

CASE STUDY

Evaluating the Influence of AI in HR Practices for Recruitment, Employee Engagement, and Workforce Analytics in Multinational Company

Y. Akhila¹, S. Sivani Reddy² and T. Lokeswara Rao^{3*}

¹BBA III Year, GIET University, Gunupur, Odisha, India

²BBA III Year, GIET University, Gunupur, Odisha, India

³Assistance Professor, GIET University, Gunupur, Odisha, India

*Corresponding author: lokeswar@giet.edu

Received: 12 Oct., 2024

Revised: 22 Nov., 2024

Accepted: 02 Dec., 2024

ABSTRACT

This study is to look into how Artificial Intelligence (AI) is influencing Human Resource (HR) practices at Multi National Company. The focus is on recruitment, employee engagement, and workforce analytics. This research identifies the ways in which AI technologies are being put to use in the HR process to enhance efficiency, decision-making, and overall employee experience. Specifically, it will address benefits and challenges presented by AI adoption in HR, its impact on organizational performance, and employee relations. This Study, therefore, through research, aims at coming up with a full understanding of the way AI is changing HR practices in the multinational company and availing insights that will reflect best practices of how AI can be leveraged to strategically achieve the set HR goals.

Keywords: Artificial Intelligence, Employment Engagement, Multinational company, HR Practices, Workplace Analytics.

The Rise of AI in Human Resources

AI has the potential to transform a wide variety of business functions, and HR is no different. Already, the use of AI technologies in HR practice has transformed traditional processes and allows an organization to effectively manage human capital. AI applications in HR include automated recruitment systems, predictive analytics for workforce management, personalized employee engagement programs, and data-driven decision-making solutions (Bersin, 2020). All these technologies aim to improve the accuracy, efficiency, and responsiveness of the functions of HR toward achieving better organizational outcomes.

How to cite this article: Akhila, Y., Sivani Reddy, S. and Lokeswara Rao, T. (2024). Evaluating the Influence of AI in HR Practices for Recruitment, Employee Engagement, and Workforce Analytics in Multinational Company. *IJISC*, 11(02): 179-185.

Source of Support: None; **Conflict of Interest:** None



For example, AI-driven recruitment systems use machine-learning algorithms in screening resumes, assessing fit with a job, and predicting performance, all processes that largely reduce the time and cost in recruitment (Upadhyay & Khandelwal, 2018). For employee engagement, AI platforms can go through employee feedback, track engagement levels, and offer personalized interventions to increase job satisfaction and retention (Jain, 2021). Another significant application is in workforce analytics, for which AI can be utilized to provide insights into employee performance, predict turnover, and optimize talent management strategies (Stone, Deadrick, Lukaszewski, & Johnson, 2015).

Artificial Intelligence in Multinational Company

Apart from high competitiveness and dynamism, multinational chemical organizations involve in efficient HR practices that aim at maintaining a skilled and motivated workforce. Adoption of AI in the companies is fueled by the desire for an effective and efficient way to streamline the HR process, increase decision-making, and a culture of innovativeness. It enables such companies to maintain cross-border compliance to regulations at a local level and global standards in managing a large and diversified workforce (Deloitte, 2021).

Problem Statement

While AI has the capacity to transform HR practices in many ways, its successful implementation can pose challenges of data privacy and require the upskilling of HR professionals. Some of these challenges are likely to be associated with potential biases in AI algorithms. We need to know the particular impacts of AI in HR practices among chemical organizations working on a multinational platform. Specifically, we need to know about recruitment, employee engagement, and workforce analytics. The research, hence, aims to address this gap with an in-depth analysis of the role of AI in such fields and recommendations for best practices.

Objectives of the study

- ❑ To analyse the impact of AI-based recruitment systems on hiring efficiency and candidate selection in multinational company.
- ❑ To explore how AI can enhance employee engagement and job satisfaction in multinational company.
- ❑ To evaluate the efficiency of AI-based workforce analytics in reaching optimization of talent management strategies.
- ❑ To provide recommendations as to how AI technology should be deployed for the realization of strategic HR goals within the multinational company.

Research Questions

1. How are AI-based recruitment systems influencing the efficiency of hiring and selection of candidates for jobs in a multinational company?

2. How does the role of AI in this process improve the engagement and job satisfaction of employees within these organizations?
3. What does this say about the quality of AI-based workforce analytics in the optimization of strategies for talent management?
4. What are the practices that assimilate AI technologies and HR practices toward strategic goals in the multinational company?

LITERATURE REVIEW

AI in Recruitment

Artificial Intelligence (AI) has brought enormous changes in the recruitment process by optimizing efficiency and effectiveness in talent acquisition. AI, therefore, has availed a more semi-automatic candidate screening process with tools like ATS and resume parsing algorithms (Chien, Wang, & Chiang, 2022). Machine learning from the candidates' datasets enables the matching and contrasting of the qualifications versus the requirements needed while ensuring that there are no errors or biases from the human resource managers.

Signal Theory is one of the bedrocks on which the development of AI in talent acquisition has ridden (Spence, 1973). It assumes that a signal is sent by one agent and received by another in exchange for information about the attributes and capabilities of the agents and/or other phenomena around them. AI adds value to this procedure because it analyses huge volumes of data so as to find meaningful patterns and predict candidate success, therefore refining signal accuracy (Kroll & Carhart, 2022). For example, one can forecast using predictive analytics how a candidate would perform or fit the organizational culture for better hiring decisions. Application is greatly facilitated with AI-driven chatbots, which ease the process in terms of candidate engagement, response to queries, and even scheduling interviews. This enhances candidate experience while reducing HR workload (Suen, 2023).

However, it is not exempt from some challenges, including algorithmic biases. Algorithmic Fairness Theory (Barocas & Selbst, 2016) demonstrates that when AI systems are not ideally developed and watched over, they may further entrench or even worsen existing biases. This theory adds to the necessity of ensuring that AI recruitment is transparent and fair, so it does not reinforce existing patterns of discrimination.

AI in Employee Engagement

There are improvements in employee engagement with the contributions of AI through analysis of feedback and sentiment for derived actions (Shin & Cho, 2022). It is common knowledge today that AI tools can help collect and analyse relevant data coming from different sources, including but not limited to surveys and performance reviews. This relates the Job Demands-Resources (JD-R) Model (Bakker & Demerit, 2007) as the underlying related theory to understand AI's impact on employee engagement. In other words, it is said to work in such a way that job resources buffer the impact of job demands on burnout and enhance engagement. This provides for even more personal engagement strategies through development programs and recognition efforts that are tailored to individual needs, increasing job resources and enhancing employee engagement in the process (Lee & Lee, 2022).

Monitoring of real-time feedback by AI tools and early detection of signs of disengagement also enable proactive intervention by HR teams. It emphasizes Continuous Improvement Theory (Deming, 1986) based on observations derived from data. The continuous ability in improvement of the strategies in employee engagements is supported by providing real-time feedback from AI itself.

AI in Workforce Analytics

In fact, AI-based workforce analytics is greatly enhanced organizational decision making by integrated analytical processing of abundant and assorted data sources (Jain, 2023). As it allows the identification of trends and patterns to foster strategic planning and development.

The Resource-Based View (RBV) (Barney, 1991) intersects this strand in that it posits that competitive advantage developed by organizations is premised on effective use of their internal resources, and these include human capital. AI-supported analytics take this capability a level deeper by providing insights into employee performance, skill gaps, and future staffing requirements. Machine-learning algorithms applied to forecast turnover rates, for instance, and to evaluate training program effectiveness can therefore underpin action-oriented workforce management, according to Khan (2024).

This is also coherent with Predictive Analytics Theory (Hubbard, 2014) that involves the role of data to predict future results. AI's predictive abilities can anticipate staffing levels and maximize the use of talent; thus, it will cohere with such a theory that holds the conception of relying on data to predictively foresee and manage future challenges (Patel, 2022).

METHODOLOGY

Research Design

The study will use a mixed method, which is based on both quantitative and qualitative research methods. The quantitative part will include a questionnaire survey for HR professionals, employees, and managers working in multinational company for data collection in employing AI tools in recruitment, employee engagement, and workforce analytics. The qualitative aspect will be realized with the aid of in-depth interviews of key informants to grasp the implementation and impact of AI technologies.

Data Collection

5. Surveys: Structured questionnaires will be sent to a sample of HRs, employees, and managers working for multinational company.
6. Interviews: Semi-structured interviews will be conducted with important stakeholders like HR managers, AI experts, and industry experts.
7. Document Analysis: Analysis of company reports, HR policies, and case studies in AI implementation to supplement survey and interview data.

Pilot Testing

During the pilot testing phase, a cohort of 45 employees, representing selected MNCs, was systematically

selected for evaluation. This preliminary testing aimed to assess the clarity, relevance, and effectiveness of the survey instruments and procedures. The insights gained from this pilot study will inform necessary adjustments to ensure the validity and reliability of the research instruments before the full-scale data collection. After analysis the data it has been found that the good model fit Cronbach alpha value exceed 0.70.

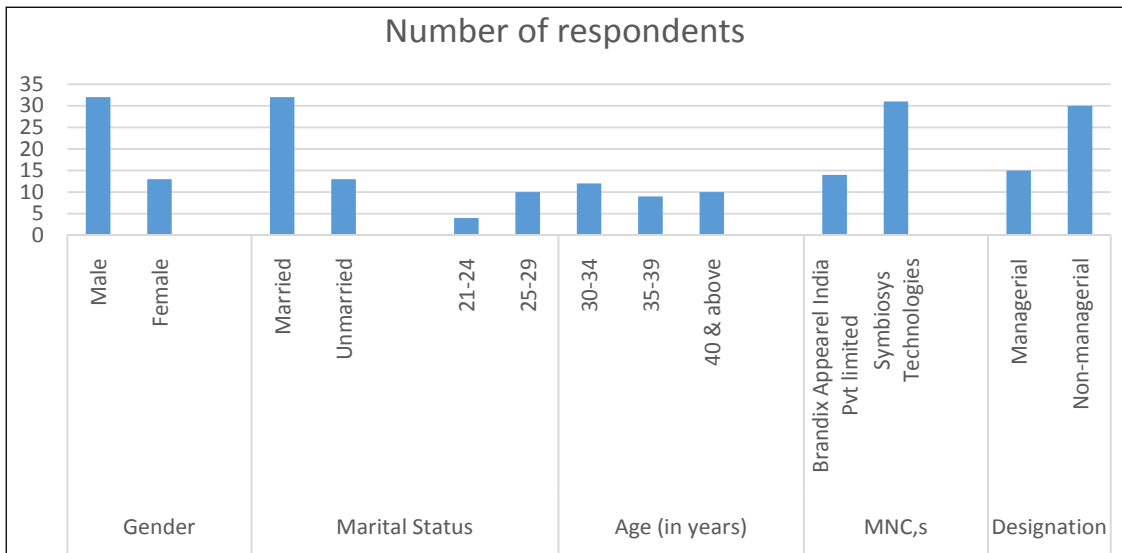
The purpose of conducting a pilot study is to examine the feasibility of an approach that is intended to be used in a larger scale study. Pilot studies are small-scale preliminary studies conducted before any large-scale quantitative research to evaluate the potential for a future, full-scale project. The pilot study helps researchers identify design issues, evaluate the study's feasibility, and spot any ambiguities, confusion, or problems with the task devised. By conducting a pilot study, researchers will be better prepared to face the challenges that might arise in the larger study and will be more confident with the instruments they will use for data collection. Pilot studies can save time and money by identifying any flaws in the procedures designed by the researcher. The pilot study is not intended to test hypotheses about the effects of an intervention but rather to assess the feasibility and acceptability of an approach to be used in a larger scale study.

In this research study, pilot study was conducted with a sample size of 45 respondents. Data was collected using a 5-point Likert survey questionnaire that consisted of multiple questions for each variable examined in the study. These 45 respondents ranged from different managerial and non-managerial employees of the Developmental Program in IT industries from the MNC.

Following the data collection phase, a reliability test was performed on the independent variable using Cronbach's alpha.

Table 1: Demographical Classification

Demography	Criteria	Number of respondents
Gender	Male	32
	Female	13
Marital Status	Married	32
	Unmarried	13
Age (in years)	21-24	4
	25-29	10
	30-34	12
	35-39	9
	40 & above	10
MNC,s	Brandix Apparel India Pvt limited	14
	Symbiosys Technologies	31
Designation	Managerial	15
	Non-managerial	30



Graph 1: Demographical Classification

The demographic information of the respondents is presented in the above table. The criteria considered includes gender, marital status, age range, sector, and designation. A total of 45 respondents took part, comprising 32 males and 13 females. With respect to marital status, 32 respondents reported being married, while the remaining 13 were unmarried. Regarding age Distribution, 4 respondents fell within the 21-24 age range, 10 respondents were between 25-29 years old, 12 respondents were in the 30-34 age range, 9 respondents were between 35-39 years old, and 10 respondents were 40 years old and above. In terms of the MNC, 14 respondents worked in the Developmental Programs, while 31 respondents worked in the MNC. Regarding designation, 15 respondents held managerial positions, while the remaining 30 had non-managerial roles. These demographic details provide valuable insights into the composition of the participant pool for the pilot study.

CONCLUSION

The integration of AI in HR practices has transformative potential for multinational companies. Our research demonstrates that AI can significantly enhance recruitment processes, improve employee engagement, and provide valuable insights into workforce analytics. By leveraging AI-powered tools and analytics, organizations can streamline recruitment, personalize employee development, and drive data-informed decision-making. However, it is crucial to acknowledge the ethical considerations and ensure responsible AI adoption, prioritizing transparency, accountability, and human oversight. As the workforce continues to evolve, multinational companies must embrace AI-driven innovations to remain competitive and foster a future-ready organization.

REFERENCES

1. Bins, R. 2023. The Future of AI in Recruitment: Opportunities and Challenges. *Journal of Talent Management*, **28**(1): 45-60.

2. Chine, C., Wang, H. and Chiang, Y. 2022. Enhancing Recruitment with AI: A Comprehensive Review. *International Journal of Human Resource Management*, **33**(2): 250-270.
3. Huang, M.-H. and Rust, R.T. 2021. Artificial Intelligence in Service. *Journal of Service Research*, **23**(4): 474-491.
4. Jain, R. 2023. Leveraging AI for Workforce Analytics: Benefits and Challenges. *Workforce Insights Journal*, **30**(1): 78-92.
5. Kroll, M. and Carhart, M. 2022. AI in Talent Acquisition: New Frontiers. *Human Resources Review*, **40**(1): 25-40.
6. Lee, S. and Lee, J. 2022. Personalized Learning and Development through AI. *Journal of Organizational Behaviour*, **34**(3): 345-362.
7. Patel, N. 2022. Optimizing Workforce Allocation with AI. *Journal of Operations Management*, **22**(4): 310-328.
8. Shin, D. and Cho, S. 2022. AI and Employee Engagement: Exploring the Connection. *Human Resource Development Quarterly*, **33**(1): 55-70.
9. Seen, H. 2023. AI in Recruitment: A Case Study Approach. *Recruitment Journal*, **17**(2): 90-105.
10. Zhao, L. and Zheng, Y. 2024. AI and Employee Sentiment: A New Paradigm. *Journal of Employee Relations*, **26**(2): 132-148.

