

Chapter 1

Artificial Intelligence for Employee Selection, Recruitment, and Training in Business Organisations

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ABSTRACT

Artificial intelligence has a potential role to play in supporting the human resources functions of selection, recruitment, training and development. This chapter, therefore, discusses the application of artificial intelligence in supporting these critical functions of the human resources function. The chapter is a review of 85 journal articles from refereed journals. The selected journal articles were drawn from 197 articles downloaded. The key findings of the review showed that the usage of artificial intelligence technologies reduced the costs of selection, recruitment, training and development of employees. The major artificial intelligence technologies that dominated usage in these human resources functions were machine learning and chatbots. The major challenges that hindered their usage were fears about algorithm bias, privacy and security concerns and lack of knowledge and infrastructure. The study recommended advanced research in the development of AI-driven innovative

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solutions for supporting the selection, recruitment, training and development of employees.

INTRODUCTION

In the modern workplace, the human resource function has continued to develop from manual systems to computer-based information systems that support the major operations of the HR department. This has seen artificial intelligence-driven solutions dominate HR functions such as training and development, recruitment and selection, payments and salaries, health and safety, benefits and compensation, performance reviews, job evaluations, industrial relations, talent identification, and employee well-being (Yadav, 2024). These functions of HR are closely related to organizational competitiveness and organizational strategic advantage. As a result, decisions regarding employee selection, recruitment, training and development have become extremely important as managers are under constant pressure to ensure the success of the teams they oversee. This has become even more critical in the contemporary organizational environment where the operations of businesses have been drastically changed by globalization, the rapid advancement of technology, and the emergence of knowledge-based economies. As a result, the importance of adopting information technologies such as artificial intelligence (AI) in enterprises has increased. This is mostly because businesses now operate in a dynamic environment that necessitates the use of cutting-edge digital technologies like AI in their human resource management processes, including recruitment, selection, training, and development. In these environments, businesses rely heavily on their ability to attract and retain the best talent from prospective hires, identify knowledge and skill gaps among staff, and provide ongoing training and development to keep employees relevant in a constantly changing work environment to survive and remain competitive.

Little research has been done on how AI and related technologies, like machine learning, natural language processing, robotics, chatbots, and vision and image recognition, may be used to support an organization's HR department, despite the widespread recognition of the potential role these technologies may play in recruitment, training, and development. Many organizations, especially those in poor nations, nevertheless choose to hire new employees and conduct training and development programs using conventional methods. These procedures are costly and time-consuming, and they frequently have not produced the expected effects. Thus, this chapter addresses how corporate organizations might use artificial intelligence technologies for hiring, training, and development. The chapter also discusses the various innovations that have been created to support training, development, recruit-

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