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Exploring the opportunities and challenges with the integration of artificial intelligence in performance management

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Abstract

Performance management has an integral role in the success of an organisation since it influences productivity, employee engagement and strategic alignment. The advancement in artificial intelligence (AI) has led to organisations exploring its integration in the performance management of their business. There are significant opportunities presented with the integration of AI in performance management such as better decision making, increased fairness and continuous improvement. However, there are still certain challenges that need to be addressed for capitalising on the benefits of the technology. Challenges related to ethics, legal compliance and data quality must be navigated carefully to leverage AI for transforming the performance management within the organisation. This paper has explored the opportunities and challenges involved with the integration of AI in performance management within an organisation.

Keywords: Artificial intelligence (AI), Effective Performance Management, Ethics

Introduction

Performance management can be referred to as the continuous and ongoing process of clearly communicating performance expectations, priorities, development planning and job responsibilities that help enhance the overall performance of an individual and orient with the strategic goals of an organisation. Effective performance management can improve employee engagement with the help of strategic alignment which positively influences productivity in an organisation. In modern times with the advancement of technology, performance management has been optimised and in this regard, AI played an essential role since it poses significant opportunities for effective performance management. All individual elements of performance management such as feedback, performance evaluation, goal setting, monitoring, planning and others can be positively influenced by the adoption of AI. This article emphasises the various opportunities that can be explored with the integration of AI in performance management. It analyses the challenges that can be associated with the integration of AI in the performance management of any organisation in modern times.

2. Literature Review

This paper has considered relevant data from reliable sources to present a thorough and critical understanding regarding the topic of AI integration, its opportunities and challenges for performance management within an organisation in modern times. Qualitative data from secondary sources such as peer-reviewed journals, online articles, newspapers from top media houses and others is gathered. Previous studies have shown that secondary qualitative data collection involves long and rigorous efforts of data searching from sources to gather relevant, detailed, critical data or information about a certain specific topic which aims at developing new knowledge along with facilitating better and more comprehensive understanding about that specific topic (Ruggiano and Perry, 2019) ^[13]. Data that is collected in this case from secondary sources helps develop a better understanding of the way integration of AI impacts performance management within an organisation. The secondary data that has been gathered for meeting the purpose of this article excludes all irrelevant information that does not directly relate to the topic.

Studies have established that considering the nature and scope of secondary data, the possibility of developing a comprehensive understanding can be limited (Rodriguez, 2021) ^[11]. The limited scope and even access are kept in mind and only data that strictly considers the adoption of AI, opportunities and challenges for its integration in performance management in organisations is considered. Online articles, peer-reviewed journals, and reports from newspapers that critically talk about such aspects are considered secondary data sources.

3. Findings and Discussion

3.1 Analysing the role of performance management for the success of an organisation

Performance management, nowadays, is considered to be an almost universal feature for organisations in modern times which helps gain competitive market advantage. It plays a significant role in ensuring success for an organisation. Effective Performance management is essential to analyse the overall performance of employees and establish constructive and strategic ways for further improvement. It can additionally influence employee engagement and productivity in an organisation to make sure that the overall performance is improved. Studies have shown that performance management can enhance job satisfaction levels among employees thus mitigating the risk of burnout (Cesário *et al.* 2022) ^[12]. Several elements of performance management are integral concerning the long-term success and achievements of any organisation such as performance planning, coaching, monitoring, development, rewards and compensation, constant and constructive criticism and feedback and others. It can be further noted that employee-supervisor relationship, communication and collaboration prospects, feedback assessment and development are dependent on performance management taken up in organisations.

Performance management systems, in almost all organisations are generally developed to assess job performance and conduct subjective evaluations of such performance. Often this traditional system of performance management becomes highly lacking and is considered a failure by the management and the employees (Murphy, 2020) ^[7]. Studies have proved that performance evaluation in any organisation can be considered fundamentally flawed and hence, the role and integration of technology for effective performance management becomes highly relevant in modern times. Since performance management is considered to be an essential part of monitoring employees' performance and assessing such performance to identify areas of further development, the overall organisational success and productivity depend on the performance management tool adopted by the organisation. In this context, the relevance of integrating modern technology in performance management has increased in recent times to develop a better way for the purpose and mitigate issues regarding this within an organisation.

3.2 Examining the relevance of integration of AI for performance management in organisations

The relevance of AI to facilitate better performance management in modern-day organisations has increased in recent times. Studies have shown that ensuring effective performance management can be problematic as often the performance management tools are faulty. Regarding this, a

study by Gupta *et al.* (2019) ^[4] established that AI-based tools and techniques can help with localisation and fault detection thus enhancing the scope of performance management. It can be noted that AI-enabled performance management systems are entirely data-driven and objective since they do not have any personal preferences. AI-enabled performance management systems collect information and data from various significant sources and hence any possibility of error can be reduced. Therefore, using AI for performance management can increase the trust of employees in the system, thus increasing the job satisfaction level among the employees. It can be further noted that the integration of AI technology in the performance management systems of any organisation makes sure that managers can provide subordinates with objective feedback. Objective feedback, monitoring, strategic alignment with the organisational goals and other factors can enhance the overall performance of the employees as well as the organisation. It ensures that leaders and management in any organisation are focused on factual information with respect to performance management and make decisions based on such factual information. Additionally, the relevance of AI in performance management has escalated due to its ability to make better judgments regarding the present performance of employees and the ways it can be improved in the future. Studies have proved that AI can be leveraged to "generate performance feedback" for employees and organisations and even develop detailed plans for future actions that might have a positive impact on organisational performance (Tong *et al.* 2021) ^[16]. Furthermore, the relevance of AI for performance management has increased significantly since AI can analyse high-level and great quantities of performance data that can generate practically actionable and strategic insights into strengths, weaknesses and even areas and scope for improvement of employees.

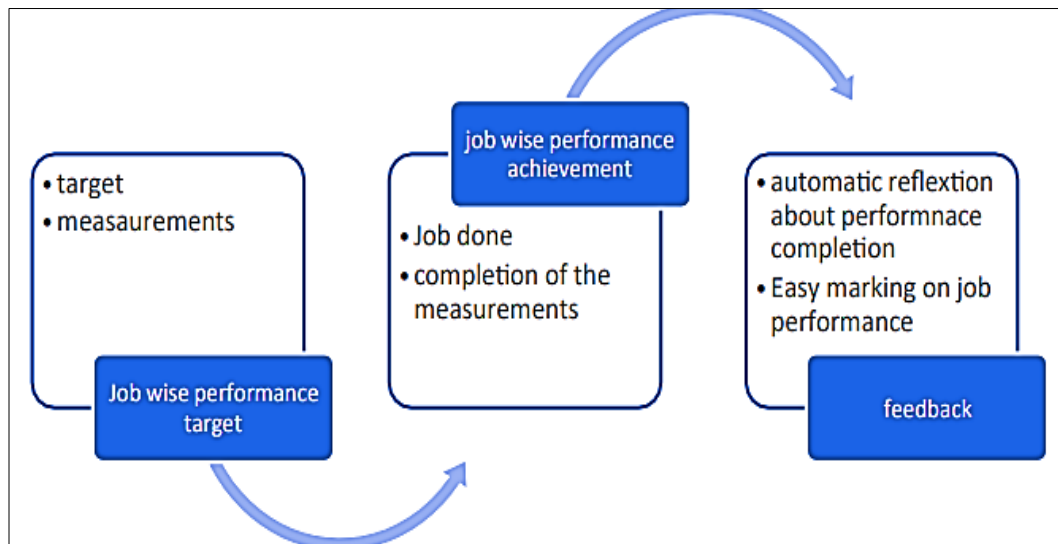
Performance management incorporates information technology and management practices together to enhance overall organisational performance and ensure long-term success for that organisation. The key practices included in performance management usually consider "planning, measurement and analysis" (Richards *et al.* 2019) ^[9]. Concerning these three areas of performance management, modern technologies such as AI can be leveraged to make sure that the entire process of planning, analysis, measurement and decisions are smooth and can be done in a time-bound manner. This significantly improves the efficiency of performance management in organisations. AI is generally used for gaining access to real-time data and feedback on the performance of employees and helps get personal insights on the tasks that have been accredited to and accomplished by employees. Based on these feedbacks, areas of improvement can be determined and employees can strategically take necessary steps to improve their performance further. Hence, it can be said that the integration of AI in performance management has provided multiple opportunities for organisational success in today's competitive market.

3.3 Evaluating the opportunities presented by AI in performance management for organisations

The evolution of technology and the use of AI presented immense opportunities to enhance performance management in organisations. According to Rožman *et al.* (2022) ^[12], the entire organisational culture from

performance management to leadership can help efficiently distribute workload based on performance evaluation which in turn can ensure a positive impact on employee engagement and enterprise performance. Integration of AI into the performance management functions in an organisation can significantly reduce the scope bias and randomness in the working structure and therefore the overall efficiency of the organisation is enhanced. Integration of AI in performance management can help with

better decision-making and promote fairness which might improve job satisfaction levels among the employees and improve their overall performance. The performance management system can be modernised with the help of AI which reduces time for performance management as well. The most beneficial opportunity that is presented with AI interaction in performance management functions is that there is minimum to no scope for human errors increasing the effectiveness of the system.



(Source: Nesa and Shahid, 2021) ^[8]

Fig 1: Outcome of performance management with AI

As presented in the above diagram, the integration of AI in performance management makes gathering relevant data regarding performance targets, and performance achievement and providing feedback for such factors easier. According to a study by Nesa and Shahid (2021) ^[8], it can be noted that automation of the performance management processes helps the management of an organisation get transparent and reliable results which further predicts the ability and future performance of employees without spending "hour to hour for assessment" and unnecessary manpower for the assessment pool. Gathering analytics and data for performance assessment and management becomes easier with the help of AI and the overall outcome of performance assessment becomes smoother and bias-free. Additionally, the absence of human errors makes the performance management system of organisations more reliable. Therefore, employees and management feel more confident with the usage and application of performance management functions. This in turn has a wholesome positive outcome for the organisations.

It is noted that AI-enabled reviews of performance are the result of AI algorithms that can produce relevant, accurate and reliable data considering real-time examination and analysis of advanced insights through constant and continuous reviews, trends from previous reviews, employee performance and other data. Additionally, integration of AI helps streamline repetitive tasks that are associated with monitoring individual performance or group performances thus simplifying the entire process and reducing efforts regarding manual hassles, errors and reviews. Furthermore, AI-enabled performance management systems help with better time management and goal setting in an organisation. This in turn ensures better human resource practices and

development in an organisation. According to Abdeldayem and Aldulaimi (2020) ^[1], AI technologies can help develop better development and training plans for every employee depending on data analytics and big data concerning the practices of employees in real-time. Performance measurement and management can thus be made more constructive eliminating most of the present shortcomings through AI technology by critical and unbiased assessments of the employee performance.

The performance management processes and functions of an organisation can be significantly optimised with the help of AI integration into the system. Not only does it make the entire system and its functions error-free, rather it can also automate time-consuming and administrative tasks of managers. Thus more time can be gained for coaching and development activities and meaningful conversations which in turn helps with performance enhancement. Additionally, it increases the productivity and performance of employees by increasing the overall work engagement of such employees. A study by Yawalkar (2019) ^[17] has mentioned that AI plays a key role in gathering accurate data regarding the performance of employees in real-time and helps with the analysis of such data, thus making the performance analysis process more efficient. This shows that the integration of AI into the performance management system improves the overall performance of an organisation and helps organisations gain long-term success. Such instances show that

3.4 Investigating the challenges with the integration of AI in performance management

The integration of AI technology in the performance management functions of an organisation is considerably

new and most organisations to date have not effectively adopted AI in their performance management systems despite it having multiple benefits. In this context, a study by (Kim *et al.* 2021) ^[6] mentioned that in most organisations AI integration in performance management is considerably low at present. The study further mentioned that except for providing continuous feedback, no other aspect of performance management can be rated as effective in terms of improving employee performance in the long run. The use of AI for establishing an effective and efficient performance management system is considered to be one such practice that has the lowest perceived effectiveness. The lack of positive perception regarding the integration of AI into the performance management functions within an organisation suggests the underlying shortcomings of the system. Additionally, AI integration being a comparatively new phenomenon does not have specific legal guidelines to follow which is essential for AI integration.

The ethical issues that come along with modern technology make it hard for organisations to adopt such technology into practice and gain the advantage of such technologies. Since there is still a lack of comprehensive ethical guidelines for AI adoption in various business processes, adoption of AI is considerably slow. Ensuring clarity in the process and increasing understanding of the process among all employees can be difficult as employees might lack the necessary technological knowledge. Although AI decreases bias in the performance management process, human control of the system might still involve bias through unethical means. Thus fairness of the system can be compromised, defeating the entire purpose of AI integration into the system. According to Jaiswal *et al.* (2022) ^[5], AI integration in organisations across industries decreased the need for general “cognitive skills” such as “data entry and processing”, monitoring and scheduling and other factors.

This shows that human skills are becoming more and more redundant and dependence has increased modern technologies. Employees lacking knowledge of modern technology can become a problematic aspect of AI integration as it might lead to a lack of trust and acceptance of the performance management system among the employees. Integration of AI can be problematic as it requires change in the entire process of performance management which can often be costly becoming significantly challenging for AI integration into the performance management within an organisation. Additionally, lack of professional expertise regarding the uses and application of modern technology along with the cost-benefit issues regarding technology adoption and data management (Rodgers *et al.* 2023) ^[10]. Since the technology is considerably new, awareness of the benefits of AI is not widely known and therefore, acceptance of AI is not common among the employees. Some employees can be highly resistant and sceptical to AI-enabled performance management systems in organisations.

Therefore, it is essential that organisations effectively communicate the advantages and benefits of AI for performance management purposes to develop trust for technology-empowered performance management. Another significant concern regarding AI integration into performance management functions is related to data privacy and security. According to a study by Tambare *et al.* (2021) ^[15], AI adoption in performance management

systems, especially in the cases of data-driven sectors and industries, has multiple security-related problems that need to be addressed and taken care of in the beginning stages to make the integration successful. AI needs continuous updates regarding new data and gathers a lot of personal and performance data such as performance reviews, areas of lacking and improvement and others of employees to work effectively. Keeping the data secure and safe at all times can be extremely challenging for organisations which affects the overall trust of employees in AI-driven performance management systems.

It is important that employees feel assured that their data is safe to boost trust in the technology integration process. Additionally, the efficiency of AI depends on the quality of data that is received by the technology. AI getting poor quality data results in an ineffective performance management process within an organisation. Faulty, incomplete or poor-quality data might generate reviews and feedback that are not accurately making the entire performance management function ineffective. Additionally, AI-enabled performance management systems need constant upgradation to stay useful and produce reliable results as organisations go through various changes such as job roles, strategic goals, performance expectations and others (Siradhana, 2023) ^[14]. These updates and upgrades require efforts in terms of continuous adapting and learning creating pressure on resources. Furthermore, it can be noted that the integration of modern technologies for various aspects of an organisation although serves various purposes and creates multiple opportunities minimises human touch and elements from the entire system.

Balancing the objectivity and efficiency of AI along with the requirement for emotional intelligence and human judgement in performance management can be quite challenging. Therefore, organisations need to develop ways to incorporate AI and human intelligence to ensure the effective and most efficient functioning of the performance management functions. A study by Dwivedi *et al.* (2021) ^[3], established that AI can potentially replace human activities and tasks in the whole range of social, intellectual and industrial applications. Therefore, it can be said that although performance management functions can be modernised and human-error-free with the help of AI, lack of human effort in this context might have a negative consequence for the organisation as employees might be comprehensive of the assessments made by AI rather than human efforts.

4. Conclusion

The development of technology in modern times has paved the way for the extensive integration of modern technologies such as AI in various business functions. Performance management in an organisation is one such business function that can be positively influenced by AI. Secondary data that has been gathered and analysed in this article established that opportunities such as better scope for decision-making, fairness and constant improvement can be facilitated with the help of AI integration in the performance management system. Additionally, this article established that there are still certain challenges such as ethical and legal compliance, reduced data quality and access that are associated with AI integration in performance management functions. The findings and discussion further prove that

extensive optimisation of performance management through the adoption of AI can help organisations achieve sustainable advantage in the digital age. This article has effectively established that any shortcomings and possible faults with the traditional performance management function can be identified and rectified with the integration of AI into the system.

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