

Study on Artificial Intelligence in Human Resource Management

Bindu H T¹, Yashaswini A², Shilpa Raj³, Archana M⁴

¹²³⁴Assistant Professor, Department of Commerce and Management, RMS institute of management and science, Bengaluru, India

Abstract- Human resource management (HRM) has experienced a significant change due to the groundbreaking advancements introduced by artificial intelligence (AI). This study investigates the transformation of HRM in an AI-centric landscape, highlighting the shift from traditional approaches to data-informed, technologically sophisticated decision-making processes. Integrating AI into HR functions has enhanced efficiency and customization by optimizing hiring, training, performance evaluations, and employee involvement. However, these advancements also raise organizational, social, and ethical issues.

Keyword: Tools of AI, data decision driven, swot of AI, functions of HRM in AI.

I. INTRODUCTION

In 21st century technology has been widely used widely across all the field. The internet has changed our lives a lot. Technology gives us a mantra of Ease of Doing, in today's world we are much more dependent on technology.

Artificial, defined according to Oxford Dictionary is something "made or produced by the human beings rather than occurring naturally, especially as a copy of something natural" (Oxford Dictionary, 2019). Therefore, it can be established that artificial is what humans have made to simulate something that usually occurs naturally. We are living in an era in which AI capabilities are reaching new heights and have a major impact on how we operate our business. Artificial intelligence refers to the technology that is similar to human mind.

AI is defined as the ability of such things as machines to learn, interpret and understand on their own in a similar way to that of humans. Artificial intelligence (AI) refers to the simulation of human intelligence in machines that are programmed to think like humans and mimic their actions. The term may also be applied to any machine that exhibits traits associated with a human mind such as learning and problem-

solving (Investopedia, 2020). AI can do the task as it done by human being through their intelligence.

Slain and Winston (1992) defined AI as being a set of techniques that allow computers to accomplish tasks that would otherwise necessitate the reasoning skills that human intelligence brings. High speed computation, huge amount of quality data handling and advanced algorithm will make AI unique. Speed and right decision are the strength for any organization in this competitive environment.

According to Nilsson (2005) machines should be able to do most of the jobs that human intelligence demand, which he calls for human-level AI. The use of AI is endless; it can be used in different sectors and industries. AI will not only help in routine jobs or to improve HR functions, such as self-service transactions, recruiting and talent acquisition, payroll, reporting, access policies and procedures.

Most of the companies have been adopting modern technology in various HR process like recruitment process, performance appraisal process, cloud-based HR systems (Jain, 2018). HRM involves many different aspects, such as training employees, recruitment, employee relations and the development of the organization.

II. LITERATURE REVIEW

The quest for intelligent web automation has passed through many different stages, from static scripting to dynamic and AI-powered agents. This paper looks at the underlying technologies and recent advances that have influenced our research.

Merlin & Jayam, "Artificial Intelligence in Human Resource Management" AI powered talent acquisition, data driven decision making Dr A prabakaran professor and research director paper on AI IN HRM tries to address employee onboarding, performance management, and turnover prediction. Rachipandya paper address the talent acquisition, onboarding, employee retention and performance evaluation.

Mandeep kaur paper address on AI Techniques for human resource management A researcher in his research paper, title "The Impact of Robotics, Artificial Intelligence on Business and Economics" has studied that use of Robotics and Artificial intelligence in business A researcher in his research paper, title "The Impact of Robotics, Artificial Intelligence on Business and Economics" has studied that use of Robotics and Artificial intelligence in business Journal of Pure and Applied Mathematics (2018) This paper tries to address the possibilities of how Artificial intelligence is transforming and supporting the Human Resource functions like recruitment, training, talent management & retention through real time examples, gives insights on intersection of Artificial intelligence & Human resource management cases and finally it addresses the future impact on the HR workforce.

Kapoor B. (2010) examines leading business intelligence vendors to look into the business intelligence and data analytics features incorporated in human resource management modules. The author examined that the human resources can position itself as essential value- adding department of the organization by taking the advantage of business intelligence.

Buzko et al (2016) found that the main factor for influencing the amount of training in the company is

net income of the company for a previous year and the transition from discrete paradigm of the information processing to continuous paradigm allow faster and more accurate adapting to environment requirements. The author concludes that in the modern business condition, it become more relevant to use AI technologies for decision making.

The impact of robotics, AI on business and economics has studied that use of robotics and AI in business may have negative impact on the overall functions of an organization like production, performance management, sale , strategic planning, CRM, banking system, coaching, training, taxes etc. Ulrich and Dulebon (2015) described the emergence of HR and propose the future of HR for increased and sustainable value. The authors have studied the HR s transformation wave from administrative to HR strategy wave.

increased and sustainable value. The authors have studied the HR' s transformation waves from increased and sustainable value. the authors have studied the HR s transformation waves from administ Impact of Robotics, Artificial Intelligence on Business and Economics" has studied that use of Robotics and Artificial intelligence in business The impact on robotics on AI in business and economics has studied the use robotics and AI in business may have negative impact on the overall functions of an organization like production, performance management, sale, strategic planning, customer relationship management, banking system, coaching, training, taxes etc. (Dirican, 2015 Ulrich and Dulebon (2015) described the emergence of HR and propose the future of HR for increased and sustainable value . the author have studied the HR s transformation waves from administrative to HR strategy waves.

Research Objectives

- To understand the concept of artificial intelligence.
- To understand the role of artificial intelligence in HRM functions
- To study the opportunities of artificial intelligence in HRM.

- To study the challenges of artificial intelligence in HRM.

III. RESEARCH METHODOLOGY

The research study is using the descriptive research design. Secondary data has been used in this research. The secondary data has been collected from research papers, published materials, online websites, HR blogs, and survey reports published by various research organizations.

Tools and techniques

Chatbots, for conversation and queries
Chatgpt , software solutions, machine learning,
Textio {for job description,} hirevue {AI driven video interview}
Lattice {summarizes employees feedback, }
Eight fold {AI for talent intelligence ,matching the candidates}
Paradox {for engagement of candidate 24/7 conversation and chatbots}
ATS {applicant tracking system software} , NPL.

Role of AI in HR Functions

Effective utilization of manpower for attainment of organizational goals is called to be human resource management. Procurement of manpower, recruitment, selection, training, development, compensation, performance appraisal and separation are the main functions of HR.

Schemerhorn (2001) is that HRM is how you are able to gain and develop a workforce which is talented, to help the company achieves its goals, as well as its mission, vision and different objectives at hand. To retain best talent and maintain the satisfaction level of human resource are the prime objective of HRM. And this is because human resources are such a dynamic part of the company and is ever changing, therefore it needs the right management by an organization (Bibi, Pangil & Johari, 2016).

In current scenario, HR department heading towards the digital revolution and using various methods to simplify the resources by using big data analysis, artificial intelligence, and cloud computing (Amla & Malhotra, 2017).

The AI offers much great opportunity to lift up the HR world. It will facilitate the organizations to achieve their desired objectives in limited time. With the advancement of technology, the organization will be requiring high skilled professionals which can make the machine to perform the task as per the requirement. Artificial Intelligence will assist the employees to manage their work life balance effectively. Employee will be able to complete their task before the deadline. The dependency on employees will reduce in the organization.

Recruitment

Most of the Following are the role of artificial intelligence in human resource management: organizations are using artificial intelligence in the process of recruitment. Facebook, TCS, Infosys, HDFC and many more organizations are using digital platform in the process of screening and interview which help them to identify the new and best talent. AI can help the recruitment managers to examine the applicant quickly and effectively. Interactive Chat box system or automated answering machine plays important role to solve the queries like about job description and specification or any other problems regarding the process of recruitment in an organization. AI compares the interviewed applicants to the top talent employees in the company and finally suggests the best applicants to recruiters (HireVue, 2018).

Selection

The next process in procurement of manpower is selection. It usually takes place after the organization have been doing initial recruitment where they establish a pool of possible qualified applicants, and now have to select the right applicant for the job (Newell, 2005). With the help of AI human resource manager can able to trace right candidate in short time of span and technology will helps out to identify the suitable candidates as per required skills sets (Rajesh, Kandaswamy, & Rakesh, 2018).

Post- Offer Acceptance

After submitting the job application by the applicant, the applicant not receives any type of communication or interaction from the employer. When HR selects the candidate and they accepts a job

offer, it will take normally 2- 3 weeks to join or start the new assignment. At that time period or gap period AI could help these new candidates by engaging and following up with the candidate so that they will connected with the company and also increase the acceptance- tostart rates of selected candidate. AI can be integrated into these types of candidate automation, however messages, responses and engagements can, with AI, be real-time and unique to the individual candidate and not just driven by a tags, positions, locations or categories.

Induction

Induction program plays very important role for the new employees. It helps to understand the organizational culture, plan, polices, structure and processes. AI can answer other common questions, information and resources that may help the new join to understand better.

Employee Relations:

Employees must have some queries related to benefit coverage, vacation time and how they are paid which require in depth conversation with HR manager or coordinator. Once data feed in the AI system, AI can answer all queries in chat form. Artificial intelligence technology can be used in chat form, email or a virtual meeting room, handing over and even booking a meeting between your HR generalist and the employee.

Work Scheduling:

Assignment of job, scheduling interviews and meeting needs lots of attention of HR mangers, although these are very unproductive activities which are not only waste their time but also restrict them to be more innovative. Here, AI will play a very vital role, it assist HR managers in work scheduling, information circulation and collecting the information or preferences from the employees through the automated chat box.

HR Payroll:

Tradition administration of wages & salary was called to be very complex process because if it was not done properly then it may create various interpersonal conflicts of dissatisfaction. Now, AI will

help in wages & salary administration as all the data are now transparent, employee' s bank accounts are linked and salary will automatically credited to their accounts and all the tax related issues are also resolved.

Training & Development: -

Now a days, computers and digital technology can do the behind the scenes role in industry. Training & development activities are now performed on digital platform. It becomes easy for organization to conduct the session across the country or globe. Through computers and modern technology industries can able to manage data analysis and provide real- time feedback during training, alteration of course of actions based on progress and responses which industries got (Riebli, 2018). AI offers the ability to scale a career development program or company coaching for each and every employee. HR Managers will plan digital or online training programme for employee which help them in eliminating the gap. AI facilitates the HR Managers and employee to track their progress.

Performance Appraisal:

Appraising employee' s performance in a definite time period important part of HR functions. If employees will not appraise regularly their satisfaction and performance may goes down. AI application for performance appraisal not only helps HR managers to get feedback from the immediate supervisor or the concerned individual related to employees performance. Confidential HR data must be accessed by the authorized person but still there will a chance of hacking information.

Strength

- AI replace human being multi task at a time
- Early doing work quick result
- Easy to access, simple in understanding
- Data decision taking is most possible

Weakness

- Critical thinking resource is not available
- Emotional intelegence and emotional quotient cannot match
- Employment opportunity are decreasing

- Too much of AI will be not good for human kind.

Opportunities of AI

- It reduce s discrimination and favoritism among employees
- It will help to increase the transparency at workplace
- AI application can be used to analyse job description
- AI helps to reduce the redundancy of employees at work place
- AI will maintain the work flow in various department
- AI is usefull in workplace and help to HR professional to understand their working and to identify the problems and trends in advance
- AI application on recruitment and selection helps in talent acquisition and identifies the right candidate for right job
- AI based on algorithms and logic ,so the chance of accurate result is high.

Challenges of AI

The whole world is now moving towards fast changing technologies and organization might choose the wrong path for making themselves more competitive and sustainable. Proper implementation of AI is very necessary which make organizations more effective and efficient. Here are the few challenges which organization faces while adopting AI system:

W hile using AI organization will start underestimating the competencies of human resource and exaggerates the importance of AI. Human beings are really good at the least routine, most complex, most collaborative, most creative work. And we' re much better than computers at this stuff (Sen, 2018).

Sometime the results of AI were not compatible with managers decision s or managers needs some modification or manipulation in desired data. So they may ignore or underestimate the results of AI and found solutions as per their requirement. This could happen where managers ignore the recommendation of the AI recruitment system and use their intuition instead, despite the evidence that

AI is a better predictor of candidate success than humans (Agrawal, 2018).

Handling AI required proper knowledge and training. getting right candidate is also a challenge for organization.

Human machine inter action is one of the challenges for AI. as most of the HR functions are performed by machine but they don't have emotional aspect.

empathy and understanding are main essences of HR but these are associated with machines

IV. RESULT ANALYSIS AND DISCUSSION

Findings

- Payroll ERP system automatically calculates salary with statutory compliances
- ATS {applicant tracking system} software automatically process takes up eligible candidate and rejects non eligible candidates
- Naukri, linkdin, internship platform for searching and acquiring job
- Data mining for all the company what people are preferring
- Workplace safety detecting hazards in the workplace environment
- Chatbots for queries and conversations
- AI powered tutors for training
- Virtual coaching
- ChatGPT, resume screening, job description.

V. CONCLUSION

AI based HR functions have strong impact on HR team which make them more productive and innovative. It not only helps them to enrich their knowledge or skills but also help to boost the motivation and performance of employees. Do not believe that AI will make the decisions it is only for HR Managers assistance which help them in making the decisions whether strategic or operational. It is not always possible that AI will provide the correct response or make the best decision, the HR manger should revisit and check the algorithms and logic before making any important decisions. Saving time

in repetitive HR jobs will help managers to do more creative and strategic tasks for the success of the organization. The company's success will depend on how they effectively and intelligently combine or manage people, process and technology to deliver transformational value at optimal cost.

REFERENCES

1. Amla m and malhotra p m (2017) digital transformation in HR
 2. BIBI p pangil F &JOHARI (2016) HRM practices and employees retention
 3. Agarwa l A (2018) THE ECONOMICS OF AI
 4. RATHIL D (2018) AI and future of HR practices
 5. Jain D S (2018,MARCH) Human resource management and Artificial intelligence international journal of management and social science research
- [www. Retorio.com](http://www.Retorio.com)
 - [www. Synthesia.com](http://www.Synthesia.com)
 - [www. //cloud .google .com](http://www.//cloud.google.com)
 - [edurekain .co /](http://edurekain.co/)