

BAM 2023 CONFERENCE

US
UNIVERSITY
OF SUSSEX

BUSINESS
SCHOOL

The role of HR in Artificial Intelligence to assess the Individual Performance

Liam Barnes

Global Banking School

Ozlem Ozdemir

Regents University

Jonathan Liu

University of Wales Trinity St David

The role of HR in Artificial Intelligence to assess the Individual Performance

Sree Lekshmi Sreekumaran Nair*
Global Banking School
891 Greenford Road
Greenford
London
UB6 0HE
Email: sreelekshmisreekumar.n@gmail.com
*Corresponding author

Jonathan Liu
University of Wales Trinity Saint David
Winchester House
11 Cranmer Road
London
SW9 6EJ
Email: jonathan.Liu@uwtsd.ac.uk

Ozlem Ozdemir
Regents University London
Regent's Park
London NW1 4NS
Email: ozdemiro@regents.ac.uk

Abstract

Nowadays the working culture has changed because of the Covid pandemic and organisations started to think about work-from-home culture. Through this, the employees have flexibility which provides them with increased control over their schedules and allows them to be productive irrespective of their location. Artificial intelligence can be used in different ways to make the most outcome of the hybrid working culture. In addition to this, Artificial Intelligence can make informed decisions which increase the potential of the hybrid working environment. However, nowadays the importance of work-life balance is increasing, and AI-driven analytics can be used to track and evaluate employee well-being. This helps the organisation to understand the impact of a hybrid working environment on employees and their well-being. Also, this will allow the organisation to understand whether the employee's performance is improving or not so that they can change their policies and procedures and support the employees. This development paper will collect data from the HR Directors of the companies within the UK using a focus group approach to complete the outcome of the paper to examine the role of HR to make better decisions about managing the performance of the employees using Artificial Intelligence.

Word Count: 1990 (*excluding the abstract and references*)

Track: *Performance Management*

Keywords: *Artificial intelligence, performance management, HR, employee well-being, decision making.*

Introduction

Performance management is considered a widely discussed topic through which employees receive the recognition they deserve and receive constructive feedback. This will also help the management to find out the real performers, and future leaders so that they can focus on their retention. Nowadays HR is very busy with day-to-day work which leads to less time to provide constructive feedback, and this leads to unsatisfied talented employees and their resignation. AI-driven performance management can reduce this situation by using analytics to enhance the relationship between HR and employees. This will also allow the organisation to become transparent, unbiased, and fair to the employees. Through this approach, the organisation can attain improved productivity, better retention, and increased satisfaction of employees. This also positively impacts the business and leads to a more efficient workforce concentrating on the strategy of the business.

Problem statement

Performance management benefits for both employees and organisation. Employees in the organisation are keen to find out their performance, however, the organisation is aware of the performance level of the staff and decides who needs the training to improve and increase their performance or update their skills. Also, evaluation is essential to decide who is going to be penalised, rewarded, and promoted depending upon the skills of the employees. According to Orlikowski (2000), for organisations to gain a competitive advantage, they need to use the technological developments which allow them to develop their business. Through AI, the organisation can improve its performance appraisal systems and encourage employees to provide the correct results of the evaluation system (Sholihin, 2013). Also, especially with hybrid working culture, it is essential to track the performance of the employees and record it. By using AI, this process can be less time-consuming, and accurate data has been generated. There is no evidence discussing the use of AI in Performance Management of hybrid working culture. Thus, the research question developed as follows:

1. Will the use of AI replace the functions of performance management and measurements currently done by HR?
2. Will AI implementation is ethical?

Literature Review

Artificial intelligence is considered the intelligence of a machine or computer which facilitates to duplicate the human abilities (Kanade, 2022). AI includes different technologies which allow machines to plan, act, and learn with the intelligence level same as humans. Using AI will free HR from administrative tasks and paperwork. The time which has been saved after this can use wisely to build the relationship with employees and concentrate on strategies. Some examples are in the HR area where AI can be used for talent acquisition, learning and development, and employee engagement and retention. HR needs to identify what questions they wanted to get answered and what problem they are trying to solve, what are the benefits, and what data needs to use to generate better results, then AI is an excellent tool.

The research by Heene (1997), the competence-based model is considered one of the HR tools which aid the organisation to accomplish their workforce through performance management. However, the study by Liddon (2006) stated that the competence model is a variety of knowledge, skills, abilities, and behaviors. To get better output from the employees, the organisation needs to use a competence-based system that concentrates on the main abilities and shapes the business strategy accordingly. These strategy helps the organisation to develop

its working model and reshape the strategies for selection, assessment, performance management, training and development, and employee engagement methods to improve the development of their career. However, Jain (2017) studied the use of AI in HR for investigating the functions such as recruitment, selection, training, development, reward management, etc. The work environment is considered a main factor for employees who have hybrid working culture. A comfortable workspace is one of the motivations of the employees to conduct their daily tasks and hence, the performance level is boosted (Aropah et al., 2020). Previous studies mentioned that the work environment has a positive impact on job performance (Gajendran & Harrison, 2007; Baltes et al., 1999). The research by Muchtar (2017), employees can build better results if they have a suitable work environment. When performance is measured, it is essential to consider the work environment factor, especially during hybrid working culture (Orissa and Shahrom, 2022).

The main limitation of the hybrid work culture is that there is less control by the supervisors over the employees and sometimes the employees also not getting adequate support from the supervisors. This will impact the performance of the employees as there will be less feedback about their performance. This will create uncertainties and tension for the employees (Lippe & Lippenyi, 2019). There is research that states that the team influence will also impact the workers (Barker, 1993; Sewell, 1998). Group cohesiveness is positively associated with performance but if there is no one to interact with them, then they experience less cohesiveness (Cohen and Bailey, 1997). To avoid this, Artificial Intelligence is considered an appropriate tool that records the performance of the employees, and the historical data will be available at any time to compare the performance.

While discussing Human Resources Management, the functions are mainly divided into two: first is to Recruit and select the employees and their compliance. The second aspect is to assess the Performance and development of these employees. In terms of performance management, HR was using the traditional periodic performance management review and it has several problems when it is especially performance-related pay such as errors and bias. The AI-enhanced tool is a more accurate and fairer evaluation of employees and thus decreasing the time needed for the managers. Also, through AI, performance can be assessed more regularly, and constantly and can determine the predictions for employee performance (Charbonneau & Doberstein, 2020). Also, if any employees need to improve their performance further, a real-time learning module can integrate with AI, so that the employees can take that module and learn. The outcome generated from AI is more accurate and less biased, and it will lead to better decision-making by HR professionals. AI can process data very fast and more accurately than humans (Johnson, Cogburn, and Llorens, 2022). The use of Artificial Intelligence in HR is a debatable topic, also it needs to consider whether the AI implementation is ethical in the workplace. The companies have the data from the employees, and they can use it in multiple ways. The research by Thiam, Liu, and Aston (2019) concluded that ethical performance is impacted by the pressure to perform at work and the organisational and industrial culture than by the availability of independent sources of information.

The use of Artificial Intelligence in the workplace to analyse the performance of the employees will benefit to compare them or provide with feedback in the real time (Duggan et al., 2020; Evans & Kitchin, 2018; Gandini, 2019; Williams & Beck, 2018). This data can be used as the main indicators to assess the daily performance of the employees and their performance goals (Holland et al., 2017; Leicht-Deobald et al., 2019; Woyke, 2018; Zax, 2013). However, performance evaluation can have a negative impact on motivation (Lepper & Greene, 1975). Also, the feedback can aid the employees to learn and become more competent (Vallerand & Reid, 1984). Through Artificial intelligence, employees will get effective feedback frequently (Stark & Pais, 2020). Moreover, when the feedback provided is only comparative, this hinders the information from the workers (Duggan et al., 2020). However, through artificial

intelligence, the updated data will be available the majority of the time than the traditional performance appraisal systems. This impacts job satisfaction and employee behavior (Gagne et al., 2021). This makes the employees less autonomous and becomes more competitive.

The transformation of the HR process through the use of machine learning concluded that there are many innovative ways to apply Artificial Intelligence in HR functions. Moreover, the different studies discussed the current impact of technology on the HR process, and this is rapidly increasing than the traditional HR research findings.

The research study has several implications for theory and practice. This study will provide insight into the practical implementation by understanding whether employers successfully consider AI and how they are going to incorporate it within the workplace. Also, organisations need to explain to their employees why they wanted to introduce AI and how the performance will be evaluated. Also, the research will provide the researchers to discover the underlying patterns that need to identify and explain individual employee performance. This paper will set a base for HR Analytics, Head of HR, and HR Directors to identify the importance of implementing AI in HR. This study will also give insight to the AI developers into the gap between the current AI usage and what is expected or desired. Also, the research provides recommendations to HR on how their role in implementing performance management while AI implements. This allows HR to prepare to use AI and improve their skills in how to use AI. This study will give importance to the existing academic literature as this will close the gap between whether the use of AI replaces the performance management functions and measurements currently done by HR and whether is it ethical to implement AI. Also, this study provides insight into the AMO theory to determine the performance of the employees.

Methodology

The study will be conducted using a focus group approach by considering the HR Directors from FT500 companies to allow participants to collectively express their perspectives. Focus groups are considered the favorable method for conducting the in-depth analysis of a topic about which little is known (Stewart et al., 2007) which prioritise both the individual and collective meaning. This will contribute to the unique data in the literature on the role of HR in Artificial Intelligence. The sample size will consist of male and female HR Directors within the UK. The participants will be aimed is 50 through networking and will be approached them using convenience, purposive, and snowball sampling techniques. A sample size larger than 30 and below 500 is considered suitable (Crimp & Wright, 1995). Here, positivist philosophy and deductive approach will be undertaken to test the hypothesis. The focus group will be conducted either online using MS Teams or Zoom or face to face which is according to the convenience of the participants. In the focus group, the questions were already prepared by the researchers and one of the researchers will act as the moderator. If the researchers get consent to record the session, then it will be recorded or one of the researchers will act as a note-taker. As there are 50 participants, the researcher will run the session by dividing the total participants into small groups which will consist of 10 participants per group. The data will be analysed through thematic coding and funnel approach via MS Excel to find the variation in the responses. After this, it will be analysed through SPSS to find out the correlation and regression after formulating the hypothesis. The mixed method will help the researchers to test the findings after the qualitative analysis. Cronbach's alpha will be calculated to check the internal consistency of the questionnaire (Cronbach, 1946). At last, the confidentiality and integrity of the respondents will be maintained throughout the research.

Direction of development

The authors believe that the main starting point of the topic is the systematic literature review. The literature review section needs to develop further (some of them indicated above) in a methodological manner. This will allow the paper to develop further to carry out the multiple realities within the gathered information and further data analysis will uncover the research

gaps. This will also increase the quality the depth of the research and can consider the variety of theoretical viewpoints which further need to investigate. As this paper is in its development phase, the authors would welcome from BAM participants further feedback and comments on the direction of this paper which could assist with developing this topic.

References

- Aropah, V., Sarma, M. M., and Sumertajaya, I. M. (2020). Factors Affecting Employee Performance during Work from Home, *International Research Journal of Business Studies*.
- Baltes, B., Briggs, T., Huff, J., Wright, J., and Neuman, G. (1999). Flexible and Compressed Workweek Schedules: A Meta-Analysis of Their Effects on Work-Related Criteria, *Journal of Applied Psychology*, 84, 496-513.
- Barker, J. (1993), Tightening the Iron Cage: Concertive Control in Self-Managing Teams, *Administrative Science Quarterly*, 38(3), pp: 408–437.
- Charbonneau, E. and Doberstein, C. (2020). An empirical assessment of the intrusiveness and reasonableness of emerging work surveillance technologies in the public sector. *Public Administration Review*, 80(5), 780-791.
- Cohen, S.G. and Bailey, D.E. (1997). What Makes Teams Work: Group Effectiveness Research from the Shop Floor to the Executive Suite, *Journal of management*, 23(3), pp: 239–290.
- Crimp, M., and Wright, L. T. (1995). *The Marketing Research Process*, Fourth edition, Hertfordshire, Prentice Hall.
- Cronbach, L. J. (1946). A case study of the split half reliability coefficient, *Journal of Educational Psychology*, 37(8), 473–480.
- Duggan, J., Sherman, U., Carbery, R., and McDonnell, A. (2020). Algorithmic management and app-work in the gig economy: A research agenda for employment relations and HRM, *Human Resource Management Journal*, 30(1), pp: 114–132.
- Evans, L., and Kitchin, R. (2018). A smart place to work? Big data systems, labour, control and modern retail stores. New Technology, *Work and Employment*, 33(1), pp: 44–57.
- Gagne, M., Parker, S. K., and Griffin, M. A. (2021). *How does future work need to be designed for optimal engagement?* In J. P. Meyer & B. Schneider (Eds.), *A research agenda for employee engagement in a changing world of work* (pp. 137–153), Edward Elgar Publishing.
- Gajendran, R., and Harrison, D. (2007). The Good, the Bad, and the Unknown About Telecommuting: Meta-Analysis of Psychological Mediators and Individual Consequences, *The Journal of applied psychology*, 92, pp: 1524-1541.
- Gandini, A. (2019). Labour process theory and the gig economy, *Human Relations*, 72(6), pp: 1039–1056.
- Heene, A. and Sanchez, R. (1997). *Competence Based Strategic Management*, Chichester: John Wiley and Sons.
- Holland, C., Levis, J., Nuggehalli, R., Santilli, B., and Winters, J. (2017). UPS optimizes delivery routes, *Interfaces*, 47(1), pp: 8–23.
- Jain, S. (2017). Is artificial intelligence - The next big thing in HR?, *International Conference on Innovative Research in Science, Technology and Management*.

Johnson, B. A. M., Coggburn, J. D., and Llorens, J. J. (2022). Artificial Intelligence and Public Human Resource Management: Questions for Research and Practice, *Public Personnel Management*, 51(4), 538–562.

Kanade, V. (2022). What Is Artificial Intelligence (AI)? Definition, Types, Goals, Challenges, and Trends in 2022, [Online] Available at: <https://www.spiceworks.com/tech/artificial-intelligence/articles/what-is-ai/#:~:text=Artificial%20intelligence%20imitates%20human%20thinking,imitate%20or%20mimic%20human%20capabilities.>

Leicht-Deobald, U., Busch, T., Schank, C., Weibel, A., Schafheitle, S., Wildhaber, I., and Kasper, G. (2019). The challenges of algorithm-based HR Algorithmic Management and Work Motivation, *Journal of Business Ethics*, 160(2), pp: 377–392.

Lepper, M. R., and Greene, D. (1975). Turning play into work: Effects of adult surveillance and extrinsic rewards on children's intrinsic motivation, *Journal of Personality and Social Psychology*, 31(3), pp: 479–486.

Liddon, G. (2006). *Forecasting a competency model for innovation leaders using a modified Delphi technique*, [Thesis], Pennsylvania State University.

Muchtar, M. (2017). The Influence of Motivation and Work Environment on the Performance of Employees, *Sinergi: Jurnal Ilmiah Ilmu Manajemen*, 6.

Orissa, N. A. B. and Shahrom, M. (2022). Factors Affecting Employees Performance in Connection with the Work from Home Requirements, *Global Business and Management Research: An International Journal*, 14(4).

Orlikowski, W. J. (2000). Using technology and constituting structures: A practise lens for studying technology in organizations, *Organization Science*, 11(4), pp. 404-428.

Sewell, G. (1998). The Discipline of Teams: The Control of Team-based Industrial Work through Electronic and Peer Surveillance, *Administrative Science Quarterly*, 43, pp: 397–428

Sholihin, M. (2013). How does procedural fairness affect performance evaluation system satisfaction? (evidence from a UK Police Force), *Gadjah Mada International Journal of Business*, 15(3), p. 231.

Stark, D., and Pais, I. (2020). Algorithmic management in the platform economy, *Sociologica*, 14(3), pp: 47–72.

Stewart, D., Shamdasani, P. and Rook, D. (2007). *Focus Groups*. Sage Publications: London.

Thiam, M.E.B., Liu, J. and Aston, J. (2019), "Ignoring personal moral compass: factors shaping bankers' decisions", *Journal of Financial Regulation and Compliance*, Vol. 27 No. 3, pp. 357-379.

Vallerand, R. J., and Reid, G. (1984). On the causal effects of perceived competence on intrinsic motivation: A test of cognitive evaluation theory, *Journal of Sport Psychology*, 6(1), pp: 94–102.

Van der Lippe, T., and Lippenyi, Z. (2019). Co-workers working from home and individual and team performance, *New Technology, Work and Employment*, 35(1).

Williams, G., and Beck, V. (2018). From annual ritual to daily routine: Continuous performance management and its consequences for employment security, *New Technology, Work and Employment*, 33(1), pp: 30–43.

Woyke, E. (2018). How UPS delivers faster using \$8 headphones and code that decides when dirty trucks get cleaned, *MIT Technology Review*.

Zax, D. (2013). Brown down: UPS driver vs. the UPS algorithm, *FastCompany*.