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Quality Assurance Framework for Micro-credentials in Japan and in the Philippines

Greg Tabios Pawilen [a] *, Eiji Tomida [b], Dick O. Eugenio[c]

[a] *University of the Philippines Los Banos, Laguna, Philippines*
[b] *Ehime University, Matsuyama City, Japan*
[b] *Wesleyan University Philippines,, Cabanatuan City, Philippines*

Abstract

Micro-credential is gaining prominence among higher education institutions in the Asian region to provide opportunities for lifelong learning and to address the gap between industry needs and the skills of different professionals and skilled workers. This study aims to propose a quality assurance (QA) framework to ensure the quality of micro-credentials offered by three collaborating universities from Japan and Philippines. The proposed QA framework could be used to assess the quality of micro-credentials in terms of design, content, learning experiences, learning environment, and assessment. The framework could also be used to evaluate the implementation of micro-credentials by other higher education institutions.

Keywords: Micro-credential, quality assurance, higher education

Introduction

This study aims to propose a quality assurance framework to ensure the quality of micro-credentials offered by three collaborating universities from Japan and Philippines. In spite of the growing prominence and interest among higher education institutions (HEIs) in designing and implementing micro-credentials, there is no study on quality assurance of micro-credentials and there are no standards set to ensure the quality of micro-credentials in the Philippines, and there are few studies on micro-credentials in

* Corresponding author name. ORCID ID.: https://orcid.org/0000-0000-0000-0000
E-mail address: gtpawilen@up.edu.ph

the ASEAN region. On the other hand, Japan is using its 2009 Quality Assurance Framework for higher education to ensure the quality of program offerings in higher education and to ensure quality in the establishment of universities and colleges. This ensures the quality of any academic program offerings, including micro-credentials, in Japan. The proposed QA framework could be used to assess the quality of the contents of micro-credentials and it could also be used to evaluate the implementation of micro-credentials by other higher education institutions.

Despite the current rave and the increased proliferation of literature about micro-credentials since the middle of the last decade, a common definition of micro-credentials is yet to be achieved (Oliver, 2021). This is not surprising, given its acknowledged polygenesis across the globe. The fact that several terms are used synonymously with micro-credentials, such as "digital badges," "open badges," "virtual badges," "online certificates," "alternative credentials," "nano-degrees," "micro-masters," etc. reveal the multiplicity of understanding, approach, and practice throughout the world (Brown & Nic-Giolla-Mhichil, 2022, p. 940; Clements et al., 2020). Although the idea of credentialing learning and skills is new, the practice of equipping people with specific skills for specific tasks possesses a long history. In Canada, for example, basic first aid training bundles have been offered since 1833 (Brown & Nic-Giolla-Mhichil, 2022, p. 941).

The lack of common definition of micro-credentials makes the field "confusing and bewildering to navigate" (Rossiter & Tynan, 2019, p. 2). The landscape is actually "messy and poorly defined, with many competing viewpoints" (Brown & Nic-Giolla-Mhichil, 2022, p. 940). There are, however, underlying similarities in understanding. *Credence,* the Latin root of "credential" is related to credibility. As Ehlers (2018) noted, "credibility in terms of learning outcomes or achievements, is usually associated with solid learning and assessment design" (p. 458). The metaphor of merit badges earned by Boy Scouts upon accomplishing a task or learning a new skill is often used in micro-credential discussions, because it encapsulates the principle of awarding recognition to a recently mastered skill (Ellis et al., 2016; Gish-Lieberman et al., 2021, p. 5).

Hanafy (2020) surveyed existing literature, analyzed existing understandings of micro-credentials, and proposed three categories of definitions of micro-credentials: (1) micro-credentials as learning offerings using trainings, but are less than a full degree (Mischewski, 2017; Pickard et al., 2018), (2) micro-credentials as proof of skills, competencies, and achievements that may be additional, alternate, or complementary to formal education (Tracey, 2014; ECIU, 2020; Beverley, 2019; Kilsby & Fountain, 2019),

and (3) a combination of both (Business Council of Australia, 2018). Although they are helpful, the categories only validate the plurality of understanding.

Lately, the emerging definition that is gaining traction is one offered by the European Commission's Higher Education Consultation Group, in which a micro-credential is "a proof of the learning outcomes that a learner has acquired following a short learning experience. These learning outcomes have been assessed against transparent standards" (European Commission, 2020, p. 10). In this light, the closest shared definition would be that micro-credentials are "shorter forms of a learning experience as compared to that of formal degree programmes—[sic] as a stackable certification of assessed learning that is additional, alternate, complementary to, or a formal component of a formal qualification that emphasizes verified learning outcomes" (Varadarajan et al., 2023, p. 7).

Despite the lack of common definition, the increase of interest in micro-credentials is undeniable, especially since the pandemic, in the government, industry, and education sectors. Micro-credentials are often believed as the timely response to the complex changes in our technological society, where new markets and opportunities emerge unabated. Indeed, the benefits of micro-credentialing are numerous.

First, in a rapidly changing world, quick responses to equip the workforce with the appropriate skills set to perform their duties is essential in sustaining any business (Wisemann, 2021; Desmarchelier & Cary, 2022). Because traditional education degrees take time to finish, are costly, and are increasingly seen as irrelevant due to the misalignment of educational outcomes from employment needs, they are not the answer to the quick-fix solution the world needs. Cote and White (2020) wrote:

> Traditional teaching and learning models have not adapted adequately to changing student demands and labor market needs. Higher education—particularly the university sector—has been confronted with a growing list of critiques to the still-dominant, campus-focused program models: long and relatively inflexible programs; inadequate recognition of prior learning; slow or limited innovation in pedagogy; insufficient student supports for career-readiness; weak alignment to labor market needs; and a limited commitment to online and digital-enabled learning (p. 8).

This is where micro-credentials come to play a significant role because they are alternative training programs that promise quicker results (Brown et al., 2021, p. 234;

Ehlers, 2018). Micro-credentials offer a different approach that is more adaptable, inexpensive, and accessible. Twenty-first century learners, Oliver (2019) writes, prefer this.

Because micro-credentials may be taken online, employees seeking reskilling or upskilling also do not need to be geographically displaced or uprooted from their existing employment and social belongingness (Government of Ontario, 2020). The student-centered and skills-based approach of micro-credentials also allows students to focus on personalized learning, self-efficacy, and self-actualization (Hunt et al., 2020). As such, micro-credentials are convenient and individualized means to acquire the requisite skills people need to possess in keeping relevant to their chosen field or in being hired in emerging new employment opportunities (Ifenthaler et al., 2016; Crow, 2016). Learning opportunities available to students are expanded by micro-credentials, and also increase the flexibility of the educational process (Bradley et al., 2018).

Third, micro-credentials are important in filling current and future skill gaps. The World Economic Forum (2020) predicts that in as early as 2025, half of all employees in the world will need immediate reskilling in response to the disruptions caused by the pandemic and the increasing automation of jobs. In 2017, McKinsey Global Institute published a report saying that by 2030, 75 to 375 million workers will need to switch occupations (Maynika et al., 2017). Similarly, The Institute for the Future (2017) claimed that "around 85% of the jobs that today's learners will be doing in 2030 haven't been invented yet" (p. 14). If these were the case, one cannot underplay the importance of constant reskilling and upskilling of global workers (Deloitte Insights, 2019).

Fourth, especially with the increasing involvement of HEIs, individual micro-credentials, when stacked, may count toward getting a formal qualification such as a certificate, diploma, or degree (Kato et al., 2020). The micro-credentialing system may be advantageous to those looking for specific certificates as well as those who eventually hope to earn a formal degree. Because micro-credentials may be designed to be stackable, this allows learners to create personalized learning pathways and accumulate credentials over time, providing a more comprehensive and well-rounded profile of their skills and achievements. Micro-credentials allow individuals to focus on specific skills or knowledge areas that are directly relevant to their career goals or the demands of their industry. They provide an opportunity for targeted skill development and allow learners to acquire new competencies or enhance existing ones efficiently.

Fifth, micro-credentials do not only benefit learners and employees; they are also beneficial to employers and companies, especially in hiring the appropriate people needed

for specific jobs, upskilling high-potential employees, reskilling transferred employees, fostering professional development, and improving employee retention (Brown et al., 2021, p. 243). Micro-credentials are "a vehicle to creating a more inclusive culture of promoting lifelong learning where everyone can thrive" (Brown et al., 2023, p. 4). Companies who are actively engaged in micro-credentialing their employees also have enhanced collaboration with higher educational institutions, which is beneficial for both parties. Through micro-credentials, companies can articulate the knowledge, skills, and competencies that higher education institutions must provide to their students (Gauthier, 2020).

Sixth, for higher education institutions, offering micro-credentials significantly expand their market and outreach (McGreal and Olcott, 2022). Micro-credentials offer the opportunity to increase enrollment and revenue (Sjöö & Hellström, 2019). This is why, according to the study conducted by Fong et al. (2016), three in four HEIs regard micro-credentials as a crucial component of their future. With the increasing inaccessibility of formal degree programs because of financial and geographical considerations, micro-credentials help universities recruit more students. Greater collaboration with the industry is also achieved, because only close dialogue can ensure the relevance of offered courses. Having new sets of students will also challenge institutions toward curricular and instructional innovations (Brown et al., 2021, p. 233). Existing resources, such as learning management systems and electronic library holdings, will also be utilized by more eager learners. Overall, offering micro-credentials is strategically beneficial for HEIs (Kiiskila et al., 2022).

Method

The primary objective of the study is to create and recommend a quality assurance framework that could be used for assessing the quality of the micro-credentials. This study used the case study method and it utilized data from the results of meetings and discussions and review of quality assurance frameworks and tools both local and international used by the collaborating universities. The study also used information gathered during the meetings and presentations done in the three collaborating universities in Japan and the Philippines:

1. University A – public national university in the Philippines
2. University B – public national university in Japan
3. University C – private non-sectarian university in the Philippines

The three universities agreed to have academic collaboration in the areas of research, instruction, and extension. One of the recent activities is a collaboration in

offering micro-credentials. The data for this study were collected following these procedures:

a. ***Review of selected literatures on micro-credentials*** – Selected literatures and studies from 2015 – 2023 were reviewed to establish the need to develop a QA framework for micro-credentials.
b. ***Analysis of the minutes of meetings and discussions*** – minutes of several meetings and presentations were analyzed to get ideas, strategies, and challenges that the universities experienced in implementing micro-credentials. The information and data gathered were used in creating the proposed QA framework to assess the quality of micro-credentials and its implementation.
c. ***Analysis of existing QA tools and frameworks*** – the researchers also analyzed the QA tools used in the three collaborating universities like local accreditation and international assessment tools.

The results of the data gathering were analyzed and summarized using qualitative content analysis. The need for a QA framework for micro-credentials was discussed, the QA tools used by the three collaborating universities were identified, and the criteria and areas for assessment were summarized and presented. The results were utilized to develop the proposed QA Framework.

Results

The results of the study are presented in three parts: (1) the need for a QA framework for micro-credentials based on the review of literatures, (2) lessons from existing QA tools used by the collaborating universities, and (3) the proposed QA framework for assessing micro-credentials.

The Need for QA Framework for Micro-credentials

It is interesting and encouraging to see that HEIs all over the world are becoming keenly interested in offering micro-credentials. Various motivations for beginning to offer micro-credentials may include visibility, reputation, innovation, responsiveness to learners, generating income, or reducing costs (Jansen & Schuwer, 2015). However, Zhang and West (2020) noted that there is currently a lack of knowledge regarding the potential of micro-credentials and the difficulties involved in adopting them in higher education. In particular, the lack of consensual definition makes it challenging to establish quality standard mechanisms. As a field that is still evolving and changing

(Kazin & Clerkin, 2018), an agreed quality assurance framework remains elusive. Brown et al. (2023) even argues that although HEIs have already jumped into the bandwagon, most of them have no clear idea about the type of leadership and internal structures that are necessary to develop and implement a successful micro-credentials program. Young et al. (2019) also noted that although existing micro-credential platforms abound, there is scarcity of research about their operation and their direct benefit to HEIs and students.

The definition of the European Commission Consultation Group that a micro-credential is "a proof of the learning outcomes that a learner has acquired following a short learning experience" and that "learning outcomes have been assessed against transparent standards" (European Commission, 2020, p. 10) implies that ideally, micro-credentials should be referenced to, aligned with, or embedded within, national qualification frameworks (Brown et al., 2021, p. 233). Granting bodies, whether as stand-alone units or sub-units of HEIs, must ascertain that their offerings are clearly benchmarked with the quality frameworks recognized and accepted in their country of operation. This also means that pursuing a universal quality framework is not ideal. Instead, contextuality is honored, because learning outcomes and standards may be tied to specific national considerations and guidelines.

During the trainings and discussions conducted in several higher education institutions, 20 private and 3 public HEIs, the following concerns were raised.

Table 1

Summary of Concerns on Determining the Quality of Micro-credentials Raised by Public and Private HEIs

• Identify which university or college is eligible in offering micro-credentials
• Determine the quality of instruction
• Assess the level of learning outcomes
• Evaluate the experience of the learners
• Determine the acceptable number of hours and days of completion
• Check the topics and contents
• Analyze the assessment tools
• Decide on the instructional design for micro-credentials

Challenges related to quality and standards include the question on the length of participation in specific courses. In short, what is the required minimum and maximum period of study? How are credits measured? Are there levels of qualifications? How are learning hours computed? Matters related to workload and number of learning hours will

have to be considered (Brown et al., 2021, p. 229). Challenges related to assessment, including credit hours and valuation of credits also need to be addressed (McGreal & Olcott, 2022). It would seem that a plethora of responses is expected. For instance, the EU treat micro-credentials as a "sub-unit of a credential or credentials that confer a minimum of 5 ECTS" (MicroHE Consortium, 2020), while the New Zealand Qualifications Authority (2019) defines micro-credentials as between 5-40 credits in size. While it is true that national frameworks promise contextual relevance, multiple global standards will also foster confusion.

Ensuring the quality and credibility of micro-credentials is a significant challenge. With the proliferation of online platforms and providers offering micro-credentials, there is a need for robust quality assurance mechanisms. Some of the crucial considerations are: first, establishing clear standards, assessment criteria, and accreditation processes can help maintain the integrity and reliability of micro-credentials. Without consistent standards, it becomes difficult to compare and evaluate the value of different micro-credentials. Second, the lack of formal recognition or accreditation for micro-credentials can impact their acceptance and value in certain contexts, so the development of clear accreditation processes and alignment with existing educational systems can help address this challenge. Third, there is a need to ensure the quality of instruction and assessment methods used in micro-credentials, particularly in online or self-paced learning environments. Maintaining rigorous and effective instructional design, providing robust assessments, and incorporating feedback mechanisms are essential to ensure that micro-credentials accurately reflect learners' skills and knowledge.

Lessons from Existing QA Tools used by Universities and Colleges in Japan and Philippines

The collaborating universities used internal and external QA frameworks to assess their performance in various areas and programs. The internal QA is developed by the university to assess its programs in relation to its mandates, achievements, and core values. External QA, however, are assurance mechanisms that ensure that university standards are aligned with regional, national, and global standards. In both the Philippines and Japan, national education bodies commissioned and recognized by the government act as evaluators of quality both at the institutional and program levels. They issue various certifications that signify compliance with minimum standards in administration, curriculum, research, student services, instruction, and other significant educational engagements.

Table 2

Existing QA System used by Higher Education Institutions in the Philippines and in Japan

Tools	Category
Certificate of Program Compliance (CHED)	Local (Philippines)
Center of Excellence and Development (CHED)	Local (Philippines)
ACSCU AAI Accreditation Tool	Local (Philippines)
PACUCOA Accreditation Tool	Local (Philippines)
Japan QA System for Higher Education	Local (Japan)
World University Ranking for Innovation	International
QS World University Ranking	International
THE Impact Ranking	International
QS Star Awards	International
AUN-QA Assessment Tools	International

Table 2 shows the QA system used in the Philippines and in Japan. Learning from these QA Systems is necessary to identify criteria and quality standards that could be used for determining the quality of micro-credentials. The Regional Report of Asia and the Pacific (UNESCO, 2003) defines quality assurance as efficient and organized management and assessment procedures used to examine the performance of higher educational institutions. The ASEAN University Network (AUN, 2020) also defines quality assurance as a multidimensional concept of academic quality based on the needs and expectations of stakeholders. In the absence of a QA system to assess micro-credentials in Japan and in the Philippines, these existing QA tools could provide lessons and insights on how to develop a QA framework for micro-credentials.

Table 3

Summary of Areas Assessed Used by Existing QA Tools used by Higher Education Institutions in Japan and in the Philippines

- Academic Reputation
- Teaching Quality
- Internationalization
- Citations
- Employer Reputation
- Employability
- Internationalization
- Social Responsibility

- Stewardship
- Outreach
- Innovation
- Faculty-Student Ratio
- Institutional Development
- Compliance to Government's Educational Requirements and Standards
- Contribution to Sustainable Development Goals
- Industry Income

Table 3 shows the summary of areas assessed by the QA tools in Japan and in the Philippines. The existing QA tools investigate the achievement of the universities and colleges in terms of research, instruction, extension, quality of graduates, and academic reputation. In terms of institutional development, the criteria focus on achievements and recognitions, organizational excellence, program excellence, facilities, and attainment of vision, mission, and philosophy, and innovations. In terms of compliance to the government's educational requirements, the criteria focused on the type of degree offered, program outcomes and learning outcomes, quality of courses, faculty and staff support, facilities and equipment, learning environment, academic support and administrative support. The existing QA tools also examine the internationalization efforts of the universities, their contribution to the attainment of sustainable development goals (SDG), input into increasing the income of industry, stewardship, and innovation.

This will answer the following questions raised by the professors and administrators during the meetings and presentations:

- *How will we assess the quality of microcredentials?*
- *What criteria will be used in assessing the quality of micro-credentials?*
- *Are there existing tools in the country that could be used to assess the quality of micro-credential?*
- *Who will assess the quality of microcredentials?*
- *Is there a government agency or an external accrediting agency who will evaluate the micro-credentials?*

Learning from the criteria of these existing QA tools used in the collaborating universities, a QA framework for assessing micro-credentials should have four parts: (1) **standards** that will focus on the relevance and responsiveness of the micro-credentials to the needs, interests, and context of the individual and the society; (2) **design** which focuses on the content of the micro-credential and its support system; (3) **achievements** that focuses **o**n the acceptability and recognition of the micro-credentials by organizations, institutions, the society and the stakeholders; and (4) **learners' data** that focuses on student feedback that will be used to continuously improve educational experiences, assess learning outcomes, customize instruction, and enhance the overall quality of education. It should also investigate the innovation that micro-credentials brought to the higher education system and to society in general.

Table 4

Summary of the Common Basic Elements for the Design of Micro-credentials

- Title of micro-credential
- Description
- Total Faculty-Student Contact Hours and Study Time
- Credit (*if applicable and if stackable*)
- Referencing Standard (*level if applicable*)
- Description of intended participants or students
- Learning Outcomes
- Content or Title of Modules or Topics
- Learning Activities and Learning Experiences
- Assessment Tools
- Availability of Support System (learning environment, academic support, administrative support)
- Instructors and Instructional Coaches

Table 4 shows the common basic elements that should be included in designing micro-credentials. This will answer the following questions raised by the professors and administrators during the meetings and presentations:

- *What is the difference between a learning plan for microcredentials and the regular courses?*
- *What are the basic elements of a course design of micro-credentials?*
- *Is there a need to prepare a course design or a syllabus for micro-credentials?*
- *If the intended learners are non-traditional students, how can we ensure that the micro-credentials are relevant to their needs?*
- *What types of assessment tools should we provide in a micro-credential?*

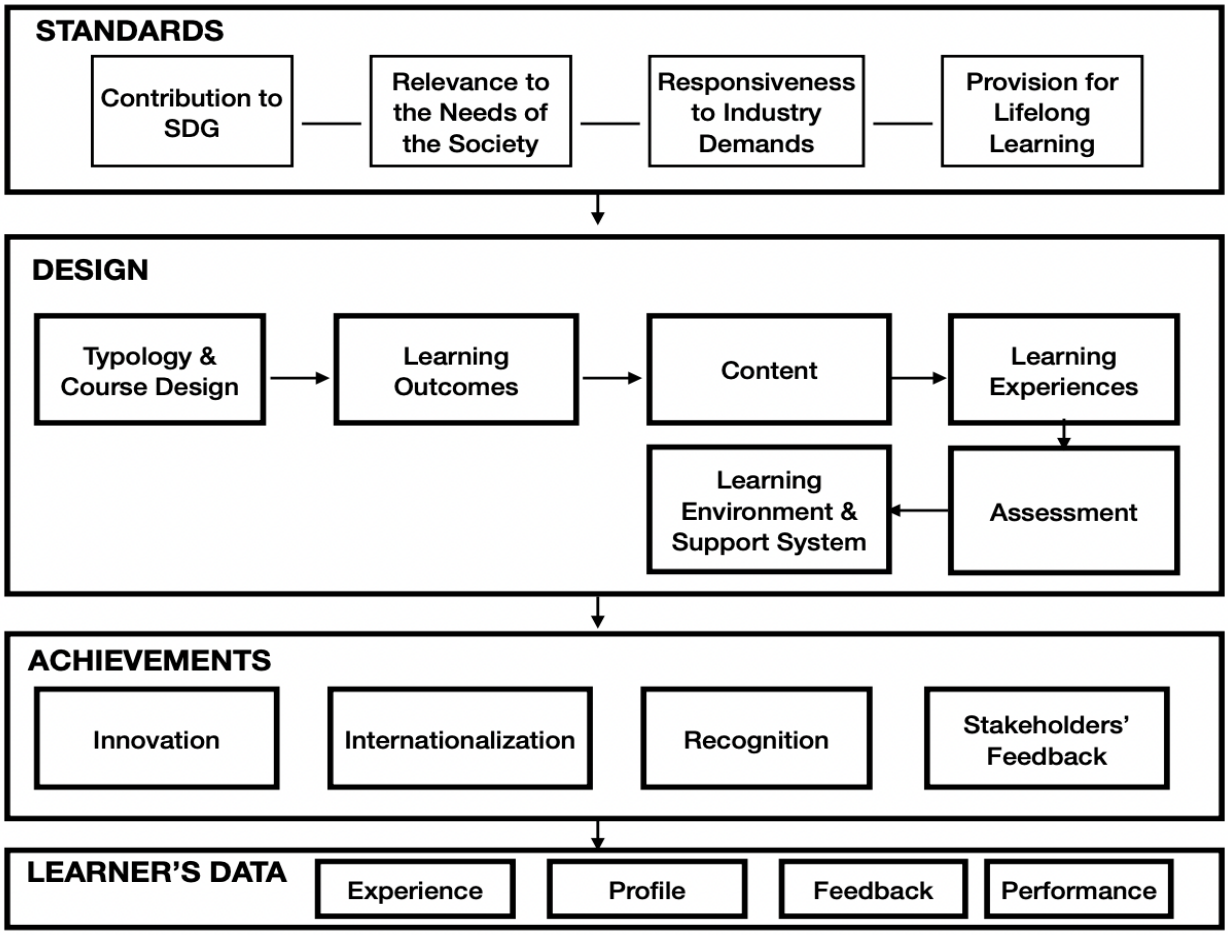
These elements are essential in the recognition and crediting of micro-credentials, especially the stackable courses. The learning outcomes, contents, learning experiences and assessment tools should be competency-based, learner-centered, outcomes-based, and relevant to the needs, learning styles and context of the learners. Since these are non-traditional students, the learning environment and the support system should be appropriate to their context. Constructive alignment between and among these elements are important to assess to ensure quality. How these elements address the social and individual needs is also essential in measuring the quality of micro-credentials.

Proposed Quality Assurance (QA) Framework for Micro-credentials

Figure 1 shows the proposed QA Framework for Micro-credentials. The proposed QA Framework is criterion-based. First, the proposed QA Framework also looks for the contribution of the micro-credentials to the *society, to industry demands, economy,* and to the *attainment of sustainable development goals* (SDG). Micro-credentials should also contribute to the *promotion of lifelong learning*. The first set lays down the ***standards*** for the development and implementation of micro-credentials. Second, in terms of academic criteria, the proposed QA Framework investigates the ***design*** of the micro-credentials in terms of *typology, or the type of micro-credentials offered and their course design, learning outcomes, content, learning experiences, assessment, and the learning environment and existing support system*. The second set expects a constructive alignment of these elements to create a culture of excellence and efficiency. Third, the proposed QA Framework assesses the ***achievements*** of the institution in implementing micro-credentials in terms of *innovation it contributes, internationalization* or acceptance from international community and partners*, recognition* from the government, accrediting agencies, and industry partners. It should also investigate the feedback of the stakeholders. Finally, to ensure continuous improvement, accountability, and relevance to industry standards, ***learners' data*** gathered from student evaluations are analyzed, so that providers may have insights concerning the effectiveness, teaching methods, and learning experiences of enrolled students. Collated learners' data also enables educational institutions to know if they are meeting student needs and expectations.

Figure 1

Proposed Quality Assurance Framework for Micro-credentials



Component 1: Standards - If by definition, micro-credential are designed to address lifelong learning needs of the learners, to develop skills and competencies of professional and technical workers, and to address industry needs for various employees, it is essential that micro-credentials should be: (1) relevant to the needs and interests of potential learners, (2) address lifelong learning needs, and (3) responsive to the needs and demands of the society and industry. Since the Sustainable Development Goals (SDG) is now emphasized in measuring the quality of achievements of all universities and colleges, it is essential to include the possible contribution of the micro-credentials to the attainment of the SDGs. The micro-credentials, to be effective, should meet 4 standards:

1. The micro-credential should essentially contribute to the achievement of the Sustainable Development Goals (SDG)
2. The micro-credential should be relevant to the needs and context of the society; diversity of learners should be respected; and the micro-credential should be inclusive.

3. The micro-credential should be responsive to industry needs and demands; relevant and new skills and knowledge should be developed
4. The micro-credential should have provision for the promotion of lifelong learning, aligned with the interests of the individuals, and support for the development of individuals

Component 2: Design - , there should be a *constructive alignment* of the micro-credentials to the needs and expectations of the society, and with the higher education provider's expertise, mandate, and programs. The design also includes 6 areas that need to be assessed to ensure the quality and constructive alignment of the content and existing support system of micro-credentials:

a. *Typology and course design* – identifies the typology of the micro-credential, its description, and alignment with specific needs of the potential learners and the society in general.

b. *Learning outcomes* – examines the learning outcomes' relevance, alignment, and responsiveness of the learning outcomes to specific needs and demands. It also examines the appropriateness of the learning outcomes to a specific referencing and qualifications framework, especially if the micro-credentials are stackable.

c. *Content* – assess the organization of topics and the appropriateness and alignment of topics with the desired learning outcomes.

d. *Learning experiences* – assesses the quality of learning experiences, appropriateness of the learning strategies and activities to the students, and the extent of how the learning experiences simulate the desired experience for the learners to master a particular skill or knowledge.

e. *Learning assessment* – explores the appropriateness, typology, and level of assessment tools. It also considers the alignment of the assessment tools with the desired learning outcomes.

f. *Learning environment*– analyzes the quality of physical infrastructure, facilities, and emotional learning environment.

- *Students' support system* – since most of the students are non-traditional learners, the quality and availability of existing student support systems need to be evaluated. Micro-credentials must also gain full acceptance and trust from among the traditional degree programs offered by colleges and universities. This means it will also necessitate a wide range of changes in the university policies, practices, and institutional culture. Likewise, the administrative support system must be more inclusive of micro-credentialing.

- *Instructional support* - assesses the quality of instructional materials, services, and programs available for the students who are enrolled in the micro-credentials.

- *Quality of academic instructors* – this investigates the quality of instructors and mentors. Since micro-credentials are experience-based and competence-based, the quality of instructors are examined by looking at their *educational background, expertise, experiences, and exposures.*

Component 3: Achievement – includes the actual achievement and contributions made through the micro-credentials. It is essential to assess the higher education institutions offering micro-credentials in terms of pushing for innovation, fostering internationalization, received recognition, and the feedback given by the stakeholders. Component 3 includes 5 criteria:

1. The micro-credentials should be innovative or has the potential to influence innovation in the formal academic programs and other continuing education programs.
2. The micro-credentials should meet international referencing and qualification standards.
3. The micro-credentials should be recognized by local and international industry partners, higher education institutions, and accrediting agencies.
4. The micro-credentials should receive positive feedback from different stakeholders.
5. The micro-credential should be verifiable preferably utilizing a digital verification system

Component 4: Learners' Data - pertains to the collection of information and insights obtained from individuals who are actively participating in courses or engaged in a learning experience. The data often encompasses a diverse array of information pertaining to the characteristics, behaviors, preferences, and performance of learners along their educational trajectory. These include quantitative data, such as assessment scores, completion rates, and demographic information, as well as qualitative data, such as feedback, comments, and reflections. These data are gathered from students in a range of educational environments, including traditional classrooms, online courses, workshops, and training programs.

Learners' data in the quality assurance framework is important in improving educational experiences. Properly documented and analyzed data may help providers achieve enhanced quality assurance, promote student-centric focus, foster an environment of continuous improvement, possess accurate assessment of learning outcomes, implement customization and personalization of learning, embody

transparency and accountability, attain competitive advantage, and sustain alignment with external quality standards. Educational institutions can be creative in gathering learners' data, but some of the common ones include: course evaluations, mid-course surveys, focus group discussions, interviews, online discussions, analytics and learning data generated by LMS, peer assessment, exit interviews of surveys, and third party assessments.

Component 4 includes 4 criteria:

1. The micro-credential should provide meaningful and engaging learning experiences for the learners
2. The micro-credential should contribute to the improvement of the learner's profile and qualification
3. The micro-credential should receive excellent feedbacks from the learners
4. The micro-credential should improves the performance of the learners

Conclusion

The growing prominence of micro-credentials in higher education necessitates the development of a quality assurance framework to ensure the quality of micro-credentials. The proposed framework in this study proposed four areas of assessment: (1) standards, (2) design, (3) achievements, and (4) learners' data. The proposed QA framework in this study will be useful in sustaining the quality of micro-credentials to be offered by the collaborating institutions. It could also be adapted by other higher education institutions or government education agencies to safeguard the quality of contents and the implementation of micro-credentials.

The implementation of proposed QA Framework requires proper documentation and assessment of these documents as evidence of quality. Confidentiality, anonymity, and ethical handling of data is also crucial in relation to learners' data. In the absence of an advisory or policy for micro-credentials both in Japan and the Philippines, this proposed quality assurance system could be used and serve as a guide to universities and colleges to design, implement and evaluate the quality of the micro-credentials. It will guide the participating institutions from Japan and the Philippines to develop a coherent strategy for micro-credential learning that effectively responds to the growing needs of professions, industry, and the community. This study finds it necessary to develop a QA framework also to ensure the quality of the provider or issuer of these micro-credentials.

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