their employability.

- **Industry collaboration:** Strengthen partnerships between TVET providers and industry stakeholders to ensure that micro-credentials align with labour market needs. Industry input should guide the design and delivery of programmes.
- **Recognition of Prior Learning:** Implement mechanisms for recognizing prior learning and work experience within TVET programmes, allowing learners to earn micro-credentials for skills acquired outside formal education.
- **Capacity building:** Provide training and resources for TVET instructors to design and deliver micro-credential programmes, ensuring that they meet quality standards and learner needs.

6.5 Learning outcomes

The definition of clear learning outcomes is essential and can be structured on the basis of the labour market needs. It is strongly recommended to adopt a learner-centric approach in micro-credentials development, emphasizing active learner engagement and facilitating the recognition of what a person knows, understands and is able to do, as a result of the learning experience. To foster the relevance of learning outcomes, they should follow the requests of the labour market representatives on the basis of forecasting activities.

To ensure that micro-credentials meet the needs of the labour market, the following measures are recommended:

- **Industry advisory boards:** Establish advisory boards comprising industry representatives, employers, and professional associations to guide the development of micro-credentials. These boards should identify emerging skills gaps and recommend course content.
- **Work-based learning:** Integrate work-based learning opportunities, such as internships, apprenticeships, and industry projects, into micro-credential programmes to provide learners with practical experience.

- **Employer recognition:** Develop campaigns to raise awareness among employers about the value of micro-credentials. Encourage employers to recognize micro-credentials in hiring, promotion, and professional development decisions.
- **Labour market forecasting:** Conduct regular labour market analyses to identify future skills needs and ensure that micro-credential programmes remain relevant and responsive to industry demands.

While industry input is crucial for ensuring that micro-credentials align with labour market needs, educational institutions should retain autonomy in designing and delivering programmes. A collaborative approach, where industry representatives provide input on skills requirements and learning outcomes, while institutions maintain control over curriculum design and delivery, can strike the right balance between relevance and academic integrity.

Learning outcomes are crucial for prioritizing flexibility and adaptability, integrating iterative design processes and structures that allow micro-credentials to be part of larger programmes or standalone qualifications. For this reason, the implementation and design of an agile curriculum should be easily adaptable to the fast changes in industry, technology, and student needs.

6.6 Quality Assurance

Micro-credentials can be issued by a vast variety of providers, coming from different backgrounds and not necessarily in line with the same quality standards. It is then fundamental to generate trust in these providers and in the learning experience they offer by fostering the adoption of a reliable quality assurance system for micro-credentials. Therefore, it is recommended to identify specific and clear Quality Assurance standards to be compliant to. In particular, these standards should:

- be set and applied both upon the course in its development and delivery process, and upon the awarding body of the micro-credential itself;

- provide the basis for the sustainability of micro-credentials in the future and be specific for relevant sectors or activities both in the academic sector and in the labour market;
- be designed considering the possibility of recognition across different countries.

While higher education institutions should have the flexibility to design micro-credential programmes that meet their specific contexts and learner needs, a centralized framework for quality assurance is essential to ensure consistency, credibility, and mutual recognition across institutions and countries. National or regional quality assurance bodies should establish minimum standards, while allowing institutions to adapt these standards to their unique circumstances.

6.7 Accessibility

Competent authorities are vital in ensuring inclusivity and accessibility for all learners. Promoting the accessibility of micro-credentials through open educational resources is essential, particularly for underrepresented communities, such as those living in remote areas. This aspect is closely linked to digitalisation and should be considered when developing an official definition of micro-credentials and related policies.

To ensure that micro-credentials benefit all learners, including marginalized and underrepresented groups, the following measures are recommended for equity and inclusion:

- **Targeted outreach:** Develop outreach programmes to promote micro-credentials among women, rural populations, individuals with disabilities, and other underrepresented groups. This could include partnerships with community organizations and local governments.
- **Affordable access:** Provide scholarships, subsidies, or income-based repayment options to make micro-credentials financially accessible to low-income learners.
- **Digital inclusion:** Address the digital divide by providing affordable or free access to digital devices and internet connectivity for learners in remote or underserved areas.

Collaborate with telecommunications companies and government agencies to expand digital infrastructure.

- **Tailored programmes:** Design micro-credential programmes that meet the specific needs of different learner groups. For example, offer flexible scheduling for working adults or provide content in multiple languages to cater to diverse populations.
- **Monitoring and evaluation:** Regularly assess the participation and outcomes of underrepresented groups in micro-credential programmes to identify and address barriers to access and success.

6.8 Digitalisation

Micro-credentials are fundamental to record the learning outcomes achieved in upskilling and reskilling experiences by learners, who should be able to easily share them across various educational and professional contexts. Therefore, ensuring the portability of micro-credentials is fundamental: it is recommended to adopt policies to further develop digitalisation, and digital tools, in this field. These policies should:

- be enhanced by specific projects and working groups, in order to discuss about standards in technologies to be implied for the development of micro-credentials;
- take into consideration the digital divide, both at the geographical level, with reference to less-developed remote areas, and facilitate the accessibility to new technologies for disadvantaged groups;
- define unified systems of verification, as is the case for full degrees issued by higher education institutions. This system could provide a univocal way to verify credentials through such means as the blockchain technology, which could be also implied to avoid fraud in education;
- set clear criteria to regulate the online platforms issuing micro-credentials.

To address the digital divide, governments and educational institutions should invest in digital infrastructure, particularly in remote and underserved areas. This could include providing affordable or free internet access, distributing digital devices to learners, and offering training on digital literacy. Additionally, micro-credential programmes should be designed to accommodate learners with limited digital access, such as by offering offline or blended learning options.

6.9 Recognition

To facilitate the recognition process, recognition practices and procedures should be established at both, national and international-regional levels, particularly for incorporating credits earned through micro-credentials into general degree courses. Clear guidelines are needed to support lifelong learning, including non-formal and informal learning⁵, and to recognize previously acquired competencies through micro-credential programmes.

For mutual recognition, transparent information provision on the Micro-credential is essential. Major components like certification, learning outcomes, purpose, and size should be standardized. Digital aspects, assessment methods, and quality standards should be harmonized, and in compliance with national requirements. Developing a shared credit value system to quantify the workload of micro-credentials and define a common framework would also be beneficial. Moreover, as mentioned above, a clear and shared definition of micro-credentials will strengthen the recognition process both nationally and across institutions.

National and regional recognition frameworks for micro-credentials should be designed to complement each other. National frameworks should establish clear guidelines for the recognition of micro-credentials within each country, while regional frameworks should focus

⁵ “Formal learning” means the learning derived from activities within a structured learning setting, leading to a formal qualification, and provided by an education institution recognized by a State Party’s competent authorities and authorized thereby to deliver such learning activities; “Informal learning” means the learning which occurs outside the formal education system and which results from daily life activities related to work, family, local community, or leisure. (Global Convention on the Recognition of Qualifications concerning Higher Education, 2019).

on harmonizing these guidelines to facilitate mutual recognition across borders. To avoid conflicts, national frameworks should align with regional standards, and a regional body (e.g., ASEAN Quality Assurance Network) should oversee the coordination and alignment of national policies.

6.10 Artificial Intelligence: recommendations for future implementation

In response to the rapidly growing trend of utilizing Generative Artificial Intelligence (AI) in education, new regulations should be introduced to explore and enhance the capacities for AI-supported education. These regulations should aim to simplify the entire micro-credentials course development and delivery process by leveraging AI tools to design course delivery modes and resources. This approach will help streamlining the process and prevent excessive burdens on lecturers.

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