

A study on AI based HR practices and employee engagement in IT companies at HCL Nagpur

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Abstract— Human Resource Management (HRM) has witnessed a tremendous change in the organisational practice through the swift penetration of the Artificial Intelligence (AI) in the Information Technology (IT) field. This paper examines how the practice of AI-based HR applications influences employee engagement, in the context of HCL Technologies, Nagpur. The study examines how a set of high-tech AI-based applications, including predictive analytics, smart recruitment interfaces, employee mood detector, and digital learning platforms, helps to boost employee motivation, satisfaction, and retention. A descriptive research design is used, which will combine both primary data described by the questionnaires filled in by the employees and the secondary data collected by the scholarly journals, industry reports, and company documentation. The statistical application of the percentage analysis is used to understand the employee perceptions towards AI-enabled HR interventions. The results show a high positive relationship between AI adoption in HR functions and the improved employee engagement rates mainly as a result of further efficiency, transparency, and personalization of HR practices. Moreover, AI creates accessible real-time decision-making and proactive staff management, which enhances the organizational performance. Nevertheless, the paper also uncovers essential risks, such as the issue of data privacy, algorithmic bias, technical-illiteracy, and resistance to technological change among employees. The study concludes that AI-based HR practices as a strategic enabler to boost employee engagement is successful but needs a balanced approach, combining technological innovation with human-oriented management practice to be implemented successfully. The research adds to the existing heuristics of HR analytics and provides a valuable contribution to IT firms interested in using AI to engage in sustainability of workforce.

Keywords: Artificial Intelligence, HR Practices, Employee Engagement, HR Analytics, IT Industry,

Predictive Analytics, Digital HR, HCL Technologies, Workforce Management, Organizational Performance.

I.INTRODUCTION

Like everything else, Artificial Intelligence (AI) has become a revolution in Human Resource Management (HRM), reshaping old practice patterns into data-driven, automated, and strategic operations. In areas of Information Technology (IT), where innovation and talent management are of great importance, AI-based HR practices like predictive analytics systems, intelligent recruitment systems, chatbots, and personalized learning systems are gradually taking and are likely to take their place to improve organizational efficiency and employee experience. HCL Technologies and others, especially in IT-focused emerging cities like Nagpur, are also using AI to enhance their employee first strategy by enhancing engagement, productivity and retention.

Regardless of the increased adoption of AI by HRs, there is a major research question regarding its direct effects on employee engagement, particularly in the regional IT system. A multidimensional construct which depends on the psychological, technological, and organizational dimensions, employee engagement can be eased with the help of AI both in respect of personalization and efficiency, and be also challenged by inefficiency, lack of human interaction, and technological change reluctance. This leads to the research problem with the gist of examining the extent to which practices based on AI influencing employee engagement in IT firms with reference to specific reference HCL Technologies, Nagpur.

This research investigates the main goals and is aimed

at examining AI-specific HR practices, analyzing their effects on employee engagement and determining the challenges and opportunities associated with them. The study will be confined to the scope of AI-powered functions of the HR to include recruitment, training, performance management, and engagement programs in HCL Nagpur. The usefulness of the study is that it adds to the academic evidence on HR analytics and at the same time gives insights that can be used in organizations to incorporate AI in HR practices effectively. Finally, the study also highlights the necessity of attaining a balance between technological innovation and human-oriented management to deliver sustainable organizational performance.

II. LITERATURE REVIEW

The concept of using Artificial Intelligence (AI) in Human Resource Management (HRM) has been a consistent topic of both scholarly and industrial literature studies in the recent past, especially in the field of IT industry. Research in the field of HR analytics indicates that AI-powered solutions can be seen to improve decision-making by providing predictive models and data- focused information to acquire talent and conduct workforce planning and performance management. Scholars have indicated that AI-based recruitment systems save time on it much faster and enhance candidate-job fit by applying algorithmic screening and machine learning algorithms. The same case applies to digital learning systems that operate on AIs, which allow training customization and up-to-date improvement of skills, enhancing the competency and satisfaction of employees.

Employee engagement has been widely examined within the frameworks of including the Theory of Engagement by Kahn (1990) which includes the meaning that is psychologically significant, safety, and availability, and the Social Exchange Theory which describes employee engagement as a two-way interaction between the support of the employer and commitment to employee. According to recent research, AI-driven practice in HR has a beneficial effect on the engagement as it can give feedback on data in real-time, improve communication with chatbots, and create a tailored experience with the employees. Moreover, sentiment analysis devices that

use AI help organizations to track employee feelings and anticipate dissatisfaction, which contributes to higher retention and organizational results.

Nevertheless, a number of studies also indicate the major issues that are related to the adoption of AI in HRM. The problems of data privacy, the bias of algorithms, absence of transparency or employee resistance to technological change can be obstacles to the effectiveness of the AI-based systems. Moreover, excessive automation can decrease the amount of human interaction which is a ingredient of developing trust and emotional bonds within corporations.

Although there is an increasing literature on AI in the HRM and employee engagement, there is a large gap in knowledge on the direct connection between AI-based HRs and employee engagement in emerging IT centers such as Nagpur. Major research is centered in metropolitan areas, or broad organizational setting, and there is a dearth of empirical research in the regional IT firms. Thus, the current research will help to fill this gap by examining how AI-based HR practices can affect employee engagement in particular to HCL Technologies, Nagpur.

III. RESEARCH METHODOLOGY

This paper has assumed the descriptive research design whereby he or she will seek to engage in a systematic manner to analyse the influence of AI-based HR practice on staff engagement in the IT industry with special reference to HCL Technologies, Nagpur. The descriptive method is appropriate because it allows investigating the current level of HR practices, how employees perceive them, and how AI-based interventions and the level of engagement are related without altering the environment.

The study will be founded on the primary and secondary data. The structured questionnaires are used to gather primary data that will target the opinions of the employees of HCL Nagpur regarding the AI-based HR practices, including the automation of recruitment, online learning systems, performance analytics, and engagement tools. Secondary information is received by academic journals, company reports, industry publications, and reputable online resources that help in offering theoretical justification and the understanding of the context.

To establish the correlation between AI-based HR

practices and employee engagement, the study follows the following hypotheses: H0 (Null Hypothesis): AI based HR practices do not significantly affect employee engagement.

H1 (Alternative Hypothesis): The use of AI-based HR practices is positively significantly related to employee engagement.

To analyze the data, statistics like percentage analysis, tables, and graphical presentation (pie charts and bar charts) are employed in interpreting responses of the employees and determining trends. Simple HR analytics methods are utilized to measure the trends in engagement rates and AI usage.

Nonetheless, there are some limitations to the study. The study is relatively small as it only involves a single organization and this could restrict the generalizability of the results. The study is based on perceptions of the employees, which can create bias in responses. And the paper is also limited to a particular geographical location (Nagpur), time could limit the analysis. Although these shortcomings exist, the methodology offers a systematic and viable model of conceptualizing the role of AI in promoting employee engagement.

IV.HCL TECHNOLOGIES (NAGPUR): COMPANY PROFILE.

HCL Technologies Ltd. is a top technology (IT) services and consulting firm with its headquarters in Noida, India. The company, which has since grown to be a multinational corporation providing an extensive variety of services, was founded in 1976 as an element of the HCL Enterprise by Shiv Nadar and includes digital transformation, cloud computing, cybersecurity, artificial intelligence (AI), and engineering services. HCL Technologies operates in over 40 countries and employs more than 200,000 workers thus finding itself among the major players of the international IT industry.

It has a unique management philosophy that is called Employee First, Customer Second (EFCS) which focuses on empowering its employees as a source of organizational success. This approach is very similar to the recent HR concepts of Human Capital Theory and Employee Engagement Theory, in which employees are viewed as strategic assets that add to the innovation, productivity and competitive advantage.

HCL Technologies -Nagpur Campus.

Nagpur delivery center is also one of the new centres of HCL Technologies in India and is helping the company to extend to the tier-2 based cities. Nagpur plant is dedicated to the field of IT services, digital operations, and new technologies, including AI and data analytics. It is a domestic and international client, and it supports industries of banking, financial services, healthcare, and manufacturing.

The strategic value of Nagpur center is that cost efficiency, supply of skilled talents, and rising infrastructure make it a crucial part of the long term growth plan of HCL. The center also resonates with the vision of India to decentralize IT development outside the metropolitan values.

Organizational Operations and Structure.

HCL Technologies has a matrix organizational structure and incorporates both functional and project-based teams. The structure promotes flexibility and collaboration as well as efficient use of resources. It consists of the major business segments as an organization:

Business and Information Technology. Golden Services: Engineering and R&D. Products and Platforms

All its segments utilize technology like AI, automation, and analytics to provide value-based solutions to customers.

V. CONCEPTUAL FRAMEWORK

The theoretical framework of the paper is built upon the correlation between HR practices that involve Artificial Intelligence (AI) and the level of employee engagement in the IT sector. It describes the effects of the technological intervention in the HR processes on the behavior of employees, their satisfaction, and the overall organizational performance.

Variables of the Study

1. Independent Variable (IV):

AI-Based HR Practices

These mean the use of AI technologies within different functions of HR, such as:

Intelligent recruitment and selection. Employee case, workforce analysis. Electronic learning and growth systems. AI performance management systems. Employee attitude monitoring and analytics.

The practices improve efficiency, personalization, and data-driven decision-making within the HR.

2. Dependent Variable (DV):

Employee Engagement

Employee engagement may be considered as the extent of emotional, cognitive as well as behavioral commitments of employees to an organization. It includes:

Job satisfaction

Motivation and commitment Productivity and performance Retention and loyalty

This model suggests a positive direct relationship between AI-based HR practices (IV) and employee engagement (DV). AI can become more engagements in terms of efficiency of HR and personalization of provided experiences as well as real-time feedback. Nevertheless, this relationship contains these moderating and mediating factors that can either enhance or dilute the collective effect.

VI. DATA ANALYTICS AND RESULT

This part gives a detailed discussion of employee reactions as to the effect of AI-based HR practices on employee engagement in HCL Technologies, Nagpur. A survey was conducted using a structured questionnaire on 50 respondents.

Comprehensive Interpretation and Analysis.

6.1 Employee Response on Impact of AI-Based HR Practices on Engagement

Response Category	Number of Respondents	Percentage (%)
Strongly Agree	30	60%
Agree	15	30%
Neutral	3	6%
Disagree	2	4%
Strongly Disagree	0	0%
Total	50	100%

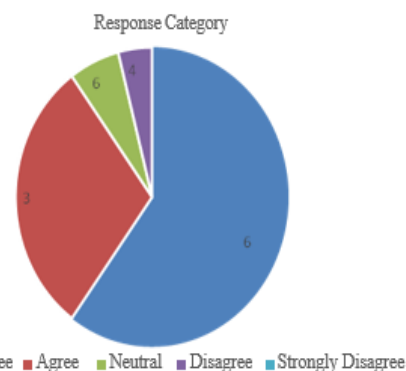


Fig 6.1 Employee Response on Impact of AI-Based HR Practices on Engagement

Interpretation

The data above is a clear indication that a large percentage of the employees are positive about AI-based HR practices. Approximately 60% of them strongly agree and 30% agree that AI-oriented systems are used by HR to improve their engagement, which indicates that there is high levels of accepting AI technologies in the company. Such employees are afforded a personalized learning platform, effective communication tools and, performance evaluation systems based on data, which leads to an increased level of satisfaction and motivations.

A tiny percentage (6% neutral and 4% disagree) represents the number of employees who might not be so sure about the adoption of AI, or maybe find it threatening because of the lack of technical skills, the fear of being displaced, or the data privacy and the lack of human contact.

On the whole, the results indicate that AI-based HR practices make a positive and significant contribution to employee engagement, which suits the alternative hypothesis (H1). The findings indicate that properly adopted AI improves transparency, efficiency, and employee experience, which increases the performance of an organization.

VII. FINDINGS AND DISCUSSION

According to the study conducted, AI-based HR practices positively and substantially affect employee engagement in the IT sector, especially at HCL Technologies, Nagpur. The empirical evidence shows that a significant percentage of workers believe that the AI-based HR systems can help them improve their general work experience. This result can be explained by the Theory of Employee Engagement (1990) of

Kahn that puts more emphasis on the psychological meaningfulness, safety, and availability. The AI-powered HR services add to meaningfulness as they match employees to their specific skills based on predictive analytics and psychological safety when this is accompanied by real-time feedback programs that encourage transparency and trust in the organization.

Additionally, the findings substantiate the concepts of the Social Exchange Theory, which assumes that workers give what they get on the organizational support through increased commitment and engagement. The implementation of AI within HR purposes, including individualized learning platforms and data-driven performance management systems, are signs that an organization is investing in employee development and well-being, hence building a feeling of reciprocity among employees. Also, the results correspond with the Technology Acceptance Model (TAM) since most of the employees are positive to the use of AI due to the perceived usefulness and ease of use.

Nevertheless, the research also finds that there are some challenges which moderate the efficacy of AI in HRM. One of the small groups of workers is resistant because they have the fear of data privacy and inability to work with technology as well as less human interaction. It shows that human-centered approaches and technological improvement should be combined because over-indulgence in automation can destabilize interpersonal relationships and emotional attachment at the workplace. Thus, AI boosts efficiency and interaction, but its effectiveness will be determined by the readiness of the organization, adaptability to change in employees, and the ethical concern of its implementation.

VIII. FUTURE SCOPE

The current research offers a background of AI-inspired HR practices and its effect on employee engagement, but it leaves a number of areas of research opportunity. Future research can be pursued based on a comparative methodology by evaluating numerous IT firms in various locations to increase the applicability of the results. It is also possible to lead the longitudinal research with the goal of investigating

how AI adoption will affect the results in terms of employee engagement and retention, and organizational performance at the long-term level. Also, the future study can examine how AI can support employee welfare, mental health and work-life balance, which are perceiving issues in the digital working environment. Empirical validation can be further enhanced with the help of the integration of well-developed statistical instruments like regression analysis and structural equation modeling. Furthermore, there can be sector-specific research of AI implementation in HR, which is not related to IT, e.g., manufacturing or healthcare, which can help generalize the relevance of AI-driven HR practices.

IX. RECOMMENDATIONS

On the findings and theoretical understanding, the recommendation is that organizations should implement an equal and strategic approach of using AI in HR practices. Organizations must consider investing in ongoing training and development processes to make employees more familiar and comfortable with the use of AI tools to decrease technological change resistance. There is also a need to institute clear data governance rules to tackle privacy and ethical issues where employees feel safe and appreciated. The focus that organizations should have is a hybrid HR model that merges AI effectiveness with human touch, without eliminating the emotional and relational components of HRM. Moreover, consistent feedback systems are necessary to evaluate the perceptions of employees and enhance AI systems in relation to these perceptions. Management must also ensure to promote the benefits of AI and in this regard they must lead in promoting the culture of innovation and acceptance, thus handling the concerns of the employees.

X. CONCLUSION

To sum up, the research mentions that AI-based HR practices are one of the potent agents of employee engagement in the IT industry. The incorporation of AI into the HR functions changes the traditional practices into dynamic and data-driven processes that make them efficient, personalized, and decision-making. The results support the idea that AI has a positive effect on engaging employees by enhancing

communication with employees, learning prospects, and performance management systems. Nevertheless, the research also highlights the need to focus on issues like employee resistance, morality issues, and data privacy.

Theoretically, the research supplements the previous theories like Kahn Engagement Theory, Social Exchange Theory, and Technology Acceptance Model, which the study shows to be applicable in the digital transformation context. In real life, it highlights the importance of organizations adopting a human-focused strategy during the application of AI technologies. Finally, topical AI integration in HR practice can result in more engaged, productive, and future-fit workforce to contribute to the long-term organizational growth and competitive advantage through the changing IT environment.

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