

Artificial intelligence and public sector human resource management in South Africa: Opportunities, challenges and prospects

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Abstract

Orientation: The Fourth Industrial Revolution has transformed modern society by ushering in the fusion of advances in robotics, the Internet of Things (IoT), genetic engineering, quantum computing, and artificial intelligence (AI) among others. AI brings a range of different technologies and applications to interact with environments that comprise both the relevant objects and the interaction rules and have the capacity to process information in a way that resembles intelligent behaviour. Similarly, artificial intelligence is also being used in the human resources management (HRM) processes and functions in the public sector to map sequences to actions.

Research purpose: The study explores the opportunities, challenges, and future prospects of integrating Artificial Intelligence (AI) and Public Sector Human Resource Management (HRM) in South Africa's public sector.

Motivation for the study: The study was motivated by the need to examine the dynamics surrounding the adoption, implementation and operationalisation of the 4IR in the management of human resources in the SA public sector in this unfolding dispensation.

Research Approach: Data was collected using the extensive review of written records such as books, journal articles, book chapters among others which were purposively selected for use in this study. Data was analysed using content and thematic analysis techniques.

Research Findings: The study established that Artificial Intelligence is beneficial in the sense that it can improve public service delivery in South Africa as the HRM personnel is enabled to focus more on the strategic areas of management by taking over routine tasks, and that it helps minimize bias in public service recruitment and selection. In contrast, research on potential challenges has revealed that combining Artificial Intelligence and Public Sector Human Resource Management may pose a threat to white-collar jobs.

Practical/ Managerial Implications: This study may lead to practical applications of AI to support the HR functions of public sector entities in SA. The public managers are better informed about the impediments, gaps and opportunities that may arise from using AI in managing human resources in SA's public sector.

Contributions: This study contributes to the body of knowledge as it unpacks and informs the dynamics associated with the implementation of AI in managing human resources in public sector entities.