
HUMAN RESOURCE MANAGEMENT: AI IN HR

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Abstract

AI is rapidly becoming an integral element of contemporary workplaces, including the Human Resources (HR) departments of various companies. AI is being utilized across different domains to assist in selecting the right candidates for job openings, to conduct and evaluate training programs, to appraise employees' performance objectively and to link co-workers with each other. The HR department can maintain a large administrative function through the use of AI and this will not only give them more time to analyse data but also to make it into actions that have a large impact. Ultimately, the intention of the AI systems in HR is to improve the user's experience. It is a must that AI systems in an HR department produce a higher level of employee satisfaction and benefit.

This study aims to showcase the positive influence of AI on the performance and engagement of employees, through the viewpoint of the organizations that have incorporated AI into their HR management systems. The viewpoint of employees is very crucial since their reliance on and their reassurance of AI's application in HR departments will greatly influence the perception of the efficiency of such AI-based HR systems. . The research uses a descriptive and analytical approach and collects data in two ways. Primary data comes from a questionnaire given to employees working in organizations that use AI in HR, while secondary data is gathered from books, journals, articles, and online sources about AI and HR.

The study looks at common AI applications in HR, such as AI-assisted recruitment, digital performance evaluation systems, online training platforms, and HR analytics. It uses simple statistical methods to analyse the data and examine how these practices relate to employee performance and engagement. This research helps to understand how AI is changing HR work and how employees feel about it. It may also guide organizations planning to adopt AI or improve their existing HR systems.

Keywords:Artificial Intelligence, HR Practices, Employee Performance, Employee Engagement, AI-based HR

Introduction:

Impact of AI-Based HR Practices on Employee Performance and Engagement

Statement of Problem AI technology is getting more and more involved in the HR sector for various functions such as staffing, learning, and assessing the workers' productivity. Contrary to this, the influence of AI on the performance and engagement of the staff still remains uncertain. The current research intends to investigate the impact that AI-enabled HR practices have on the employees and their perception of the systems as well.

Methodology This study follows a **descriptive and analytical research design**. The aim is to describe and analyze the impact of AI-based HR practices on employee performance and engagement from the employees' perspective.

Analysis The analysis is carried out using **simple statistical tools** such as percentages, mean scores, and correlation and chi-square for demographics to interpret employee responses.

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Finding: Findings will be based on Demographics, AI based HR practices, Employee performance, Employee engagement, relationship between AI practices and outcomes.

Literature Review

Edited by Vidhi Agrawal (2025) — Routledge.

This academic book systematically explores AI applications across major HR functions: recruitment, performance management, training, and especially employee engagement through AI. It contains chapters that directly address how AI enhances performance appraisal, engagement tools, and HR decision processes.

Edited by Soumi Ghosh et al. (2024) — Apple Academic Press.

This text presents AI techniques used in HRM, including machine learning, NLP in recruitment, and predictive performance analytics — all relevant to performance and engagement outcomes.

Edited by Anamika Pandey et al. (2023) — River Publishers.

This book situates AI in the broader context of sustainable HRM and organizational performance, including elements of employee engagement, organizational resilience, and innovation.

Edited by Preksha Yadav — IRMA International (2025).

A specialist book that discusses ethical frameworks, strategic HR planning in AI contexts, and practical integration of AI across HR functions — including recruitment, performance evaluation, and engagement.

https://jocc.journals.ekb.eg/article_307053.html?utm_source=chatgpt.com

AI applications in HR include algorithm-driven recruitment systems, performance management algorithms, sentiment-analysis tools for engagement, and chatbots for HR support services. These technologies automate manual tasks and provide data-driven insights across HR functions. Several literature reviews note that AI significantly enhances administrative efficiencies and decision-making processes.

https://jocc.journals.ekb.eg/article_307053.html?utm_source=chatgpt.com

More broadly, systematic literature highlights that AI can support performance through:

- More objective performance assessments
 - Prompt identification of performance gaps
 - Tailored recommendations for upskilling and training
- These enhancements contribute to higher productivity and better alignment with organizational goals.

https://link.springer.com/article/10.1007/s44282-025-00175-8?utm_source=chatgpt.com

Not all research finds straightforward positive effects. Some studies suggest that emphasis on quantitative metrics via AI may overlook qualitative and contextual contributors to performance (e.g., collaboration, emotional labor). Empirical evidence from public institutions shows employee concerns that AI performance monitoring may focus too heavily on measurable indicators, possibly affecting nuanced job contributions.

https://bbijbm.lppmbinabangsa.ac.id/index.php/home/article/view/161?utm_source=chatgpt.com

Perceived fairness and transparency: When employees understand how AI systems operate, they tend to trust the tools more, improving engagement and performance outcomes.

Job security perceptions: The belief that AI threatens job security can dampen performance and engagement, while perceived job security can strengthen positive effects

https://www.sciencedirect.com/science/article/pii/S0278431925001537?utm_source=chatgpt.com

A recent experimental study reported that employee reactions to AI involvement in HR operations could be negative, particularly when employees perceive organizational dehumanization resulting from algorithmic decision-making, especially in collaborative climates.

Methodology adopted

Research Design

The present study adopts a descriptive research design. This design is suitable because the study aims to describe and analyze the impact of AI-based HR practices on employee performance and engagement by collecting first-hand information from employees.

Nature of the Study

The study is empirical in nature, as it is based on primary data collected directly from respondents working in organizations that use AI tools in HR functions such as recruitment, performance appraisal, training, and employee engagement.

Sources of Data: Primary and Secondary data

Population of the Study

The population of the study consists of employees working in organizations where AI-based HR practices are implemented, particularly in areas such as recruitment, performance management, learning and development, and employee engagement systems.

Sample Size

A sample of 70 respondents was selected for the study.

Sampling Technique

The study uses convenience sampling technique, as respondents were selected based on their availability and willingness to participate. This method was chosen due to time and accessibility constraints.

Tool for Data Collection

Data was collected using a structured questionnaire consisting of both closed-ended and Likert scale questions.

The questionnaire was divided into sections covering:

- Demographic details of respondents
- AI-based HR practices
- Employee performance
- Employee engagement

Empirical Results and Analysis

The empirical results of the study are analyzed and interpreted using primary data collected from 70 respondents. The analysis is presented under the following headings: Demographic Profile, AI-Based HR Practices, Employee Performance, Employee Engagement, and Relationship between AI-Based HR Practices and Employee Outcomes.

1. Empirical Results Based on Demographic Profile

Analysis

Percentage analysis was used to examine the demographic characteristics of the respondents.

Results

- Majority of the respondents belong to the **young and middle age groups**, indicating a technologically adaptive workforce.
- Most respondents have **moderate work experience**, suggesting sufficient exposure to organizational HR systems.
- A significant portion of respondents are employed in **IT and service-oriented organizations**, where AI-based HR practices are more prevalent.
- Both genders are adequately represented in the study.

Interpretation

54 National Conference On “*Contemporary Issues In Global Business Management Practices*” 25 &26 February,2026 by University Arts & Science College (Autonomous),Kakatiya University.

The demographic profile suggests that the respondents are well-positioned to evaluate AI-based HR practices, as they possess both technological familiarity and organizational experience.

2. Empirical Results Based on AI-Based HR Practices

Statistical Tool Used

Mean score and percentage analysis

Results

- Respondents largely agreed that AI is used in recruitment, performance appraisal, training, and HR decision-making.
- Mean scores for AI-based HR practice statements were above the midpoint of the 4-point scale, indicating positive perception.
- Employees reported that AI reduces manual HR workload and improves efficiency.

Interpretation

These results indicate that **AI-based HR practices are actively implemented and positively perceived** in the organizations studied.

3. Empirical Results Based on Employee Performance

Statistical Tool Used

Mean analysis and correlation analysis

Results

- Majority of respondents agreed that AI-based HR practices help them **perform their jobs more effectively**.
- AI-driven performance appraisal and feedback systems were found to **support productivity and efficiency**.
- A positive correlation was observed between AI-based HR practices and employee performance.

Interpretation

The findings empirically prove that **AI-based HR practices contribute significantly to improved employee performance**.

4. Empirical Results Based on Employee Engagement

Statistical Tool Used

Mean analysis and correlation analysis

Results

- Respondents expressed higher levels of motivation, job satisfaction, and involvement due to AI-based HR systems.
- AI-based HR practices improved transparency and communication within the organization.
- A positive relationship was observed between AI-based HR practices and employee engagement.

Interpretation

These results show that AI-based HR practices play a key role in enhancing employee engagement and commitment.

5. Relationship between AI-Based HR Practices and Employee Outcomes

Statistical Tool Used

Pearson correlation analysis

Results

- A positive and statistically significant relationship exists between AI-based HR practices and employee performance.

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- A positive and statistically significant relationship also exists between AI-based HR practices and employee engagement.

Interpretation

The results confirm that **greater adoption of AI-based HR practices leads to better employee outcomes**, validating the study hypotheses.

Overall Empirical Conclusion

Based on the analysis of data from 70 respondents, the study empirically establishes that AI-based HR practices have a strong and positive impact on employee performance and employee engagement. The relationship between AI practices and employee outcomes is significant, supporting the effectiveness of AI in modern HR management.

Implications of the Study

The findings of the study on AI-Based HR Practices and their impact on Employee Performance and Engagement provide several important implications for organizations, HR professionals, employees, policymakers, and future researchers.

1. Implications for Organizations

The study shows that AI-based HR practices have a positive impact on employee performance and engagement. Organizations should therefore:

- Invest in AI-driven HR systems for recruitment, training, and performance appraisal
- Use AI tools to improve efficiency and reduce manual HR workload
- Integrate AI strategically to enhance overall organizational productivity

By adopting AI in HR, organizations can achieve better workforce management and competitive advantage.

2. Implications for HR Managers

HR managers can use the findings to:

- Make data-driven HR decisions using AI-based analytics
- Improve accuracy and fairness in recruitment and performance evaluation
- Design personalized training and development programs through AI platforms

The study highlights that AI does not replace HR professionals but supports and strengthens their decision-making role.

3. Implications for Employee Performance

The positive relationship between AI-based HR practices and employee performance implies that:

- AI-based feedback systems help employees identify performance gaps
- Clear goal-setting through AI tools improves work efficiency
- Continuous performance monitoring enhances productivity

Thus, AI acts as a performance-enabling tool rather than a control mechanism.

4. Implications for Employee Engagement

The results indicate that AI-based HR practices improve employee engagement by:

- Increasing transparency in HR processes
- Enhancing communication between employees and management
- Improving job satisfaction and motivation

Engaged employees are more committed and contribute positively to organizational success.

5. Implications for Training and Skill Development

The study suggests that AI-based learning systems:

- Support continuous learning and upskilling

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- Provide customized training based on employee needs
 - Prepare employees for future technological changes

Organizations can use AI to build a future-ready workforce.

6. Managerial and Policy Implications

From a managerial and policy perspective:

- Clear guidelines should be developed for ethical use of AI in HR
- Transparency and data privacy must be ensured
- Policies should encourage responsible AI adoption without employee resistance

This helps in building trust and acceptance among employees.

7. Implications for Technology Adoption

The findings support models like the Technology Acceptance Model (TAM), showing that:

- Perceived usefulness and ease of use increase employee acceptance of AI
- Positive attitudes towards AI lead to better performance and engagement

Hence, successful AI implementation depends on employee perception and readiness.

8. Implications for Future Research

The study opens scope for future researchers to:

- Conduct studies with larger samples
- Compare AI-based HR practices across industries
- Examine long-term impact of AI on employee well-being and job satisfaction

This study acts as a foundation for further empirical research in AI-driven HRM.

Overall Implication

The study clearly implies that AI-based HR practices are beneficial for both employees and organizations when implemented ethically and strategically. AI enhances performance, engagement, and HR effectiveness, making it a valuable tool in modern human resource management.

Study Hypothesis

1. Alignment with Research Objectives

The main objectives of the study are to:

- Examine the impact of AI-based HR practices on employee performance
- Analyze the influence of AI-based HR practices on employee engagement

The hypotheses directly test these objectives. Hence, they are logically and conceptually aligned with the purpose of the study.

2. Consistency with Research Methodology

- The study is empirical in nature
- Primary data was collected from 70 respondents
- Data was analyzed using correlation analysis and chi-square test

Hypothesis testing is most suitable for such quantitative, primary-data-based research. Therefore, the hypotheses are methodologically valid.

3. Compatibility with the Questionnaire

Each hypothesis is supported by **specific questionnaire items**:

Hypothesis	Questionnaire Sections
Impact on Performance	Questions 13–16
Impact on Engagement	Questions 17–20
HR Effectiveness	Questions 21–23

Hypothesis

Questionnaire Sections

Demographic Association Section A + AI practice questions

This confirms that the hypotheses are **measurable and testable** using the collected data.

4. Statistical Applicability

The hypotheses:

- Can be tested using **Pearson correlation** (impact/relationship)
- Can be tested using **Chi-square** (association with demographics)
- Are suitable for a **4-point Likert scale**

Thus, the hypotheses are **statistically applicable**.

5. Support from Study Findings

The empirical results show:

- Positive impact of AI-based HR practices on performance
- Positive impact on employee engagement
- Favorable perception across respondents

Since the null hypotheses were rejected, it confirms that the hypotheses are practically applicable and empirically supported.