


# Chapter 5

## Addressing Skills Gaps in the Workforce: How Micro–Credentials Bridge the Divide

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### **ABSTRACT**

*The widening skills gap poses a growing threat to global economic resilience, leaving many job seekers underprepared for evolving market demands. Traditional degrees, while valuable, often struggle to keep pace with the rapid shift in technical and soft skill requirements. This chapter explores how micro-credentials have emerged as a nimble, targeted solution to this disconnect, offering learners a way to upskill and reskill with precision and relevance. By examining the structural advantages of micro-credentials—such as modularity, competency alignment, and industry validation—we uncover their potential to realign education with workforce needs. Drawing from diverse stakeholder experiences and practical case studies, the chapter critically reflects on implementation challenges, recognition frameworks, and the role of policy in supporting equitable access. Ultimately, it argues for a recalibration of how we define and recognize learning in the 21st century, positioning micro-credentials as a vital bridge in the education-to-employment continuum.*

### **INTRODUCTION**

The modern labor market is caught in a paradox. On the one hand, we face widespread unemployment and underemployment; on the other, employers struggle to fill

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vacancies due to a shortage of qualified candidates. This misalignment—commonly referred to as the *skills gap*—has become one of the most pressing challenges of our time. Across sectors and continents, the message is strikingly similar: people are willing to work, but often lack the precise skills required for the jobs available. Meanwhile, industries are evolving faster than ever before, driven by technological change, automation, digitalization, and a growing emphasis on adaptability and innovation (Ciarli, 2021). Education systems, though deeply rooted in tradition, have been slow to adjust, creating a mismatch that threatens economic resilience, individual well-being, and societal progress.

Enter micro-credentials—a concept that, until recently, lived largely in the margins of formal education discourse. These short, focused certifications have gained traction as a flexible, responsive alternative to traditional degrees. Their promise lies in their specificity and adaptability: they are designed to validate discrete sets of competencies and can be completed in a fraction of the time it takes to earn a degree. In essence, micro-credentials speak the language of the workplace. They reflect what a person *can do*, not just what they *studied*. This distinction is crucial in an economy increasingly shaped by project-based work, gig opportunities, and rapidly shifting job roles. But micro-credentials are not just a pedagogical novelty. They represent a philosophical shift in how we think about learning, value, and professional growth (Omona & O'dama, 2024). Unlike the conventional notion of education as a one-time, front-loaded experience—typically confined to one's early adulthood—micro-credentials support a model of *lifelong, career-responsive learning*. They empower individuals to continuously update their skills, adapt to new environments, and remain relevant in an uncertain future. For employers, micro-credentials offer a more granular and timely way to assess talent. For educational institutions, they offer new avenues for relevance and engagement in a landscape increasingly skeptical of long, costly degree programs.

Still, the rise of micro-credentials brings with it critical questions. How can we ensure their quality and credibility? Will employers truly trust and recognize them as legitimate indicators of readiness? Are we at risk of fragmenting education into too many disjointed parts? What policies and infrastructures are needed to support their development and equitable distribution? And perhaps most importantly: who gets to decide what skills are worthy of recognition?

This chapter seeks to explore these complexities through a multidimensional lens. It begins by dissecting the roots of the skills gap, exploring how and why it has persisted despite widespread investment in education and training. It then turns to the concept of micro-credentials, unpacking their potential to address these gaps in ways traditional pathways often cannot. By analyzing real-world use cases, stakeholder perspectives, and ongoing innovations, the chapter offers a grounded yet forward-looking reflection on what it means to prepare a workforce for the demands of the

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