# Chapter 10 Rethinking Entrepreneurial Reskilling in an Era of Industry 4.0: A Case Study of Tertiary Institutions in Ghana

#### Richard Afedzie

Pentecost University, Ghana

## Harry Atieku-Boateng

https://orcid.org/0000-0001-7305-7460

Pentecost University, Ghana

## Lordina Appau-Baffour

Pentecost University, Ghana

#### ABSTRACT

This study explores the role of technology in entrepreneurial reskilling in Ghanaian tertiary institutions, focusing on the use of technological tools, their impact, and the challenges faced by students. The research reveals a diverse use of technology in entrepreneurship classes, including digital analytics, online collaboration tools, and presentation software. The study used a face-to-face interactions and telephone interviews by way of a semi-structured questionnaire. A purposive sampling approach was used. It identified 36 students from six tertiary institutions across Ghana who have experienced the use of technological tools in their entrepreneurial classes. Responses from participants were analyzed using thematic analysis. Major statements and themes that occurred frequently in the responses of participants were coded into "technological knowledge and reskilling" and "digital analytics and e-commerce." The study underscored entrepreneurial reskilling and the importance of integrating Industry 4.0 technologies to enhance entrepreneurial reskilling and innovation.

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#### INTRODUCTION

Entrepreneurship reskilling has become the buzzword for much of the innovation and technological development in our 21<sup>st</sup> century world of business. A significant share of the economic growth in the global business arena can be ascribed to the entrepreneurial reskilling that has been driven by technological advancement (Amabile & Kramer, 2011). Organizations are rewarded with financial growth by the creativity and entrepreneurial drive of their employees. Specifically, entrepreneurial reskilling has assumed a significant dimension in the curriculum of most tertiary institutions in the 21<sup>st</sup> century world of education (Daniel, 2016).

#### **BACKGROUND OF THE STUDY**

The 21<sup>st</sup> century world of work is significantly shaped by the Fourth Industrial Revolution (4IR) which has transformed our way of life through the use of technology. This new technological advancement has engineered a shift in the workplace and created a shift in skills required by employees in the labour market. The emergence of the fourth industrial revolution which is also referred to as Industry 4.0 has created a new phenomenon of software innovations particularly in entrepreneurial reskilling. Industry 4.0 is defined as the era of technological transformation of the workplace. It has altered the reskilling process in most educational institutions and has enabled smarter approaches to reskilling outcomes (Fayolle, 2013).

In the quest to match up with the trend of technological growth and progress, tertiary institutions have taken up entrepreneurial training as a cardinal part of their business school curricula (Donkor, 2022). This new development in the curricula has been necessitated by the yawning gap between graduates' lack of practical skills required in the 21<sup>st</sup> century workplace (Tomlinson et. al., 2017). Much of the educational instruction and learning in Sub-Saharan Africa and Ghana has been geared predominately on theories with little emphasis on technical, critical, and soft skills (social and personal) learning (Donkor, 2012). This outcome has created the lack of entrepreneurial spirits among graduates from tertiary institutions.

Specifically, the introduction of engineering for non-engineering graduates with diploma for Ghanaian graduates in 2021 has brought in its wake a wave of reforms that has integrated the program of reskilling unto the Ghanaian tertiary institutions (Donkor, 2022). This engineering for non-engineering initiatives has significantly transformed the skills of graduates and made them employable (Rippa, & Secundo, 2018).

As such, this study suggests that the Ghanaian tertiary institutions have made remarkable progress in developing a sustainable and standardized learning format for entrepreneurial reskilling (Ernest, et. al., 2015). In particular, the government of Ghana's leading role in the areas of funding and provision of critical infrastructure has been instrumental in building a sustainable program has made an impact in reskilling graduates with entrepreneurial knowledge and abilities. In essence, entrepreneurial reskilling is the learning of innovative skills that is based on generating a creative and integrative knowledge, ability and technical know-how in the student. It is meant to develop and foster an entrepreneurial capacity to build and sustain an enterprise that can contribute to the societal development (Decker, 2019).

Significantly, the technological, economic, social, and cultural transformation has redefined the labour market and the approach business schools structure their curricula in Ghana (Onyina & Afedzie, 2023. Learning entrepreneurial reskilling has reinvented the approach to learning in tertiary institutions

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