Editorial: Micro-credential as a digital enabler for higher education ecosystems

Introduction
Micro-credential programs are still in their infancy in many countries. It implies that service providers and learners face challenges in implementing and adopting micro-credentials (Kumar et al., 2022). The implementation of digital infrastructure, its connectivity and public utility is an essential aspect of promoting micro-credentials. It requires an established and sustainable policy to execute a micro-credential program in higher education. At the same time, learner enrollment in this program is also a significant challenge. A careful assessment of the needs and requirements of professional and digital learners can provide a solution to overcome learners’ enrollment challenges. Micro-credential programs are helpful for a broad group of people, such as students, professionals, and industry leaders looking for a flexible learning environment to upgrade their skills portfolio (Gauthier, 2020). It is a strategic reset after the world experienced a global COVID-19 pandemic. Micro-credentials engage learners to be actively involved in tech-based environments that help them enhance their social and personal competencies. It also allows people to gain lifelong learning experiences while further supporting the responsiveness of university education to meet the challenges and requirements of societal relevance. According to Milligan and Kennedy (2017), micro-credentials are part of “a digital credentialing ecosystem, made possible by digital communications technologies establishing networks of interest through which people can share information about what a learner knows and can do” (p. 43).

The global crisis of the COVID-19 pandemic increased the demand for alternate ways and solutions to deliver education in universities. In this context, micro-credentials complement traditional education systems (Kato et al., 2020), and they can be viewed as an attractive and flexible solution for all levels of learners, such as Bachelor’s, Master’s and Ph.D. students. Micro-credentials demonstrate knowledge, skills and experience by offering mini-qualifications in the field of education. The term micro-credentials are also known as monodegree programs, in which traditional degree and certified programs are delivered using a digital medium. Micro-credentials involve various activities such as completing tasks, projects, lectures and assessments. As a result, a learner receives credentials in the form of a digital certificate or badge. Micro-credentials have several benefits, such as a flexible learning environment, bridging shortcomings in education careers, skill enhancement and personal and professional development. Micro-credentials can be offered using physical, blended and online modes. In addition, it provides a wide range of courses in almost every field of study.

In short, micro-credentials are an essential part of future education around the globe. Such models in the education system are becoming popular among learners and education service providers. If the higher education institutes adopt micro-credentials as their mandatory part of the education system, the new generation will become the true beneficiaries of this model. On the other side, higher education institutes provide learning opportunities for disadvantaged background learners, such as those from rural and less developed areas where access to quality education is limited. Micro-credentials also focus on people who are less familiar with technology and possess weak digital learning skills. For example, a group of senior citizens aged 50 years and older is less likely to continue their education at university. However, micro-credentials would be one option for them to overcome their skills
shortcomings and avoid their growing psychological challenges. It helps them overcome the challenges of unemployment and, at the same time, meet industry demands (Maina et al., 2022; Temjanovski et al., 2023). Therefore, to understand the current and future demand for micro-credentials, this special issue focuses on various aspects such as framework, policies, infrastructure, learners’ engagement, training, employability, digital skills, competitiveness and sustainability in the future.

Overview of special issue collection

The special issue considered theoretical, empirical, conceptual and policy-driven submissions that address the real impact of micro-credentials in higher education. The collection of papers addressed and advanced the United Nations’ Sustainable Development Goals 4, which mainly focuses on quality education and promoting lifelong learning experiences for all.

This special issue of the *International Journal of Educational Management* (IJEM) received significant attention from researchers and policymakers. The collection of papers belongs to multiple country affiliations, which include China, Pakistan, Taiwan, India, Malaysia, Turkey, Uzbekistan, the USA, Cyprus, the United Kingdom of Great Britain and Northern Ireland. The submission in the special issue focuses on unique approaches. After careful consideration, we considered six full-length papers that were relevant and fit best on the theme of micro-credentials as a digital enabler for higher education ecosystems.

The first paper by Haobo Zou, Asad Ullah, Zubaida Qazi, Amna Naeem and Sofia Rehan investigated the impact of micro-credentials on the perceived employability of university students in Pakistan. This study also focused on various components of human capital to assess the student’s perceived employability. The findings of this research revealed a positive relationship between micro-credential programs and students’ perceived employability. The study further highlights that micro-credential programs can help students identify diverse career directions, which further helps them develop a sustainable future in their lives.

The second paper by Rohit Raj, Arpit Singh, Vimal Kumar and Pratima Verma examined the important factors of micro-credentials that help students attain relevant qualifications for their career goals. The study employed two ranking methods, namely, preference ranking for organization methods for enrichment evaluation (PROMETHEE) and multi-objective optimization based on ratio analysis (MOORA), which were used together to rank the major challenges. The study findings revealed multiple factors that hinder the implementation of micro-credential programs, such as ambitious course descriptions, inadequate volumes of learning, unclear remuneration policies, a lack of individual acceptance and an inadequate level of accreditation and quality assurance. The study further suggested a policy direction for educational institutions and policymakers to focus on the identified factors to further improve micro-credential programs.

The third paper by Miao Miao, Mansoora Ahmed, Noman Ahsan and Bushra Qamar assesses the attitude of university students towards micro-credential programs. The study further investigates behavioral intention and labor market conditions to understand the students’ learning for enhancing their skills. For this purpose, this research employed structural equation modeling (SEM) and used technology acceptance and self-determination theoretical models. Their findings indicate a positive relationship between the variables, except for perceived challenges and controlled motivation factors. The study further revealed that labor market conditions do not moderate the relationship between students’ attitudes and behavioral intentions towards the use of micro-credentials. Overall, this study suggests a useful policy guideline for higher education institutes and other institutions that offer micro-credential programs for learners.

The fourth paper by Yanan Wang, Lee Yen Chaw, Choi-Meng Leong, Yet Mee Lim and Abdulkadir Barut examined the determinants of learner intentions towards massive open
online courses (MOOCs). The study collected a sample of 270 valid samples from six Chinese universities where the learners intend to use MOOCs for their professional and personal development. The results obtained from structural equation modeling revealed that the expectation confirmation factor possesses a positive association with learners’ satisfaction, self-efficacy, flow experience and perceived usefulness with MOOCs. Additionally, learners’ satisfaction, self-efficacy, flow experience and perceived usefulness further show a positive relationship with the continuance usage intention of the learners. This study offers practical guidance for MOOC providers to develop effective strategies for learners to continue their learning momentum with MOOCs.

The fifth paper by Poh Kiong Tee, Tat-Huei Cham, Eugene Cheng-Xi Aw, Adham Khudaykulov and Xiaoyu Zhang investigates the learning experience of Malaysian young adults with micro-credential program design factors. Additionally, this study also highlights the mediating role of learning enjoyment in micro-credential courses. For this purpose, this study gathered sample data from 345 working adults from major economic states in Malaysia and employed the analysis of moment structures (AMOS) for data analysis. The results suggest that program design factors predict learning experience significantly, while enjoyment during learning moderates the relationship between behavioral responses and learners’ experience.

The sixth paper by Himani Sharma, Varsha Jain, Emmanuel Mogaji and Anantha S. Babbilid assessed the integration of micro-credential programs in higher education to enhance employability. The study conducted online interviews using a sample of 65 participants from multiple countries, which included the United Kingdom, India, the United Arab Emirates and Nigeria. The study further employed a multi-stakeholder approach to perform data analysis. The findings revealed two possibilities for integrating micro-credential programs into the higher education system. First, a blended approach can be offered to integrate micro-credential courses, while the second possibility is to integrate micro-credentials on a wide scale as a sole outcome of online programs. This research suggests useful policy for higher education institutes by creating a higher level of operational understanding about micro-credentials, strategic deliberation and their enablers.

Closing remarks
In conclusion, the guest editors would like to convey their profound appreciation and gratitude to all the reviewers who provided complete assistance during the review process. We sincerely appreciate the prompt and invaluable feedback they provided throughout the review process. We are confident that the time and effort they have dedicated have greatly contributed to our ability to draw an optimal conclusion about the selection of papers. We are grateful to all the authors who deemed this special issue an appropriate platform to showcase their current research discoveries. We would like to extend our heartfelt appreciation to Professor Brian Roberts, the founding editor of the \textit{International Journal of Educational Management}, for his unwavering support and guidance during the creation of the special issue. We are also grateful to Professor Chris Brown and Professor Dong Nguyen, the editors of the \textit{International Journal of Educational Management}. Their insightful recommendations and understanding were crucial in facilitating the selection of the most suitable papers for the special issue project. We express our gratitude to the Emerald Publishing and journal editorial teams for their unwavering commitment and prompt responsiveness in ensuring the success of this special issue. We conclude this special issue by expressing our closing remarks that the compilation of articles in this issue will assist policymakers, academicians, universities, micro-credential service providers and researchers in generating interest and fostering more profound deliberation in the emerging domain of micro-credential programs.

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References


