

The Effectiveness of Micro-credential Programme from the Perspective of Tourism Students

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Abstract

Tourism micro-credential programmes have gained significant attention in recent years as a means of enhancing the skills and knowledge of students pursuing careers in the tourism industry. However, it is important to evaluate the effectiveness of these programmes from the perspective of tourism students at various universities in Malaysia. These digital proofs of learning serve as evidence of the learner's achievements, knowledge, and experience, which can be utilised to progress towards a more comprehensive certification or degree that focuses on a specific topic of study within a shorter time. Despite the increasing use of this platform in recent years, there are limited studies discussing its impact on students' perceptions and its effectiveness in enhancing their engagement with tourism subjects. Thus, this research was conducted to determine the effectiveness of the micro-credential programmes from the perspective of tourism students so that they can be managed more effectively in higher education institutions. To obtain data, the qualitative technique of interpretive phenomenological analysis (IPA) was applied to thoroughly examine the participants' actual experiences. The participants were selected among the tourism students from various universities in Malaysia that offer tourism and hospitality courses. The interview data were analysed using thematic analysis, which enabled the identification of four themes and fourteen codes. The findings highlighted that the students have positive experiences following micro-credential programmes. Further research should be carried out to ensure micro-credential programmes stay relevant in a constant tourism industry.

Keywords: *Micro-credential, tourism education, qualitative, phenomenology study.*

Introduction

In today's professional education landscape, interactive, collaborative, and online activities have become inextricably linked as the integration of learning into every environment transforms how knowledge is acquired, shared, and applied across various contexts. This change highlights the importance of interactive and flexible educational methods in meeting the diverse needs of learners and professionals. The digital revolution has facilitated the development of micro-credentials, which are now offered by various learning institutions in Malaysia, including Universiti Sains Malaysia, Universiti of Malaya, and Universiti Teknologi MARA (Ahmat et al., 2021). These courses are predominantly available online, allowing many students to participate in web-based learning on a massive, open scale (Satyarini et al., 2022).

To enhance their representation in the industrial world, students must acquire new competencies and skills through various learning activities outside their primary study programmes, such as micro-credential programmes. A micro-credential programme is a targeted, short-term educational offering focusing on specific skills or competencies, providing learners with practical, job-relevant skills that can be quickly acquired and immediately applied in personal and professional contexts (European Commission, n.d.).

Micro-credentials have garnered increasing interest, particularly in the higher education sector. By the end of 2022, the number of micro-credentials had risen to over 2,500; by 2023, this number had grown to 2,900 (Patra & Mendez, 2023). In the industry, employers are now seeking candidates with qualifications beyond traditional degrees, given the rapid changes in today's environment. Only 3% of employers consider a university education to be significant (Lim et al., 2018; Xu & Tan, 2023). This statement aligns with the

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observations of Ruddy and Ponte (2019), who noted that higher education students seek credentials that enhance their employment prospects, are easy to obtain, and add value to their academic qualifications.

The growing diversity among the student population has driven the demand for more flexible and personalized learning paths. The use of micro-credential platforms is expanding, particularly in educational institutions aiming to ensure their sustainability in the future. These platforms are now becoming part of institutions' suite of credentials or qualifications. Beyond students, many individuals are turning to micro-qualifications as alternatives to traditional training and education, addressing time constraints and promoting lifelong learning. This system allows professionals across various fields to enhance their competency and experience, adding value to their currently possessed knowledge and skills.

In addition to providing an overview of micro-credentials, this research aims to discuss the effectiveness and explore the perspectives of tourism students regarding the micro-credential programme. The study has two primary objectives:

- i. To examine the effectiveness of the micro-credentials programme on tourism students.
- ii. To explore the views of tourism students on the micro-credentials programme.

The arrangement of this paper is presented as follows: Section 2 reviews the background literature, Section 3 gives details of the research methodology, Section 4 elaborates on the research findings, Section 5 presents the study discussion, and Section 6 discusses the research conclusions.

Literature Review

In recent years, micro-credential programmes have emerged as innovative educational tools offering targeted learning experiences in various fields. Their effectiveness in enhancing skill acquisition and career readiness has gained significant attention, particularly in disciplines like tourism and hospitality. This article aims to evaluate the success of micro-credential programmes from the viewpoint of tourism students. By assessing their perspectives, this study seeks to provide insights crucial for the effective integration and advancement of micro-credentials within higher education institutions.

Overview of Online Learning in Tourism Course

Technology has played a crucial role in both higher education and the tourism sector. At the turn of the century, researchers highlighted challenges and concerns regarding the integration of modern technology in education. Sigala and Baum (2003) identified issues faced by hospitality and tourism students, such as increased global competition and shifts in the educational landscape. In the other hand, Becket and Brookes (2008) noted that colleges and universities are under growing pressure to provide high-quality support in increasingly demanding environments.

In response to these challenges, tourism studies have increasingly offered fully virtual master's and PhD programmes, as well as online classes as alternatives to traditional educational institutions. Several academics have explored the career benefits associated with online education in the tourism sector. Sigala and Baum (2003) highlighted that online education provides diverse opportunities for individuals pursuing tourism and hospitality careers, allowing them to learn at their own pace despite physical limitations. This flexibility results in a larger pool of candidates and a smoother transition into organisations. Cho and Berge (2002) argued that online education produces qualified individuals who can adapt easily to changing business plans and strategies, leading to reduced turnover and increased engagement for businesses. Additionally, Cho and Berge (2002) proposed an educational model for hotel management courses that integrates technological advancements and online learning.

Micro-credentials Courses in Higher Learning Institutions

In many aspects, the change generated by technological advances influences the educational industry. Technological advances are changing the ways we access educational content, participate in instruction, and share knowledge with learners and peers. Micro-credentials are digital assets that may be utilised to recognize, display, and transmit information about an individual's abilities, strengths, and understanding (Fishman et al., 2018). As micro-credentials document specific skills and achievements, badges are well-positioned to highlight the intermediate phases through which individuals pass as they deepen their

expertise in a domain, documenting where learners have been, and signalling where they should go next (Davis & Singh, 2015). In a sense, badges or digital badges offer students a way to display and share a wider array of accomplishments beyond traditional grades or certificates.

In contrast to conventional kinds of badges, digital badges contain metadata that anyone may obtain and verify (Dowling-Hetherington & Glowatz, 2017). In an interpersonal skills course, for instance, students who meet certain requirements might receive a "public speaking" micro-credit in the shape of a digital badge. From higher learning education perspectives, micro-credentials are viewed as a means of fulfilling the needs of those who want to succeed in their professions as well as providing qualified employees for quickly evolving companies (Desmarchelier & Cary, 2022; Oliver, 2019). Additionally, they were proposed as a means of broadening opportunities for greater learning by lowering the expenses of enrolment (Wheelahlan & Moodie, 2022). Micro-credentials are additionally used interchangeably with 'digital badges,' 'open badges,' or 'virtual badges,' which are electronic certificates issued for completing e-learning programmes (Clements et al., 2020). Due to this reason, the application of micro-credentialing in colleges and universities is fraught with potential pitfalls. Since the word was originally used loosely for both individual programmes and the entirety of degree programmes, there is no universal agreement on the meaning and scope of micro-credentials (Wang et al., 2020). As micro-credentials are frequently validated with digital badges, this has become the leading reason for concerns about 'badges' that undermine the legitimacy, integrity, and prestige associated with conventional certificates issued by traditional academies (Brown et al., 2021).

Micro-credential Practices in Malaysia

In Malaysia, the term micro-credential emerged in 2019, with the Malaysian Qualification Agency (MQA) launching guidelines for higher education institutions to ensure well-accredited and validated micro-credential programmes. Many higher education providers offer online certification programmes, but a limited number of them offer micro-credentials, mini-degrees, or mini-qualifications. Micro-credential is an added certification that complements a formal qualification and can accumulate into more extensive credentials or degrees. It focuses on a smaller learning volume than conventional awards, allowing learners to complete the required study over a shorter duration. Micro-credentials form part of a digital credentialing ecosystem facilitated by digital communications technologies. It establishes networks of interest for sharing information about a learner's knowledge and skills.

In Malaysia, universities such as Universiti Sains Malaysia, University of Malaya, and Universiti Teknologi Malaysia have started offering micro-credentials in their respective institutions. Starting in 2020, Universiti Teknologi MARA (UiTM) included micro-credential in their Strategic Planning UiTM2025 to offer these modules to national and global markets. The Institute of Continuing Education and Professional Studies (iCEPS) at UiTM is responsible for developing and promoting micro-credential modules using the university platform. UiTM offered various micro-credential courses concerning tourism and hospitality, including preparing hot desserts, food safety and hygiene for the food service business, and micro award in table etiquette. Other universities that offer these programmes include Universiti Sains Malaysia, University of Malaya, and Universiti Teknologi MARA (Ahmat et al., 2021). With the advancement of technology impacting the education sector, higher education providers are expected to increasingly offer online or digital certification programmes, such as micro-credentials.

Methodology

Research Design

This study aimed to investigate the effectiveness of micro-credentials from the perspectives of tourism students. The interpretative phenomenological analysis (IPA) qualitative research methodology was employed to achieve this. This method allows researchers to understand how individuals react to specific events (Smith, 2015). IPA is particularly suitable as it provides a flexible and subtle understanding of people's experiences. Instead of generating a theory applicable to the entire community, it offers a deep insight into participants' views within a specific group (Almajali et al., 2022). This approach is also appropriate for research aiming to understand a situation rather than predicted outcomes. It is therefore crucial to involve individuals directly affected by the phenomenon under investigation.

This study's primary data collection tool was semi-structured interviews, which provided comprehensive insights from the participants. These in-depth interactions enabled researchers to engage closely with each specific case, allowing for the development of multiple perspectives on the research questions. Purposive sampling, or judgment sampling, was used in this study as it is a standard procedure in qualitative research. Based on their track records, tourism course students from various universities in Malaysia with experience in micro-credential courses were approached. This method allowed researchers to gather diverse opinions from students in different domains.

The research obtained approval from the Research Ethics Committee on May 23, 2023 (Reference: 600 UiTM CPP (RMU 5/6); BERC/5/2023 (UG/MR/176)) before inviting participants. The researchers have ensured the proper selection of respondents and sample size. Interested individuals could voluntarily participate by directly contacting the researchers. Before the interviews commenced, we issued consent forms and recorded all interviews, adhering closely to the interview guidelines. Consequently, twenty-two (22) tourism students from universities in Malaysia who had experienced micro-credential programmes voluntarily participated in this study.

Data Collection and Analysis

Regarding sample size considerations, Almajali (2022) highlighted the typical small scale of Interpretative Phenomenological Analysis (IPA), typically involving one to twelve participants. In contrast, Gill (2020) argued against rigid guidelines, emphasising the importance of gathering sufficient, high-quality data to address research questions effectively. This approach was crucial in the current study, where Hennink et al. (2019) underscored the need for a targeted sample size to explore the phenomenon comprehensively. The study's inclusion criteria focused on tourism students from various Malaysian universities participating in micro-credential programmes, with data collected through online interviews conducted via Google Meet.

Before proceeding with the interview sessions, researchers ensured that participants met the screening criteria. Only those with experience using micro-credentials were approached for interviews. Following the screening questions, the qualified participants were asked to respond to the four trigger questions as follows:

Interview Question 1: How effective is the micro-credential programme for your study?

Probing Question 1: How do micro-credential programmes impact your learning?

Interview Question 2: How do you view the micro-credential programme?

Probing Question 2: What is your perspective or opinion on the micro-credential programme?

The interview questions were straightforward for the participants to answer. Researchers also used probing questions to elicit more detailed responses and further develop the participants' stories. Each interview session lasted approximately 10 to 15 minutes. The 22 participants were from both public and private universities, providing a range of perspectives from tourism students across different domains. The participants' responses were recorded as audio files and subsequently transcribed for thematic analysis. In Interpretative Phenomenological Analysis (IPA), thematic analysis is a valuable method for identifying, analysing, and reporting patterns within the data (Braun & Clarke, 2006). Inductive coding techniques were used to create themes during the thematic analysis process. Similar interview data were grouped, with each group assigned a name. Themes were then recognised based on these codes. This process allowed researchers to thoroughly analyse similarities, differences, and convergence and divergence within the data. The participants' profiles for this study are shown in Table 1.

Table 1. Semi-structured interview respondents.

Respondents	Age	Gender	University	Courses
Participant 1	26	Male	Private	Hotel Management
Participant 2	22	Male	Private	Hotel Management
Participant 3	21	Male	Private	Culinary Arts
Participant 4	24	Male	Public	Hotel Management
Participant 5	22	Female	Public	Hotel Management
Participant 6	25	Female	Public	Hotel Management

Participant 7	23	Female	Public	Culinary Arts
Participant 8	26	Male	Private	Hotel Management
Participant 9	24	Male	Public	Hotel Management
Participant 10	25	Male	Public	Tourism Management
Participant 11	25	Male	Public	Food Service Management
Participant 12	26	Male	Public	Hotel Management
Participant 13	22	Male	Public	Culinary Arts
Participant 14	24	Male	Private	Tourism Management
Participant 15	25	Male	Private	Hotel Management
Participant 16	22	Male	Private	Hotel Management
Participant 17	25	Male	Public	Food Service Management
Participant 18	24	Male	Private	Tourism Planning and Development
Participant 19	25	Male	Private	Hotel Management
Participant 20	23	Male	Public	Culinary Arts
Participant 21	25	Male	Private	Culinary Arts
Participant 22	23	Female	Public	Food Service Management

The participants in this study ranged in age from 21 to 26 years old. They were all students enrolled in micro-credential programmes at both public and private universities in Malaysia. Specifically, 12 participants attended public universities, while the remaining 10 came from private institutions. Of the 22 respondents, the largest group, 11 participants, were studying hotel management courses. Additionally, 5 participants were pursuing culinary arts, 3 were in food and service management programmes, and 2 were studying tourism management. There was also one participant each from tourism planning and development and hospitality studies, which had the smallest representation among the courses.

Research Findings

Four major themes emerged from the qualitative data as the result of the thematic analysis regarding the effectiveness of micro-credential programmes in their studies. These themes were identified through probing questions, particularly because some participants initially did not fully grasp the meaning of the first interview question, leading to unclear answers during the interview session. From the thematic analysis, researchers have identified four main themes which are time efficiency, resource accessibility, employability, and educational sustainability (Table 2).

Table 2. Result of thematic analysis.

Themes	Codes
Time Efficiency	Short-term learning Self-regulated learning
Resource Accessibility	Subject exploration Effective learning
Employability	Career readiness Employment paths
Educational Sustainability	Lifelong learning Complementary competencies

Critical Success Factors by Themes

Theme 1: Time Efficiency

Micro-credential programmes have emerged as dynamic pathways for students seeking to enhance their social mobility through short-term learning opportunities. These programmes are characterised by their focused, specific nature, allowing learners to acquire targeted skills in a relatively brief period. Perna (2021) stated that micro-credentials serve as specific in range and take less time to be acquired compared to the traditional classroom. Many students use digital badges as opportunities for their short-term learning which

results in long-term benefits (Tinsley et al., 2022). Additionally, micro-credentials offer a learning platform within a condensed period (Perna, 2021). Orman et al. (2023) emphasized that micro-credentials serve as a time-efficient method to enhance learners' skills and knowledge in specific areas.

Participants 1,3,4,6,12,19,21, and 22 claim that the micro-credential programme is appreciated as it takes a brief period to complete.

“A lot since it helps me to get certain achievements that are within a short span of time in my study.” (Participant 1)

“Helps me to get more knowledge and tokens in the shortest amount of time.” (Participant 3)

“For the learning aspect, it helps a lot where this micro-credential able to decrease the duration of the studies duration for my programme. Despite 4 years, it could possibly be 3 years.” (Participant 4)

“A certification programme that provided the opportunity to the community to participate on it because it is a flexible short-term course that was created based on industry needs and suits for working people who does not have time to participate in a face-to-face class.” (Participant 6)

“A certification programme that is give all people opportunity to participate because it is flexible short-term course that was created based on industry needs.” (Participant 12)

“Super effective for me because I can get online qualifications in a short span of time.” (Participant 19)

“Micro-credential helps reduce programme study duration. The community can obtain specialised qualifications through micro-credential certificates and badges without pursuing their study.” (Participant 22)

“Short-term certification programme designed for industry demands on working people with limited time on face-to-face training.” (Participant 21)

Flexible hours are also one of the factors that contribute to the time efficiency of the micro-credential programme among tourism students, as it encourages self-regulated learning (SRL). Self-regulated learning refers to the process by which individuals take control of their own learning experiences. In self-regulated learning, students are actively involved in managing their learning process. They engage in metacognitive activities such as self-reflection, self-monitoring, and self-evaluation to regulate their learning behaviours. Ralston (2021) highlighted that some people prefer micro-credential due to its adaptable programme structure. According to Flasdick et al. (2022), participants have unlimited access to all course materials digitally and can access them at flexible times. Thus, this flexible delivery offers demand for credentialing learning. To top this, participants also joined micro-credential because it is structured as a home-based learning. A credential badge allows participants to access educational resources and participate in learning activities at their comfort place (McKnight, 2021). Participants 6,9,14,17,18 and 20 suggested that this flexibility gave them freedom to study at their own time and comfort:

“I have got 2 classes or practical every semester, so I used the micro-credential programme to study on my own. It gave me more opportunities to test my knowledge in practical classes after semester 4.” (Participant 17)

“Flexible learning time, which is I can focus on my study when I have a free time.” (Participant 9)

“I can get an online qualification even though I am still pursuing my study at university.” (Participant 14)

“Micro-credential programme gives freedom in choosing modules that offer knowledge, skills and competencies that I want or need to learn only.” (Participant 6)

“From my personal point of view, Micro-credentials programmes are more like a short course. This means that I can take it whenever I want and wherever I need since I can also take the course online. Micro-credentials impact my learning outcomes in an excellent way. Moreover, it helps me to increase my qualification for my studies.” (Participant 18)

“Micro-credentials programmes are short online courses that enhance qualifications for my studies without the need to face any bad impact or obstacles during my learning since it offered more flexible and convenient access.” (Participant 20)

Puzziferro (2008) found that students in the upper tier of the self-regulated learning group are more satisfied when using the open-source platform compared to students in the low SRL group. By actively engaging in self-regulated learning practices, students can enhance their understanding and improve their problem-solving skills over their learning journey through the available micro-credential platform.

Theme 2: Resource Accessibility

Selvaratnam and Sankey (2021) highlighted that micro-credential programmes function as open-source learning platforms that are accessible to a wide range of institutions. Such platforms offer users a variety of significant benefits for their studies. To name one, this allows for subject exploration by students since they have the access to explore knowledge outside of their respective fields. Micro-credentials serve as evidence that students can enhance their knowledge by obtaining diverse accreditations beyond their primary field of study, thereby improving their understanding of various specific topics (MacCallum & Brown, 2022). Participant feedback illustrating knowledge enhancement includes the following examples:

“Can learn many other topics that are outside of my major. Moreover, it is easy to study from home.” (Participant 10)

“It provides me with a variety of new knowledge, skill or competencies to continue to meet the current needs without requiring a long period of study commitment.” (Participant 5)

“Pretty effective since it can help me to learn new things.” (Participant 2)

“This platform encourages students to learn more and gain new knowledge outside their field.” (Participant 6,12)

“It does impact my learning by giving me more exposure to a diverse job that I can choose based on my qualifications.” (Participant 19)

Another core advantage of micro-credentials for learners is effective learning, as highlighted by Hunt et al. (2020). Every educational platform must offer a robust education programme to attract student interest, thereby ensuring the platform delivers valuable benefits to its users and contributes to the sustainability of the programme over time. This approach not only enhances the educational experience but also fosters long-term engagement and success for all stakeholders involved. The participants emphasized that the short modules significantly contribute to the effectiveness of micro-credentials in their studies, enabling them to better manage their learning strategies. Moreover, participants in these programmes typically hold high expectations of achieving effective learning outcomes. These participants shared similar views on the effectiveness of micro-credential studies:

“Micro-credentials programme is effective towards my study since the delivery and assessment methods that enable learning sessions to be carried out in accordance with the abilities, circumstances and limitations faced by students” (Participant 5)

“Smaller learning units that enable me to concentrate more on the topics or learning units that according to my suitability and ability.” (Participant 7)

“More engagement because it is online learning and requires internet data to access the learning videos and assessment.” (Participant 10)

“For theory courses, I think it works well because each topic is equipped with notes, assignments, and quizzes that are really useful for me to test how far I understand about the topic.” (Participant 11)

This programme simplifies the process of how I find information.” (Participant 13)

“Simple learning modules provide concentrated attention on important topics.” (Participant 22)

“It is quite easy as it allowed me to watch all the lecture videos as many times as needed to fully understand the topic.”
(Participant 9)

“Easy to understand and save time.” (Participant 13)

“It is quite effective because of the short-term learning for my study.” (Participant 16)

“Basically, it is depending on the learning objective of certain subject. Sometimes it can be effective. For example, micro-credential suits calculation or statistically method.” (Participant 4)

“Pretty much effective.” (Participant 14,17)

“Provided me with many resources to enrich my understanding about the topic.” (Participant 11)

“This programme facilitates the learning process in various types of subjects.” (Participant 13)

Nevertheless, it is also important to note that micro-credentials may have its downside. For subjects requiring clear and deep explanations of theories, micro-credentials may not be the best option, and this is shared by Participant 4:

“For theory subjects where explanation is needed, it is quite useless.” (Participant 4)

Theme 3: Employability

Employability emerged as another key theme reported by participants, as many aimed to gain additional qualifications to be ready for the job market. They noted that the micro-credential programme aids in their career readiness by equipping them with the necessary skills for employment. In our rapidly changing global economy, career preparedness requires adaptability, a commitment to lifelong learning, and mastery of essential knowledge and attitudes (Jaunarajs & McGarry, 2018). Most participants also claimed that micro-credentials enhance career readiness, especially for fresh graduates. Participants 1,2,3,4,5,7,15,16 and 21 agreed on this idea:

“It helps me to choose my career with the help of qualifications that the programme offers.” (Participant 2)

“A lot. It helps me to make sure that I know about specific job qualifications.” (Participant 3)

“Gain more advantage of new knowledge and other skills that are geared towards job needs.” (Participants 1,7)

“It needs to be applied as soon as possible for students’ future planning especially where they should graduate and get a job within the age range 22 to 24 years old.” (Participant 4)

“This platform can improve the employability of fresh graduates who are preparing to enter the labour market.”
(Participant 5)

“A programme that can improve the employability of fresh graduates who are preparing to enter the labour market.”
(Participant 7)

“I am grateful because it can help other students to be more ambitious in choosing their job based on their expertise.”
(Participant 15)

“MC programme can help me to choose my job based on my qualification from my study.” (Participant 16)

“Gaining a better understanding of programme branches and job qualifications.” (Participant 21)

It is entirely common for students to venture into different fields than the ones they studied at a higher level of education. Obtaining micro-credentials is essential for preparing themselves and opening alternative career or employment paths upon graduation. This is also applicable to those already in the job market who may wish to explore other employment options, making micro-credentials invaluable for them. Micro-

credentials have the potential to create a universal framework across stakeholders, facilitating improved interaction and comprehension, and assisting learners in developing a career path (Berry & Cator, 2016). Participants 2, 3, 8, 11, 15, and 18 emphasized the importance of micro-credentials in expanding employment opportunities.

“It is as a backup for people who lack in qualification in the job field that they are hunting.” (Participant 2)

“Can help a lot of people by giving them another qualification for seeking various job fields.” (Participant 3)

“It is a good programme to help students apply for and experience more diverse jobs. This can lead to improving student ability.” (Participant 8)

“Would be useful since seeking a job is the first thing that comes to my mind after graduation. Even if we study well in a certain field, we still need to prepare ourselves with other additional knowledge to be competitive.” (Participant 11)

“By joining many credentials modules, it helps me to diverse more job scope. Moreover, the qualification and achievement that I obtain can be used in the future.” (Participant 8)

“It is effective by helping me to learn more about specific job skills that I can use in my study. In addition, I can apply for more diverse jobs in my course by getting an online certificate.” (Participant 15)

“To be frank, micro-credential for me is as backup thing to do for me to get more achievements and qualifications for working in the hospitality industry in the future.” (Participant 18)

Theme 4: Promoting Sustainable Education

Participants strongly suggest that universities should actively promote micro-credentials for their benefits in supporting lifelong learning. They also emphasize the importance of implementing micro-credential programmes in all higher learning institutions. While numerous colleges and universities offer internet-based certification programmes, only a few provide mini-degrees, mini-qualifications, or micro-credentials. Some academicians view micro-credentials as additional certifications that supplement officially recognized credentials (Selvaratnam & Sankey, 2021).

Micro-credentials are not only useful for fresh students but also for working adults. They offer flexible learning options that allow professionals to upskill or reskill without the need for long-term commitment to traditional degree programmes. This flexibility is particularly valuable for working adults who need to balance their educational pursuits with job responsibilities. By acquiring micro-credentials, working professionals can stay updated with industry trends and enhance their career prospects. Participants believe that the sustainable development of micro-credential programmes should be a priority for most universities, as these programmes can be integrated into future educational models. Promoting micro-credentials can help create a more adaptable and skilled workforce, benefiting both individuals and the broader economy.

“In my opinion, the micro-credential programme helps people who seek more knowledge, and they can apply the knowledge in their working expertise according to their job specification.” (Participant 1)

“Other universities should create micro-credential platforms to increase their use in educational institutions.” (Participant 2)

“It needs to be applied among community and student.” (Participant 4)

“Should be implemented more.” (Participant 8)

“They should be implemented more in every type of higher learning education.” (Participant 19)

“Need to be developed more to increase student interest.” (Participant 14)

“It can be improved a lot.” (Participant 16)

“Delivery, learning and assessment methods should be adapted accordingly so that optimal learning can be experienced by various levels of students. For example, learning season can be conducted either face-to-face or online.” (Participant 7)

“My perspective is that micro-credential should be supported by every university for their own students’ benefit.” (Participant 15)

“The public and private university must work together for the micro-credential programme to provide a variety of modules in various fields.” (Participant 19)

Complementary competencies are one of the key factors influencing the acceptance of micro-credentials. Ahmat et al. (2021) stated that students can select the competencies or abilities they want to develop and then decide which micro-credential modules to enrol in. This flexibility allows students to tailor their learning experiences to meet their specific career goals and personal interests. Micro-credentials serve as complementary competence to academic qualifications by providing a focused, practical approach to learning that supplements traditional education. Academic qualifications typically cover a broad range of subjects and provide a comprehensive foundation of knowledge while micro-credentials allow learners to seek deeper into specific areas, gaining specialised skills that may not be covered extensively in their degree programmes. This combination of broad academic knowledge and targeted skill development can make graduates more versatile and competitive in the job market.

For working professionals, micro-credentials offer a way to stay current with industry advancements and evolving job requirements. By earning micro-credentials, they can demonstrate their commitment to continuous professional development and adaptability, which are highly valued by employers. This dual approach to education—combining the traditional academic programmes with the depth of specialised micro-credentials—can create a more competent, adaptable, and competitive workforce.

“Micro-credential programme improved my knowledge, skill and competencies in my study.” (Participant 12)

“The micro-credential programme gave participants or working people chances to add value to their abilities to remain relevant in their future or current job.” (Participant 18)

“One of the students’ priorities after pursuing their studies is to be more competitive in the career zone when graduating.” (Participant 17)

“Micro-credential is essential for future achievements and qualifications in the hospitality industry. Hence, they are often looking for employment, but preparation with extra knowledge is critical for competition in a wide range of fields. The micro-credential programme provides participants with useful skills that help them with their work relevancy and education.” (Participant 20)

“An education programme that needs to be promoted to attract interest among community and students in higher education to improve the quality of graduates’ marketability.” (Participant 9)

Therefore, participants strongly recommend that higher-level institutions consider integrating micro-credentials and actively promote them as part of their course offerings.

“This programme is less used, and many people still do not know about the existence of this programme.” (Participant 13)

“Can be used for future education.” (Participant 14)

“The micro-credential accreditation must be improved so that it becomes a qualification...” (Participant 10)

Discussion

This qualitative research aimed to assess the micro-credential programme's effectiveness from the tourism students' perspective. A total of 22 tourism students from various universities participated in the study. Thematic analysis of the data revealed four key themes.

The impact of micro-credential programmes on learning

The impact of micro-credential programmes on learning was significant, particularly in terms of time-saving benefits for tourism and tourism students. Most respondents agreed that micro-credential programmes enable them to attain qualifications in a short time. The flexibility of short-term learning schedules allows students to conduct self-regulated learning and, therefore, quickly acquire new skills and knowledge applicable in their workplaces. This viewpoint aligns with a study conducted by Perna (2021), which found that micro-credentials provide a platform for accelerated learning.

Resource accessibility also emerged as one of the themes. Flasdick et al. (2022) noted that participants benefit from unlimited digital access to course materials, enhancing their learning ability at flexible times. Selvaratnam and Sankey (2021) described micro-credentials as open-source learning platforms accessible across various institutions, offering significant educational advantages. This access has allowed people to explore subjects beyond their academic learning. MacCallum and Brown (2022) emphasized that micro-credentials prove learning achievements beyond traditional fields, advancing expertise in specialized areas. On top of that, it also offers practical learning experiences, except for subjects requiring deep and clear explanations of the theories.

Micro-credential programmes serve as tools for enhancing qualifications and preparing for employability, offering career advancement opportunities, and meeting upskilling needs in a rapidly evolving job market (Oliver, 2019). This viewpoint aligns with the perspective shared by the participants, who say that micro-credentials benefit fresh graduates by preparing them for the job market and working professionals who would like to pave other employment opportunities.

Perspectives toward the micro-credential programme in learning

Perspectives on micro-credential programmes in learning highlight their role in promoting sustainable education. Ralston (2020) advocated a comprehensive approach to micro-credential education, fostering professional identity, soft skills, and self-awareness. Participants expressed optimism about the future development of micro-credential programmes in higher education, anticipating further adoption and refinement to ensure success via lifelong learning. It is also vital as complementary competencies helpful in creating a resilient workforce.

Conclusion

This study has explored the significant impact of micro-credential programmes on learning within the tourism sector. Through the perspectives of the 22 participants, it became evident that these programmes offer efficient pathways to acquiring qualifications, enhancing skills, and preparing for career advancement in this evolving industry. There were three themes discussed on the effectiveness of micro-credential programmes towards student learning and one theme on the students' perspectives toward micro-credential programmes. The findings support existing literature, highlighting the flexibility, accessibility, and sustainability of micro-credentials as key factors in their effectiveness. While this study contributes valuable insights, it is important to acknowledge the study's limitations. The sample size was relatively small and limited to tourism students, which may restrict the universality of findings to other disciplines.

Therefore, moving forward, future research could benefit from larger, diverse samples to further explore the broader impacts and potential challenges of micro-credential adoption in respective industries. Future studies could also focus on evaluating the long-term outcomes of micro-credential programmes on career progression and industry relevance, either specifically in selected branches of knowledge or focused on other relevant factors such as gender, geographical, cultural, or socio-economic diversity. Additionally, it is also suggested that future studies explore innovative ways to integrate micro-credentials with traditional academic pathways that could enhance their acceptance and utility in higher education.

In conclusion, it is strongly recommended for educational institutions and industry stakeholders to continuously integrate micro-credential programmes into curricula and professional development frameworks. This combination not only meets the upskilling needs of students and professionals but also fosters a responsive educational environment capable of adapting to evolving industry demands. Micro-credential programmes present a promising direction to enhance educational outcomes and professional development. By dealing with the identified recommendations and building on the strengths of this research, the role of micro-credentials in shaping the future of learning and employment can be optimised.

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