



The Future of Talent Management: Integrating Artificial Intelligence in HR Practices

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Abstract:

The entry of AI in business world has provided the booming alarm of innovation and marked compulsion of acquiring these innovations for the HR professionals. In the area of Talent management there is unique transformation due to rapid involvement of artificial intelligence (AI). Traditional HR practices, which rely heavily on manual decision-making and historical data, are increasingly being replaced or supported by AI-driven systems. This study is based on secondary data. The purpose of the article is to examine the role of AI in transforming traditional talent management practices, to analyze the benefits of integrating AI into HR functions, to identify challenges and risks associated with AI adoption in talent management, and to explore the future scope of AI in strategic talent management. There is notable gap regarding the consideration of certain parameters like employee trust, acceptance, and ethical perceptions of AI-driven HR practices. So the future researchers can initiate for filling these gaps. Also the work on industry-specific, cross-cultural, and human–AI collaboration models could be explored for better outcomes.

Keywords: *AI, Talent Management, Ethical Perceptions, Employee Trust*

Introduction:

With the integration of AI in business world, the intensity of innovative practices and its roles is becoming crucial aspect to be considered by the professionals. The field of Human Resource has also marked the adoption of AI in its practices and techniques. In the area of Talent management there is unique transformation due to rapid involvement of artificial intelligence (AI). Traditional HR practices, which rely heavily on manual decision-making and historical data, are increasingly being replaced or supported by AI-driven systems. This study is based on secondary data. The purpose of the article is to examine the role of AI in transforming traditional talent management practices, to analyze the benefits of integrating AI into HR functions, to identify challenges and risks associated with AI adoption in talent management, to explore the future scope of AI in strategic talent management.

Literature Review:

Bagga et al. (2025) examined the role of Artificial Intelligence in talent management within learning organizations using a quantitative survey method. The study found that AI significantly improves talent acquisition, workforce planning, performance management, and reduces bias in HR practices. The findings highlight AI's ability to enhance efficiency and fairness in decision-making. However, the study is limited to learning organizations and lacks longitudinal and cross-industry analysis.

Rajan and Nagajothi (2024) analyzed AI-powered talent management strategies through a conceptual and analytical approach. The study revealed that AI enhances recruitment efficiency, employee engagement, performance evaluation, and workforce planning while raising ethical and privacy concerns. Although insightful, the study lacks empirical evidence based on primary data,

indicating a gap in understanding employee and HR acceptance of AI systems.

Khan (2024) examined the challenges and opportunities of AI in talent management using a systematic literature review. The findings suggest that AI strengthens recruitment accuracy, employee development, and succession planning but poses ethical, bias, and trust-related challenges. The study is limited by its reliance on secondary data, highlighting the need for empirical and mixed-method research.

Verma (2024) examined the role of Artificial Intelligence in maximizing human resource potential through talent management practices. The study highlighted that AI significantly enhances talent acquisition, development, performance management, and retention by enabling data-driven and automated HR processes. It also emphasized ethical challenges such as bias, data privacy, and employee resistance. However, the study is conceptual in nature and lacks empirical validation across industries.

Rajan and Nagajothi (2024) analyzed AI-powered talent management strategies in HR using an analytical research approach. The findings revealed that AI improves recruitment efficiency, employee engagement, performance evaluation, and workforce planning while reducing human bias. Despite its practical insights, the study does not include primary data or statistical testing, indicating a gap for empirical and employee-centric research.

Savarimuthu and Jothi (2019) examined Artificial Intelligence as a tool for talent management with a focus on human-centered AI. The study found that AI effectively supports recruitment, talent development, engagement, and retention by automating repetitive tasks and enhancing decision-making. It emphasized that AI complements rather than replaces human roles. However, the study lacks quantitative evidence

and does not measure organizational outcomes of AI adoption.

Research Gap:

The existing literature dominantly concentrated on the potential of Artificial Intelligence in talent management from conceptual, technological, and organizational perspectives. Most of the works rely on secondary data or on the conceptual framework with limited empirical and longitudinal evidence. So there is notable gap regarding the consideration of certain parameters like employee trust, acceptance, and ethical perceptions of AI-driven HR practices. So the future researchers can initiate for filling these gaps. Also the work on industry-specific, cross-cultural, and human–AI collaboration models could be explored for better outcomes.

Objectives of the Study:

1. To study the role of AI in transforming traditional talent management practices.
2. To Find out the benefits of integrating AI into HR functions.
3. To identify challenges and risks associated with AI adoption in talent management.
4. To explore the future scope of AI in strategic talent management.

Research Methodology:

The article is primarily based on secondary data. The data and relevant information is collected from the journals, websites and Research articles of eminent researchers.

Notable Concepts of Integration of AI in Talent Management:

Talent Management in Contemporary Organizations:

Talent management is a systematic process through which organizations attract, develop, motivate, and retain employees to

achieve long-term goals. Traditionally, talent management relied on manual processes and personal judgment, often resulting in inefficiencies and inconsistencies. With increasing workforce complexity and competitive business environments, organizations now require more structured and strategic approaches to manage talent effectively.

Role of Artificial Intelligence in Talent Management:

Artificial Intelligence supports modern talent management by assisting HR functions with data processing and informed decision-making. Rather than replacing human involvement, AI enhances the accuracy, speed, and consistency of HR processes. Its role spans recruitment, workforce planning, performance management, employee development, and retention, helping organizations align talent strategies with overall business objectives

Ethical Challenges in AI-Based Talent Management:

Despite its benefits, the use of AI in talent management presents ethical and operational challenges. Concerns related to data privacy, transparency, and potential bias in decision-making require careful attention. Overdependent on automated systems may reduce fairness and accountability if not balanced with human judgment, making ethical governance essential.

Discussion Section and Conclusion:

From the previous work and perception of earlier researchers, it is revealed that AI significantly improves talent acquisition, workforce planning, performance management, and reduces bias in HR practices. AI enhances recruitment efficiency, employee engagement, performance evaluation, and workforce planning while raising ethical and privacy concerns. From the above discussion it is also noted that AI effectively supports talent development, and

retention by automating repetitive tasks and enhancing decision-making. In nutshell this paper is raising some gaps which can be fulfilled by Future researchers. More works should be done on Longitudinal and cross-industry analysis. Previous studies study lacks empirical evidence based on primary data, indicating a gap in understanding employee and HR acceptance of AI systems.

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