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ARTIFICIAL INTELLIGENCE'S IMPACT ON HUMAN RESOURCE MANAGEMENT: A THOROUGH ANALYSIS

*JUHI KUMARI, **Dr. HARSHDEV VERMA

Research scholar, Assistant Professor

Department of Commerce

Deen Dayal Upadhyaya Gorakhpur University, Gorakhpur, Uttar Pradesh

Abstract: Adoption and integration of technology in business are increasingly requirements rather than options. Businesses today align their technology with their goals to guarantee survival, development, and continuity of operations. By making the organization's business processes even more connected and efficient than before, technological innovations have completely transformed and restructured them. These technological developments in business are bringing humans and machines closer together and researching methods to improve productivity, ease of use, and efficiency. The application of artificial intelligence (AI) in enterprises is an example of this kind of corporate change.

AI-powered human resource (HR) technology helps businesses generate both immediate and long-term advantages. Human resource (HR) departments can enhance the employee experience by utilizing artificial intelligence, which enables managers to make consistent decisions about major business challenges, automates repetitive tasks, develops customized training modules, and supports HR managers in making more informed decisions about talent development.

This study is primarily descriptive. It is based on secondary data gathered from research papers, books, websites, blogs on human resources, and survey results. The primary objective of this research is to demonstrate the increasing importance of artificial intelligence (AI) in human resource management (HRM) and to elucidate how AI has been integrated into diverse HRM operations. The study discovered that there is an increasing need to include artificial intelligence (AI) in human resource management (HRM) and that AI is essential to improving HR tasks like hiring and performance monitoring.

Index Terms - Artificial Intelligence (AI), Human Resource Management (HRM), Human Resource (HR).

INTRODUCTION

Technology is one of the main elements that determines an industry's success. Since the 19th century, a lot of human employment in the manufacturing sector have been replaced by robots. The advent of personal computers and the internet in the workplace led to the displacement of human labor by machines in 1970, marking the beginning of the third industrial revolution. Artificial intelligence (AI) and machine language (ML), two digital technologies that are already influencing daily workplace processes, will be the driving forces behind organizational transformation. A flexible agent that scans its environment and operates in a way that maximizes its odds of success at a particular job is referred to as "the ideal intelligent" machine. Artificial intelligence is the intelligence exhibited by machines, as opposed to the natural intellect possessed by humans. The phrase "artificial intelligence" was first used in scholarly contexts in 1956. Artificial intelligence proves to be advantageous in several corporate functions by reducing workloads and job strain on employees. Business needs to adapt rapidly and take immediate action.

Businesses may use AI technologies to improve their everyday operations and existing performance. The importance of artificial intelligence in the workplace was acknowledged by strict managers as a result of growing business pressure. The whole structure of a business is starting to include artificial intelligence these days. AI systems are used for all purposes, for instance, in the human resources department, including hiring, performance monitoring, harmonizing HR operations, and screening candidates.

RESEARCH OBJECTIVES

1. To study the concept of artificial intelligence.
2. To study the role of artificial intelligence in human resource management.
3. To study the benefits of artificial intelligence in human resource management.

RESEARCH METHODOLOGY

The descriptive research design is being used in this investigation. The researcher employed secondary data in the study. Research papers, published materials, internet resources, HR blogs, and survey results released by different research groups have all provided the secondary data.

LITERATURE REVIEW

Artificial Intelligence

Artificial intelligence (AI) is made up of the words "artificial," which means "man-made," and "intelligence," which means "the ability to acquire and apply information and skills."

The idea behind the concept of artificial intelligence (AI) is built on the notion that human thought can be automated. Although the notion of building machines to help people with their work was not new, the debate over whether computers might display intelligence picked up steam after Alan Turing looked into the mathematical potential of machine learning. Turing argued in his essay "Computing Machinery and Intelligence" that robots can make the same decisions as people in problem-solving and logic.

The Logic Theorist, the first Artificial Intelligence (AI) program, was introduced by John McCarthy and Marvin Minsky in 1956 during the Dartmouth Summer Research Project on Artificial Intelligence (DSRPAI). They proposed that computers might be used to simulate human intellect by defining artificial intelligence (AI) as the ability of machines to understand, reason, and learn similarly to humans. The scientific and engineering process of developing intelligent machines, especially computer programs, is known as artificial intelligence (AI), according to John McCarthy. According to Kasemsap (2017), a field of study called artificial intelligence (AI) equips robots with the ability to tackle complex issues similarly to a human.

As for artificial, there's less need to describe it because everyone knows what "A" means (Bringsjord & Schimanski, 2003). "Anything created or produced by human people rather than happening naturally, especially as a duplicate of something natural," is what the Oxford Dictionary defines as "artificial" (Oxford Dictionary, 2019). So, anything made by people to mimic something that often occurs naturally can be considered artificial. According to some definitions, artificial intelligence (AI) is the creation of robots, machines, or computer programs that display behavior similar to that of humans (Tecuci, 2012; Kaplan, 2016). Artificial intelligence (AI) is described in this research as a system's ability to independently learn, understand, and interpret information in a way that is comparable to that of humans.

Artificial intelligence (AI) has many different applications and circumstances in which it might be used. For example, a device, robot, software, or computer program (Tecuci, 2012). AI has advanced several technical domains, including robotics, automated reasoning, expert systems, and natural language interpretation (Ved et al. 2016). Furthermore, Ved et al. (2016) assert that language interpretation, machine perception, problem-solving, robotics, and gaming are the five primary areas in which artificial intelligence is being applied. Tecuci (2012) provides additional evidence for these application areas by listing knowledge acquisition, natural language processing, and robotics as some of the key uses of AI.

Human Resource Management

Many definitions of human resource management have been put out by different scholars; yet, the majority of these definitions do support one another. Schemerhorn (2001) defines HRM as the process of hiring and developing qualified employees, who help an organization achieve its mission, vision, and other present objectives. Human resource management (HRM) may also be defined as an employee management approach that seeks to maintain a competent and dedicated staff using a variety of techniques, including structural, cultural, and personnel changes, in order to provide the business with a competitive edge (Storey, 2004). In the context of this research, human resource management (HRM) refers to the process of a company's personnel acquiring and maintaining new skills, capabilities, and competences using a variety of management techniques.

The recruiting, management, and development of new hires are all part of HRM practices (Wall & Wood, 2005). The majority of these protocols are designed with the express purpose of retaining new personnel and preserving their degree of satisfaction. This is because human resources require adequate management by an organization because they are a dynamic and ever-changing aspect of the business (Bibi, Pangil & Johari, 2016). According to Youndt, Snell, Dean, and Lepak (1996), industrial organizations that prioritize innovation in the manufacturing process to achieve a competitive edge and higher performance may find that managing and retaining HRM is particularly important. HRM's role in an organization has evolved throughout time, and it is no longer only used to manage internal labor expenses (Becker & Gerhart, 1996). Due to the fact that people are a company's most valuable asset and that managing and acquiring them is crucial, human resource management (HRM) is being researched as a strategic asset (Bas, 2012).

Dimensions of Human Resource Management

Noe et al. claim that (2006). An efficient human resource management system is made up of the following six dimensions, which are connected and interact with one another:

(1) Human resource planning is the initial stage of human resource management. The strategy mainly helps the company forecast its future human resource requirements and basics.

(2) Recruitment and deployment are like the organization's lifeblood, nutrition, and answers to staffing and staffing problems when human resource planning is incorporated.

(3) The main objective of training and development is "education."

(4) Performance management is the fourth and most important component. For other dimensions, it provides the majority of the data.

(5) Motivating employees to take on business-related problems is the aim of compensation management.

(6) The goal of employee relationship management is to oversee staff members and help the company set up a productive cycle for the logical distribution of human resources.

Artificial Intelligence (AI) in Human Resources (HR)

Payroll, maintenance, and recordkeeping were the core duties of human resources at first. Their job description was expanded over time to include additional responsibilities including well-being, compliance, and staff training. Eventually, their duties were expanded to include recruiting and the selection of qualified employees. The field of human resource management, or HRM, is becoming more and more significant. These days, in addition to overseeing the aforementioned duties, they are also in charge of inspiring employees' well-being and workforce development. More information than ever before is available to Human Resource (HR) organisations. In recent years, organisations have expanded beyond the typical job descriptions to include skills in fields like data analytics, data visualisation, and learning. Advances in artificial intelligence, machine learning, predictive analytics, and information technology (IT) have made it feasible to do conventional duties much more easily and efficiently in HR operations. HR directors wish to make investments in areas such as artificial intelligence (AI), enhanced process automation, and predictive analytics (Rao 2019). Digital and human technology will influence the future of human resources (HR). As artificial intelligence (AI) gains traction in human resource management (HRM), HR leaders are focusing on striking a balance between AI and technical innovation.

Artificial intelligence involves using logic-driven computer programs to mimic human intellect's abilities in learning, reasoning, perception, and critical thinking (Villani, 2018). The user (employee) and candidate experience in organizations is enhanced by artificial intelligence's (AI) capacity to handle massive volumes of data and transform it into information that is helpful for making decisions (Kapoor, 2020). Meister (2019). AI, according to Tom Stachura of IBM, "is an accelerator that lets us be able to consume a variety of data and deliver context to a decision maker, employee, or company leader." It allows us to accomplish scalable customization and offer the right intelligence at the right moment. Moreover, AIs are meant to provide value while doing any task, unlike previous technologies that were developed to increase productivity while decreasing expenses (Guenole & Feinzig, 2018). According to Jain (2014), HR professionals need AI to be able to seamlessly integrate into the HR function and provide value, as the department's role has evolved from being a strictly supporting one to one that is strategy-focused and helps drive the whole organization. When AI handles the routine tasks, HR staff members can concentrate on fostering unique traits like empathy, creativity, and critical thinking, which increases the speed and efficiency of the HR function (Stevenson, 2019). Despite the fact that AI is capable of handling a large portion of the work that is now performed in the HR function, human interaction is still necessary when dealing with workers, therefore AI is still a long way from completely replacing HR experts (Davenport, 2019).

IMPORTANT AREAS WHERE AI IS USED IN HRM

AI is ushering in a time of significant automation, which will enable the efficient automation of a number of back-office functions required for trustworthy HR transactions and service delivery.

AI is frequently utilized for HR activities such as:

- **Recruitment:** Probably the largest technological shift has occurred in the recruitment area. Expanding and improving candidate acquisition, digital application processes, and candidate selection have led to a faster and more efficient recruiting process as well as a shift in the dynamic between applicants and employers. Jia (2018). AI has become an indispensable tool for recruiters in the last few years, and 76% of them believe it will have a big influence on HR's recruiting function (Verlinden, 2019).
- **Training:** Through the use of artificial intelligence technology, staff members may benefit from automated training data recording. Managers may rapidly learn about training outcomes and save time by having the intuitive data swiftly evaluated to reveal the extent and impact of employee learning. A quick and effective learning experience can also be achieved by businesses using speech technologies, learning material databases, and core algorithms. The operation and management of both online and offline training can be considerably reduced by AI trainers, in addition to improving the quality and effectiveness of learning. (Jia, 2018).
- **Retention:** The ability of the organisation to retain its employees is referred to as employee retention. Combining big data, machine learning, and human interaction is essential for successfully leveraging AI for retention. Any company that chooses to utilize AI to enhance employee development and retention should ensure that its HR staff understands the fine

line that must be drawn between relying too much on technology and the intangible benefits of working with people. AI may be used by employers in a variety of creative ways to improve worker retention and happiness, such as:

- Work-life balance achieved through flexible schedule
 - recognising growth prospects
 - increasing efficiency (Jia, 2018)
- **Performance Management:** In terms of performance management, data about employees' job performance may be gathered and analyzed in order to integrate the performance evaluation model into the framework. The intelligent decision support system (D O., 1999) makes it possible to use some scientific assessment procedures, including the 360-degree performance evaluation methodology, more automatically and quickly. These evaluation strategies are put into the decision support system to increase the accuracy of the count of employee evaluation outcomes.
 - **Compensation Management:** Compensation management, or salary management, is a dynamic management process that, with the guidance of organizational growth plans, defines, assigns, and alters employee compensation principles, methods, levels, structures, and features (Henderson, 2007). Applications of artificial intelligence can aid in the administration of salaries fairly (Jia, 2018).
 - **Employee Relationship Management:** Corporate culture and labour relations are included in employee relationship management, which coordinates the connection between employers and employees. Artificial intelligence technology can be utilised as a support system in labour process relationship management and communication management to resolve numerous complex stereotypes, carry out management activities, and serve as performers, helpers, and advisors.



BENEFITS OF IMPLEMENTING ARTIFICIAL INTELLIGENCE (AI) IN HUMAN RESOURCE (HR)

With larger organisations accepting the transformation, artificial intelligence (AI) is revolutionising business and trade worldwide. The continuous development of artificial intelligence (AI) in human resources (HR) has made the previous approaches seem antiquated. Experts claim that when the next generation of cognitive, automated, and immersive technology transforms how we do business, AI has the ability to completely transform HR (Ghaswalla, 2020). Because technology has the potential to change the role of human resources (HR) from one of strategic advantage to one of worker support, there has been an increasing need to evaluate HR practises in light of this. The following have been identified by the study as the primary arguments in favor of combining artificial intelligence (AI) with human resources (HR):

- **Increases Competitive Edge** - Businesses must continuously track the moves of their rivals and make adjustments in order to stay ahead of the competition. Human resource (HR) applications of artificial intelligence (AI) offer fresh perspectives, change how decisions are made, reveal the advantages and disadvantages of rivals, and enhance commercial outcomes. A strategic investment in artificial intelligence (AI) is seen by forward-thinking businesses as generating considerable commercial values and giving them a competitive advantage in their industry.
- **Developing and Acquiring New Skills** - Technology has changed how business is conducted in the current day, thus businesses are eager to invest in new methods and tools for staff development. Artificial intelligence (AI) gives human resources (HR) professionals the ability to use predictive analysis combined with natural language to bridge employees' skill gaps and link them to learning opportunities to acquire more in-demand abilities.

- **Increases Employee Satisfaction** - Employees anticipate a tailored work experience as the world witness's digital transformation occur in all aspects of life. Knowing the employees' pulse is crucial as talent pools get more complex. Employees demand products that are appropriate, handy, and can be tailored to their needs and preferences. By satisfying four criteria—clarification, compliance, connection, and culture—Artificial Intelligence (AI) helps business executives resolve this problem. The broad ranges of data overlapping that Artificial Intelligence (AI) enabled technology allows for help enhance employee experience at the individual level.
- **Effective Utilisation of the Budget for Human Resources** - Because it affects the business's long-term economic and financial success, human resource (HR) budgeting decisions are exceedingly difficult to make. The modern human resource manager (HR) depends on AI-driven algorithms to make the right choices about resource allocation and budgeting, as opposed to the one-size-fits-all approach that worked well in the past. Decisions generated by Artificial Intelligence (AI) have the main benefit of being based on factual and statistical data that have undergone rudimentary computations.
- **Mental Wellness** - Since it handles responsibilities involving people, the Human Resource (HR) department is an essential element of any business. Due to the increasing amount of personal and professional connection between employers and workers, the role of human resources (HR) has shifted from being product-oriented to becoming people-centric. Currently, the areas of expertise for HR professionals include workplace mental health and wellbeing are maintained through counselling, mentoring, and moral support. Longer work hours, shifting company dynamics, shifting business responsibilities, and pressure to achieve project deadlines are a few reasons why it's important to monitor the mental health of the workforce. Organizations can utilise AI-based approaches like sentiment analysis to detect employees who are experiencing disruptive mental states and to correlate staff morale. AI-enabled wearable devices, for instance, may evaluate and track data using deep learning models, speech and picture recognition, and NLP, attitudes and feelings of employees. The ability to incorporate knowledge about the warning signs of a worker's poor mental state into Artificial Intelligence (AI) enabled frameworks would enable the Human Resource (HR) department to provide additional support. This aids in the identification of workers who are having difficulty performing job tasks or who are battling mental illnesses like anxiety and depression (Okhifun, 2020).

LIMITATIONS

HR artificial intelligence necessitates particular staff capabilities. Although they are accustomed to using digital technology, employees frequently find it difficult to accept and apply AI products (Albert, 2019). Human resources are the foundation of every organization. Putting AI technology into place might change management levels and empower staff. It might be difficult for the HR department to identify the suitable workers that can work with AI technologies, which is one of the main issues confronting the industry. Technology's potential to supersede HR's authority and involvement in corporate decision-making places more limitations and issues on the HR department's ability to make decisions in day-to-day operations.

CONCLUSION

Artificial intelligence (AI) has an excellent application approach across several domains. There are a ton of opportunities that have been generated by using artificial intelligence (AI) in business. Future applications of artificial intelligence (AI) are endless, especially in the field of human resource management (HR). Artificial intelligence (AI) undoubtedly assists human resource managers in doing a variety of duties efficiently and rapidly, freeing them time to focus on higher-value work. But as of right now, artificial intelligence (AI) cannot completely replace humans. Hiring and performance management entail a lot of administrative and repetitive work. The intricacy of human resources (HR) and the wide range of elements that affect it is like adding butter oil to a roaring fire. Automation and digitalization of human resource (HR) labor provide real-time solutions, integrated guidance, and experience. A human resource manager's job now requires more strategic thinking due to the usage of artificial intelligence (AI) as opposed to being a manual administrative task.

Although artificial intelligence (AI) is perceived as a game-changer and a chance for businesses to acquire a competitive edge, there are a number of challenges that must be overcome in order for a business to completely benefit from AI (Bersin, 2017). The earliest challenges were brought about by the data's redundant nature. Changes made to one piece of data may not reflect in another because different departments require the Human Resource data from different storage sites, which brings up the problem of data inconsistency. The second concern is the data security and confidentiality policy and how to handle it. Companies that utilize AI-enabled technology have to guarantee to their staff that their information won't be exploited and take security measures to prevent unauthorized access. Since AI embedded programs and algorithms rely on data that has been collected and recorded by humans, its accuracy cannot be guaranteed. Though they may not always yield results that are correct and acceptable, these algorithms lessen the need for human judgment. Despite the difficulties mentioned above, the majority of researchers are of the opinion that human resources (HR) and digital technologies will be crucial to business in the future, and they see artificial intelligence (AI) as a catalyst for change that will lead to the end of the current dark period.

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