

# Micro-Credentials in TVET: An Analysis of Trainers' Perceptions, Challenges, and Benefits in Bridging Skill Gaps in Tertiary Education

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## ABSTRACT

This paper focuses on the phenomenon of micro-credentials and attempts to analyze the trainers' perceptions, challenges, and benefits in bridging skill gaps in tertiary education among the offering TVET institutions in Kenya. The target population was 108 TVET senior lecturers selected from TVET institutions in both Makueni and Machakos Counties. A standardized questionnaire was used to collect data from 36 respondents; a pilot study was conducted among 10 respondents to guarantee both validity and reliability of the research instruments. The study concluded that TVET institutions were ready for the introduction of Micro Credentials in their institutions. The conclusion was based on the fact that 94% of the lecturers supported the introduction of the Micro Credentials in TVET institutions, and they considered micro-credentials as complementary to the tertiary education. Moreover, 61.1% saw Micro Credentials as a fundamental for bridging skill gaps within the traditional tertiary education. Moreover, Micro Credentials effectively reduce inequality by enhancing more access to training due to their low cost and flexibility. Finally, the hindrances in starting Micro Credentials in the TVET institutions are solvable; for example, lack of quality and standardization framework. Therefore, what TVET institutions need to do is to set a body responsible for quality assurance standards regarding the credibility of Micro Credentials qualifications. The study further recommended that: time was ripe to introduce Micro Credentials in the TVET institutions. Finally, the study found that there was a high possibility of succeeding in introducing micro-credentials in TVET institutions because the staff overwhelmingly supported the idea.

**Key Words:** micro-credentials, skills, up-skilling, learning outcomes, life-long learning,

## INTRODUCTION

The current world is marked by remarkable opportunities, unending risks, and complex challenges that have resulted into shift in the job market landscape and ecosystem (Ha et al., 2022). Against this background, micro-credentials (M-Cs) have emerged and are trending; they have become the subject of rising attention world over as a pathway to complementing the traditional educational system in preparation for competent and employable graduates. There is consensus that since the advent of the Covid-19 pandemic, the world is still reeling from the unprecedented disruptions of the pandemic especially in the education and training ecosystem. For example, those currently going through the traditional educational system are said to be lacking critical skills and competencies required in the job market (ILO, 2025). Therefore, M-Cs are handy in providing relevant pathway of enhancing critical skills development to meet the diverse workforce needs to penetrate the labour market (Johanan et al., 2025). Moreover, in today's world of rapid technological advancement and massive competitions, M-Cs present a wide range of unlimited possibilities for short-term learning experiences geared towards enhancement of learners' competencies. While complementing the traditional educational systems, M-Cs have been uniquely addressing the skills gap ecosystem stuck between post-secondary education and labour market. In that regard, M-Cs provide students with matched practical skills and competencies required the job market. Today's job market is ever-evolving characterized by newer expectations each new day; therefore being employable and relevant in today's labour market one has to match job requirements by updating his or her skillset. Even those in gainful employment, they require re-skilling and

up-skilling to enhance their performance and by thus remain employed (Ali and Khan, 2023). According to (World Bank, 2022), with the increased world of automation and artificial intelligence, those without the new skills may become redundant in the nearest future. To remain employed, and to transit to their new roles in employment, then M-Cs ecosystem are critical for those already in the labour market, and notwithstanding the new entrants with traditional qualifications (Ali and Khan, 2023, p.1104).

The government of India has taken illustrious steps in introducing M-Cs in its educational system. Incidentally, through policy makers and educational regulators has been carrying out significant transformation in higher education landscape in order to enable the young graduates to be in step with rapidly technological advancement and ever-evolving skill requirements and competencies to fill the gaps in the job market. According to (Mahamuni and Raju, 2023), M-Cs have succeeded in democratizing education in India, for example through M-Cs, there more access in education by the removal of the obstructions of location, religious hindrances, gender inequalities, and socio-economic conditions barriers. However, India has to overcome outstanding challenges interfering with the introduction of M-Cs; for instance: issues of credibility, security, ecosystem, and quality assurance standards. To chart the way forward for smooth introduction of M-Cs, the Indian government through The University Grants Commission (UGC) developed Guidelines for the introduction of M-Cs commonly referred to as the National Education Policy (NEP) 2020 (UGC, 2020). A country like Malaysia has made strategic steps in in the introduction of M-Cs. For instance, according to (Che Ahmat et al., 2021), the implementation of M-Cs in Malaysia includes two bold steps: credit transfer policy and accreditation of prior experiential learning. The main purpose of introducing M-Cs is to advance knowledge, skills, values and competencies. Moreover, the guidelines and policies require the M-Cs to be developed based on-demand, industry driven, transparent, personalized, and out-come driven.

For most sub Saharan African (SSA) countries, they are stuck in the traditionally learning whereby qualifications like degree, or a professional certificates are overpriced (Van de Laar et al., 2022). Undoubtedly, M-Cs presents a bright future and promise for Sub-SSA. However hindrances and challenges such as: lack of understanding about the benefits of M-Cs, lack of adequate resources, weak infrastructure, inadequate policies and regulatory bodies. According to (Manyukwe, 2024), a survey was carried in 28 selected African countries about the introduction of M-Cs. The findings showed that despite knowledge about profitability of introducing M-Cs in higher education, the M-Cs were only offered by the TVET.

micro-credentials has established that they are offered mostly by technical and vocational education and training (TVET) colleges, followed by higher education institutions, with respondents saying there is strong consensus on the importance of developing a common continental approach.

The process and experience of introduction of the M-Cs in the SSA varies from one country to the other. For example, in Tanzania, the possibility of introducing M-Cs is ripe, for example, both educators and students are optimistically looking forward for the introduction of the M-Cs. However, most of the universities in Tanzania are yet to introduce M-Cs. (Moreover, Tanzania is yet to put in place the relevant infrastructure, relevant policies, and technologies needed for the introduction of M-Cs (Ghasia et al., 2019). The government of South Africa has popularized M-Cs as foundational and innovative ways for the development and recognition of youth skills.

In Kenya, Technical and Vocational Education and Training Authority (TVETA) is recognized as a State Corporation, placed under the Ministry of Education established. The regulation and promotion of quality technical and vocation and training, and assurance of equitable access by the Kenyan citizens has been placed under the mandate of the TVET Act of 2013. For less than a decade, the growth of TVET institutions in Kenya is phenomenal. For example, between 2013 and 2022, the number of TVET institutions have grown from 753 to 2,401 (Amubi and Kipkirui, 2023). One of the notable gaps so far as far as TVET is concerned is that it cannot be equal to introduction of M-Cs. While TVET programme is more focused on impartation of skills and competencies unlike in the traditional educational system; both are also keen on certificates, diplomas and degrees. They also have clear timelines ranging from a year, to three or more years depending on the profession (Ali and Khan, 2023). Therefore, the ecosystem of M-Cs in Kenya like in most developing countries is still at its infancy state. In that regard, there is lack of a national policy that communicates a harmonized and coherent framework (Maina et al., 2022). For example, currently there is no common

understanding about M-Cs; moreover, there is lack of established basis for the recognition of M-Cs at the national level (Manyukwe, 2024).

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