

Chapter 2

AI in Skill Development, Critical Thinking, Digital Literacy, and AI-Driven Job Preparation

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ABSTRACT

Thus, the chapter aims to unravel the role of AI in skill enhancement with reference to critical thinking ability, problem-solving skills, and digital skills. With AI technologies gradually progressing to redefine employment situations in different parts of the world today, it has become essential to train the learners for the arising complex employment scenario. The first part of the chapter explores how critical thinking and problem solving can be improved by AI, such as using adaptive learning systems, simulation, and data analysis. It then goes further to illustrate how the use of AI tools in the teaching of digital literacy is conducted, with a focus on how the

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use of AI in learning makes it possible for a learner to be taught based on his/her specific needs and the acquisition of the fundamental skills needed in the digital competency. The last part looks at the ways of teaching education to prepare students for jobs with artificial intelligence, balancing between technical and humanities, ethics, and retraining.

1. INTRODUCTION

1.1 Background of the Study

AI is gaining its unobtrusive yet permanent place in civilizational development and thus is introducing a new paradigm, which reshuffles the economy, segments of industries, and even individual lives. AI is set to rapidly grow and invade nearly every sector, be it the medical field, the fiscal, the manufacturing or the learning sector. AI is comprised of machine learning, NLP, CV, and robots. With the development of these technologies, the process of executing tasks is changed altogether, and therefore employees need to develop new skills and knowledge. Education systems throughout the world are challenged with ensuring comparable transitions by facilitating students to learn new skills to conform to these changes and to match the skill demands of AI-based employment markets (Brynjolfsson & McAfee, 2017).

This has brought into question a more flexible and elastic learning model which is going against the traditional education model that has more or less been focused to rote learning and information memorization. It is in such methods that the higher order thinking skills of creativity, problem solving, critical thinking have to be accorded the highest priority given the fact that these cognitive skills are not only relevant but critical in a world that is increasingly being dominated by Artificial Intelligence. Also, due to the rapid trend in digitalization of the ways and means of communication and information, there is need to imbibe good digital intelligence in order to effectively manage the digital tools and information. The instructing approaches preparing the students to get prepared for work in the future concerning need to transform according to the nature of work as AI emerges. This means that all these above vital abilities are essential in the future where AI will be more than just a technology in the preparation of personal and career needs (Schwab, 2016).

1.2 Importance of Skill Development in the AI Era

Thanks to AI, the focus on skills training has shifted in parallel, from less valuable hard skills and muscle memory to the higher, abstract skills that are challenging to program. Nevertheless, the use of AI systems is still limited to domains where

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