JPPIPA 10(Special Issue) (2024)

Jurnal Penelitian Pendidikan IPA

Journal of Research in Science Education

http://jppipa.unram.ac.id/index.php/jppipa/index

Artificial Intelligence: A New Paradigm in Human Resource Management

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Received: April 18, 2024
Revised: June 23, 2024
Accepted: August 25, 2024
Published: August 31, 2024

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DOI: 10.29303/jppipa.v10iSpecialIssue.8609

Abstract: The ability to automate procedures and improve decision-making, artificial intelligence (AI) is quickly transforming a wide range of industries, including human resource management (HRM). The application of AI in different sectors, including HRM, has been predominant and profound. AI has created a disruption by displacing established HRM processes with innovative ones, and its scope includes recruitment and selection, workforce management, and learning and development. AI is enabling machines to make more accurate decisions than humans based on data and behavioral patterns. The integration of AI into HRM is changing how organizations appoint, manage, and engage their workforce, with machines taking over manual tasks and HR professionals taking on more strategic roles. This study aims to ascertain how AI affects human resource management. This research uses theoretical literature review as a research method. 22 publications serve as the research materials for this study, which employs a theoretical literature review methodology. The authors discovered that AI has an impact on HR professionals' abilities, job displacement, and position creation. AI should be used by HR managers to boost productivity.

Keywords: Artificial intelligence; Human resource management; Productivity

Introduction

Artificial Intelligence (AI) is rapidly revolutionizing so many industries at such an alarming rate that one such advanced AI robot, Sophia, joined the panel and was pitched questions during the United Nations's convention on sustainable development. In computer science, artificial intelligence (AI), sometimes called machine intelligence, is intelligence demonstrated by machines (Das et al., 2015; Tyagi & Chahal, 2020), in contrast to the natural intelligence displayed by humans and other animals. Computer science defines AI research as the study of "intelligent agents": any device that perceives its environment and takes actions that maximize its chance of successfully achieving its goals (Ahmed, 2018).

AI is revolutionizing Human Resource Management (HRM) by automating processes and enhancing decision-making (Muralidhar et al., 2022). AI applications in HRM span recruitment, workforce management, and employee development. While AI offers benefits like increased efficiency and productivity, it also presents challenges such as ethical concerns and potential adverse employee reactions (Tambe et al., 2019). The integration of AI in HRM is particularly prominent in the IT sector, where it is used throughout the employee lifecycle from recruitment to performance appraisal. To address challenges in implementing AI in HRM, researchers suggest focusing on causal reasoning, randomization, experiments, and employee contribution (Tambe et al., 2019). As AI continues to reshape HRM, it is crucial for organizations to understand its implications and potential, while also considering its limitations and ethical considerations (Tewari & Pant, 2020; Verma & Bandi, 2019).

How to Cite:
Artha, B., Syakdiah, Kurniyati, N. N., & Ratnawati, E. T. R. (2024). Artificial Intelligence: A New Paradigm in Human Resource Management. *Jurnal Penelitian Pendidikan IPA*, *10*(SpecialIssue), 372–376. https://doi.org/10.29303/jppipa.v10iSpecialIssue.8609

AI has grown exponentially in the past decade and is assisting managers in making better and quicker decisions with precision (Javaid et al., 2022). AI technology is becoming ubiquitous and is transforming human resource management practices (Tewari & Pant, 2020). The application of AI in different sectors, including Human Resource Management (HRM), has been predominant and profound. AI has created a disruption by displacing established HRM processes with innovative ones, and its scope includes recruitment and selection, workforce management, and learning and development (Muralidhar et al., 2022; Samarasinghe & Medis, 2020).

AI is enabling machines to make more accurate decisions than humans based on data and behavior patterns (Saura et al., 2022). The integration of AI into HRM is changing how organizations appoint, manage, and engage their workforce, with machines taking over manual tasks and HR professionals taking on more strategic roles (Tewari & Pant, 2020). AI is being used in various HR functions in the IT sector, such as recruitment, performance appraisal, on boarding, and benefits administration. The use of AI in HR is seen as both a boon and a threat by people, as it can improve efficiency but also threaten jobs (Verma & Bandi, 2019). AI can be used in the field of human resources, especially in the development of human resources. Human resource managers are advised to use AI to support companies' performance.

Method

In order to accomplish the goals and objectives of the research, a theoretical literature survey is carried out, and a conceptual framework for further investigation is provided. We introduced a research methodology that has been used by earlier scholars (Torkayesh et al., 2023; Vasiljeva et al., 2017). A total of 22 articles were used in this study, that collected from sciencedirect.com, emerald.com, tandfonline.com, and jstor.org.

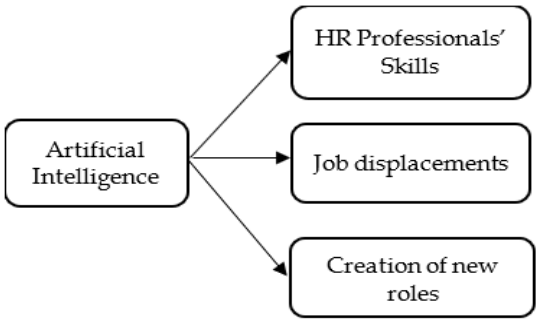

Figure 1. Conceptual model of the research

Based on the conceptual model, authors stated the following research questions: RQ1: How will AI transform the skills required for HR professionals?; RQ2: What new skillsets will be necessary to work alongside AI?; RQ3: How will AI impact the job displacement?; and RQ4: How will AI impact the creation of new roles in HR?

In the current research, the authors consider Artificial Intelligence (AI) as independent variable, and HR professionals' skills, job displacements and creation of new roles as dependent variables. In this research, authors analyze based on existing theory that AI affects HR professionals' skills, AI affects job displacements, and AI affects the creation of new roles. Human resource managers must use AI to support the performance of the companies.

Result and Discussion

Artificial Intelligence

The goal of artificial intelligence (AI), a relatively new technology, is to boost human intelligence or work capacity. It has great applicability across a range of fields (Ahmad et al., 2021; Kolotylo-Kulkarni et al., 2021). According to Ahmad et al. (2022) and Larson (2010), artificial intelligence (AI) is a technical term that assesses and realizes a human's regular mental process through intellectual development and stimulation. Algorithms that simulate how the human mind works are the basis of AI technology. Social science and engineering are combined by artificial intelligence (AI), which has many uses that advance civilization. It can recognize human commands and use algorithms to understand data in a manner like to that of the human mind.

Artificial intelligence (AI) has seen a rise in commercial applications as a result of advances in modern science and technology, which have altered both our personal and professional lives. It is becoming the main driver behind e-commerce and offers a number of advantages (Helmy et al., 2022). The field of artificial intelligence (AI) is rapidly expanding both in academia and industry, attracting researchers to further explore its applications in diverse fields and develop its technological capabilities. These days, it helps people with a variety of tasks, etc. It is therefore one of the major starting points of the contemporary era of development (Ran et al., 2021).

Human Resource Management (HRM)

Human Resource Management (HRM) is a strategic approach to managing an organization's workforce, encompassing recruitment, development, and retention of employees (Koteski & Petkoski, 2022). It involves implementing policies and practices aligned with organizational goals to maximize employee potential and organizational success (Singh & Pandey, 2019). HRM functions include workforce planning, talent

acquisition, learning and development, performance management, and employee well-being (Koteski & Petkoski, 2022). The field has evolved from simply referring to employees as resources to viewing them as valuable assets or human capital. HRM plays a crucial role in today's competitive business environment, where efficient utilization of human resources is essential for organizational effectiveness and quality management (Goswami, 2018). As industries face challenges like skilled workforce shortages, HRM's importance in attracting and retaining talented professionals becomes increasingly significant (Budhwar et al., 2022; Halid et al., 2024).

Human resource management has become crucial for business success, with a focus on employee motivation and satisfaction Managing human resources nowadays differs greatly from managing human resources, about two, three or four decades ago, because in the past, ensuring and providing a certain degree of labour productivity was the main concern of management. Nowadays, modern managers remain focused on organizational efficiency and labour productivity but have become more aware of the importance of employee motivation and satisfaction and therefore are increasingly emphasizing their importance in insuring increased labour productivity (Aziri et al., 2014).

As a management function, human resource management has been widely documented as playing a fundamental role in designing and bringing about the changes that have given rise to 'labour market flexibility' (Mohanasundram et al., 2022). As a result, there is an exponential growth of human economic expansion that has had a devastating effect on the environment and the world's natural resources, and this diversity makes it even more important to understand the numerous different theories underpinning HRM and to explore the outcome of HR practices on organizations, managers and workers and wider society (Mohanasundram et al., 2022).

Human resource management is crucial for aligning human resources with strategic objectives and motivating employees through practices like hiring, training, and performance reviews. The cornerstone of HRM, the employee performance assessment process, also acts as a means of assessing individual contributions, offering helpful criticism, and creating avenues for ongoing development. Beyond the conventional duties, modern HRM methods go further into creating an environment at work where employee wellbeing, engagement, and work-life balance are valued highly -aspects that significantly affect motivation and, in turn, performance (Nazrullaevna, 2023).

Corelation between AI and HRM

Artificial intelligence in human resource management faces challenges, but a path forward is proposed based on causal reasoning, randomization, and employee contribution. There are for key challenges in Human Resource (HR): complexity of HR phenomena, small data sets, accountability and fairness issues, and potential adverse employee reactions. There are three principles to address these challenges: causal reasoning, randomization and experiments, and employee contribution (Tambe et al., 2019).

Artificial intelligence is transforming the human resources field by providing tools to predict candidate success and rapidly transforming the HR industry, providing solutions for hiring, employee development, and management (Ahmed, 2018). AI-powered tools can help identify top candidates more efficiently and effectively by looking beyond just technical skills and considering emotional and psychological traits and the success of AI HR tools depends on the accuracy and specificity of the algorithms, as well as the availability of large datasets to train the systems (Ahmed, 2018).

AI Techniques and its subset, Computational Intelligence Techniques, are not new to Human Resource Management, and since their introduction, a heterogeneous set of suggestions on how to use AI and Computational Intelligence in Human Resource Management has. The potential of AI in HRM could be explored in six selected scenarios: turnover prediction with artificial neural networks, candidate search with knowledge-based search engines, staff rostering with genetic algorithms, HR sentiment analysis with text mining, resume data acquisition with information extraction and employee self-service with interactive voice response (Strohmeier & Piazza, 2015).

AI is being increasingly adopted in human resource management to automate routine tasks, streamline processes, and improve efficiency. AI is being used in recruitment to evaluate job applicants, conduct interviews, and identify talent. AI can help reduce bias and increase transparency in the hiring process and can automate routine HR tasks, allowing employees to focus on more strategic work (Saklani & Khurana, 2023).

AI is being increasingly integrated into human resource management to transform employee experience and improve HR functions. AI plays a significant role in transforming and advancing various HR functions, from recruitment to performance management (Saxena, 2020). The adoption of AI has changed the role of HR managers from being focused on administrative tasks to taking a more strategic approach, and the future of business will involve a combination of human and digital (AI) resources, with AI being a driver of change and improvement in HR (Saxena, 2020).

AI is being increasingly used in HR activities like hiring, training, and performance review, but most organizations still lag behind in fully incorporating AI into their HR processes due to deployment costs. There are concerns about how AI may affect job growth and employment, but AI does not completely eliminate human workers, and organizations need to focus on their workforce needs and future impacts. AI can be used to perform tasks that typically involve human knowledge, such as data description, interpretation, and prediction (Tiwari, 2020).

Conclusion

AI significantly and positively related with HR professionals' skills, AI significantly and positively related with job displacements, and AI significantly and positively related with the creation of new roles. Suggestions for further research is conduct empirical research on the concept of this research.

Acknowledgments
Thank you to all parties who have helped in this research so that this article can be published.

Author Contributions
This article was written by four authors, namely, B.A, S, N.N.K, and E.T.R.R. All authors worked together at every stage of the writing of this article.

Funding
No external funding

Conflict of interest
No conflict interest.

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