

Chapter 11

Integration of Micro– Credentials With Artificial Intelligence in Open Education: Developments and Challenges for Middle East Countries

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ABSTRACT

The global trends in higher education are moving toward skill-based credentials. Micro-credentials and digital badges are the buzzwords to demonstrate the acquisition of industry-specific skills of the candidates. Integration of AI in open education could enhance the deployment of personalized higher education for everyone and can address several challenges related to retention, assessment, and credibility of micro-credentials in open pedagogy. Timely sharing of these credentials across a wide range of international systems through AI will widen the prospects of continuing education and employment for learners. The Middle East is making timely responses to the digitization of education systems. According to some market forecasts, the market for AI tools in the Middle East region will reach nearly eight billion dollars by the year 2027. There are several ethical dilemmas surrounding use of AI in education and micro-credential programs such as data privacy, biasness and fairness, equity in access, accountability, transparency, cultural sensitivity and the impacts on traditional education models and current review therefore stresses the need for comprehensive ethical guidelines and policies in the Middle East region rather blind

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adoption. The book chapter offers an analysis of the existing scenario, emerging opportunities and challenges and makes specific recommendations to expand and integrate AI tools in open education in the Middle East region.

INTRODUCTION

Political, social, economic, scientific, and technological revolutions in the past intersected and influenced the role and purpose of tertiary education recognizing the need for continual learning for human development and agency. Access to good quality higher education is viewed as a human right and could play a significant role in addressing social and economic challenges. These revolutions have led to the emergence of open education initiatives, such as massive online courses and open educational resources, representing a paradigm shift in education (Blessinger & Bliss, 2016).

Middle East region is making a fast response to the adoption of the latest technological advancements in all fields including the education system. The traditional and open education systems in this region are employing new digital tools, and immersive techniques and creating learning environments that meet the unique and diverse educational needs of learners (Singh et al., 2019). The integration of advanced technologies like Artificial Intelligence (AI), is the emerging priority in the education system in the Middle East region. Despite recent and significant advancements in AI technologies within this region's education sector, several technological, attitudinal, and ethical issues are at the forefront and hinder the swift adoption and integration of digitized education. This chapter briefly introduces the significance of micro-credentials in job skills development and enhancement, the potential benefits of AI integration in open education and lists a few AI tools currently employed for the delivery of micro-credentials. Micro-credentials hold significant importance in the Middle East region as they provide effective quick solutions to diminish the wide gaps in the job skills market. Integration of AI in the delivery of micro-credentials can support workforce development and will also contribute towards the achievement of strategic goals in the adoption of educational technology in these countries. The key focus of this book chapter is to provide an overarching overview of current developments and challenges in the deployment of educational technology in the Middle East region. The chapter also provides a comparative analysis with global trends and conducts a critical analysis of literature from the Middle East region to understand the educational, technological, sociocultural and ethical context for the development and implementation of AI-powered micro-credential programs. The exploratory and critical analysis of the recent literature provides the basis to make recommendations for competency-based digitized educational tools and assessment

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