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Research Article

The Impact of Artificial Intelligence on Talent Acquisition

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Abstract:

Firms have been pushed to reassess their organizational frameworks and the procedures linked to recruitment as a result of recent breakthroughs in artificial intelligence (AI). The complex effects that AI has on talent acquisition tactics are investigated in this study. When it came to gathering primary data that was pertinent to the study, a quantitative methodology that utilized a cross-sectional design was utilized. The purpose of this study was to gain an understanding of the significance of utilizing AI technology in the process of formulating efficient strategies for talent acquisition by collecting data from 662 participants. According to the findings of research, AI-related aspects have a significant impact on talent acquisition management techniques. It incorporated techniques such as automated review phases in the recruitment process, which are places where artificial intelligence (AI) tools, such as chatbots, play an essential role. The findings unambiguously and unequivocally suggest that relational and transactional AI components in recruiting are equally vital for the delivery of good recruitment services. The application of technology results in a considerable improvement in the overall quality of the services provided by recruitment agencies. E-human resource management needs to make progress in three core areas in order to develop effective techniques for talent acquisition. These areas are context, various stakeholders, and sustainable outcomes. The results of this study demonstrate the need of taking into account a wide range of contextual factors while simultaneously investigating the complementary aspects of relational and transactional elements in the field of AI recruitment. In order to improve the efficiency and relevance of AI tools in the ever-changing talent market, it is vital to continually review and adapt them to the specific circumstances of the local environment.

1. Introduction

In the current extremely competitive global market, businesses must employ innovative and creative strategies to attract top-tier personnel. Talent acquisition has emerged as a strategic imperative due to the critical role of human capital in achieving sustainable success[1]. Talent acquisition strategies include a comprehensive approach to recruiting qualified individuals who are consistent with the organization's objectives and culture[5]. HR departments must devise strategies to attract and retain top talent, which is increasingly recognized as a critical success factor, as organizations contend with the challenges of a dynamic and unpredictable labour market[10].
Artificial intelligence (AI) is at the forefront of technological advancement by revolutionizing our interactions and perceptions of the world[7]. Artificial intelligence, which is founded on the

objective of providing computers with intelligence comparable to that of humans, encompasses machine learning, artificial intelligence, robotics, and other cutting-edge technologies[3]. The fundamental principle of artificial intelligence is that machines should possess the capacity to learn, solve problems, and make decisions in a manner similar to that of humans. AI has the potential to significantly and continuously alter our jobs, lives, and connections with the world as it continues to advance and impact industries such as finance and healthcare[12].

2. Background of the Study

AI definitions encompass its technological roots and potential social repercussions. Artificial intelligence (AI) encompasses the engineering and scientific disciplines focused on developing intelligent systems, specifically computer programs, capable of human-like cognition and behaviour. It signifies a compilation of models and algorithms that empower computers to execute jobs formerly undertaken by humans[2]. Furthermore, AI encompasses both supervised learning and the ability to perform certain tasks and make decisions. Talent acquisition strategies are systematic approaches designed to identify, engage, assess, and acquire qualified candidates for vacant positions within a business to fulfil its objectives[4]. Talent acquisition is a process that enables businesses to identify, assess, and recruit exceptional individuals who align with their values and can assist them in accomplishing their goals. AI-powered analytics assist businesses in making data-driven decisions by disclosing the effectiveness of their recruitment efforts.

Enhancing talent acquisition efforts can be achieved by analysing key performance metrics and evaluating the effectiveness of various channels. Enhancements in efficiency, velocity, and overall process quality were seen following the integration of AI into the talent acquisition procedure. A positive correlation exists between acquiring knowledge about AI and its application in talent recruiting. The candidate experience and usability significantly influence the extent of AI adoption. The implementation of AI in talent acquisition has streamlined the comparison of candidates' qualifications to available opportunities. Besides, enhancing the efficiency of hiring processes, it possesses additional potential applications in talent acquisition[16].

3. Purpose of the Study

Incorporating AI into talent acquisition strategies presents new opportunities and potential challenges. The increasing implementation of AI to automate several aspects of the hiring process, including sourcing, screening, and matching candidates, may substantially affect conventional talent acquisition methods[11]. Despite the anticipated efficiency advantages and improved decision-making using AI in talent acquisition, there is an immediate necessity to address the current challenges and intricacies. This study seeks to conduct a critical analysis of the intricate relationship between AI and talent acquisition in this context, elucidating the potential, concerns, and prospects for the enhancement of human capital in modern corporate environments.

4. Literature Review

Chatbots automate labor-intensive tasks like as sourcing, screening, and communication, hence facilitating the automation of 80% of the whole "Top of Funnel" recruitment activities in talent acquisition. The help facilitates screening, qualifying, organizing interviews, addressing frequently requested questions, assessing experience feedback, and responding to rejected candidates. It has been widely utilized to automate resume screening and initiate contact with prospects using front-end communication channels, including the Web, mobile platforms, and social media, via messages or dialogue boxes[13].

AI defined in process-oriented terms, encompasses the amalgamation of theory and practice in system development and operations management, involving inputs, processes, and outputs. "Input" refers to the data that is received, regardless of its structure. "Process" refers to "pre-process," encompassing all activities that occur before to central processing, such as cleaning, converting, and selecting. "Output" refers to "information that can assist in human decision-making or serve as input for another information system"[14].

In the realm of human-computer interaction, AI can be viewed from a relational perspective, focusing on "how individuals perceive AI in relation to themselves and vice versa"[6]. The matter pertains to individuals' perceptions of AI in regard to their own communicating abilities. This aligns with the definition of communicative robots, which are "autonomously operating systems designed for quasi-communication with humans to facilitate additional algorithmic functionalities".

The utilization of artificial intelligence in recruitment is perceived to offer substantial benefits. The principal benefit is the enhancement of operational efficiency for both applicants and organizations. Utilizing AI, HR managers and leaders can more efficiently identify, recruit, and inspire top talent, thereby enhancing company outcomes and liberating individuals from

monotonous, repetitive tasks. The organization may achieve cost savings through improved hiring practices, reduced staffing expenses, and less employee turnover. The second advantage is that it facilitates equitable assessments by including cultural fit and diversity while minimizing the influence of individuals' unconscious prejudices[13].

To identify the most eligible candidates, AI can help mitigate unconscious bias in the selection and evaluation procedures by concealing demographic information, including gender, age, race, and educational institution. Thirdly, engaging prospects offers distinct advantages. When individuals who are suitable for a post do not receive a response from recruiters, they may choose against submitting an application. Be aware that initiating the screening process may need more than a week. AI enables the screening process to commence immediately and be validated within a brief timeframe, such as 24 hours. In summary, AI in recruitment enables organizations to maintain communication with candidates and prevent the loss of skilled workers. It indicates that technical factors such as beauty, simplicity, enjoyment, service quality, and usefulness favourably affect conduct in pre-employment relationships[15].

5. Research Question

What is the influence of E-HRM on talent acquisition activities?

6. Methodology

6.1 Research design:

A cross-sectional study was performed, with individuals monitored over a period of four months. The efficacy of the cross-sectional design relied on data being gathered at a singular, economical location. Due to constraints in research time and materials, a quantitative methodology was employed. Through a random sampling method, the researcher successfully contacted each survey participant. The requisite sample size for a viable study was calculated utilizing Rao Soft. Participants will be provided with information regarding the experiment and will have the opportunity to pose any inquiries to the researcher while completing the survey.

6.2 Sampling:

Subsequent to an early assessment including 40 participants, the research's valid data set comprised a definitive survey of 662 individuals. A random sampling method was employed to distribute the entire set of questions. Given the sensitive nature of the collected data, the researcher would not have allowed participants to submit incomplete surveys for this study. Following the selection of a sample size of 630 persons via the Rao-soft approach, researchers disseminated 750 questionnaires to gather data. A total of 703 survey replies were collected; 41 were eliminated, resulting in 662 participants in the study.

6.3 Data and Measurement:

This study mostly utilized questionnaires as the instrument for data collection. Part A comprised fundamental demographic inquiries, whereas Part B employed a 5-point Likert scale to evaluate respondents' experiences with various offline and online venues. Comprehensive secondary sources, including online databases, were utilized to gather the requisite data.

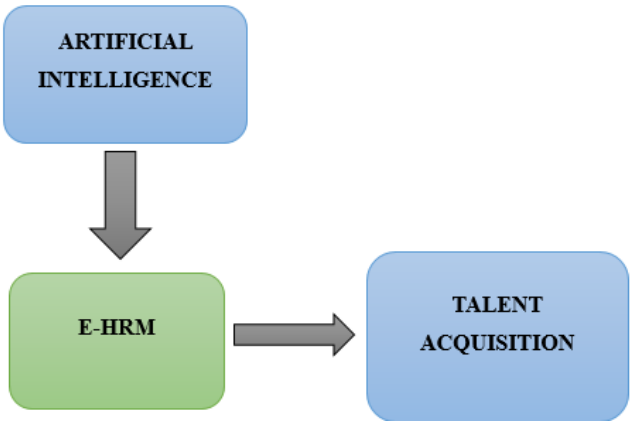
6.4 Statistical Software:

This research employed SPSS 25 and MS Excel for statistical analysis.

6.5 Statistical Tools:

The descriptive analysis illuminated the data's fundamental characteristics. The researchers has conducted validity checks by integrating factor analysis with ANOVA.

7. Conceptual Framework



8. Results

Factor Analysis

Factor Analysis (FA) is commonly employed to decompose a set of measurement items into their fundamental components. The factors being

examined are believed to be directly influenced by invisible forces. One method that employs models is accuracy analysis (FA). The primary aim of this research is to elucidate the relationships among certain events, the circumstances that precipitated them, and the evaluation of errors.

The Kaiser-Meyer-Olkin (KMO) Method is employed to assess the suitability of data for factor analysis. The researcher evaluate the entire model and each variable individually to ensure sufficient sampling was conducted. Determining the extent of shared variance among various variables is achievable through statistical methodologies. Datasets with lower percentages are better appropriate for factor analysis.

The KMO output is a value ranging from zero to one. The sample size is considered sufficient if the KMO score is between 0.8 and 1.

If the KMO drops below 0.6, indicating insufficient sampling, corrective actions must be implemented. Select with caution; 0.5 is employed by specific authors for this purpose, resulting in a range of 0.5-0.6.

A KMO score of 0 indicates a prevalence of partial correlations over overall correlations. A major impediment to component analysis is substantial correlations.

To ascertain your eligibility for Kaiser, kindly examine the following:
A decrease from 0.050 to 0.059.
It is well below normal, ranging from 0.60 to 0.69.
The normal range for middle school is between 0.70 and 0.79 cm.
Employing a quality point scale from 0.80 to 0.89.
The fluctuation in value from 0.90 to 1.00 is remarkable.

Table 1: KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.938
Bartlett's Test of Sphericity	Approx. Chi-Square	3252.968
	df	190
	Sig.	.000

Bartlett's Test of Sphericity further demonstrates the generalizability of the correlation matrices. The researcher indicates that the Kaiser-Meyer-Olkin method demonstrates a sample adequacy of 0.938. The researchers obtained a p-value of 0.00 using Bartlett's sphericity test. The findings of Bartlett's sphericity test were significant enough for the researchers to determine that the correlation matrix fails to meet the criteria for a valid correlation matrix.

Independent Variable

Artificial Intelligence

AI is the programming of computers to show intelligent conduct like to that of humans. From chatbots to video interview analysers to predictive analytics to resume parsing, artificial intelligence (AI) spans several technologies in the talent acquisition space. These technologies simplify candidate assessment, improve decision-making accuracy, and automate labor-intensive recruiting procedure repetitious chores. AI systems have intelligent communication, scalable resume screening, and ability for role matching using past data. Artificial intelligence (AI) can lower time-to-hire, improve operational effectiveness, and lessen the impact of human prejudice in hiring. In this research, artificial intelligence is the independent variable since it is the main technical tool affecting the results of talent acquisition. The degree of the system's effectiveness and integration with other HR systems, such E-HRM, depends on the degree of digital readiness of the company. Understanding AI's direct and indirect effects can help one to determine its actual worth in contemporary hiring policies[9].

Factor

E-Hrm

"e-HRM" is the online management of human resources operations including performance reviews, training, on-boarding, and recruiting. It creates the institutional and technical foundation for fully using artificial intelligence in talent acquisition. Operating effectively with E-HRM systems, which offer necessary infrastructure, data integration, and workflow automation, artificial intelligence technologies run under Applications tracking systems (ATS), HR information systems (HRIS), and cloud-based recruiting tools help to enable the smooth data flow among several AI modules. The main result of the research is that E-HRM either moderates or mediates the link between AI application and results in talent acquisition. Strong E-HRM systems provide exact data, consistent processes, and easy user access, therefore enabling organizations to more fully exploit AI. Consequently, the effectiveness and scalability of AI-driven hiring practices depend on E-HRM.

Dependent Variable

Talent Acquisition

A strategy approach for finding, drawing in, evaluating, and finally selecting competent applicants to meet present and future organizational workforce demands is talent acquisition. By matching personnel strategy with corporate goals and stressing the long-term growth of human capital, it improves conventional hiring practices. In the context of AI, applicant experience, application diversity, time-to-hire, cost-per-hire, and quality of hire are important measures of talent acquisition outcomes. AI technologies can improve talent acquisition operations in numerous ways including automated resume screening, customized candidate correspondence, and suitability predictions. Talent acquisition shows the observable outcomes of including AI and E-HRM. The success of the company depends equally on its capacity to change and reinvent its HR procedures as on its technological capacity for artificial intelligence. The main goal of the research is to assess, by means of platforms like enterprise resource planning (ERP), the transforming possibilities of AI in current talent acquisition by evaluating its impact on talent acquisition.

Relationship between E-HRM and Talents Acquisition

Analysing the interaction between E-HRM and Talent Acquisition help one to grasp how digital infrastructure improves recruiting results. E-HRM combines numerous recruitment activities into a one, data-driven system, therefore offering the technical basis to support and enhance talent acquisition processes. By means of data analysis, job posting automation, applicant monitoring, and communication channels, it maximizes and standardizes recruitment procedures. Improving the application experience, increasing recruiter efficiency, and guaranteeing correct candidate data management all depend on a properly running E-HRM system. Through better hiring decisions, this digital integration helps businesses to lower time-to-hire and cost-per-hire. E-HRM helps in the hiring process, therefore affecting the efficacy of AI. Without a correctly operating E-HRM system, even the most modern artificial intelligence technologies can be insufficient. E-HRM is essential to turn the possibilities of technology into real advantages in talent acquisition[8].

Building on the previous discussion, the researcher tested the hypothesis that there is significant interrelationships between E-HRM and talents acquisition activities in modern business environment.

"H_{01}: There is no significant influence of E-HRM on talents acquisition activities"

"H_1: There is a significant influence of E-HRM on talents acquisition activities"

Table 2: H_1 ANOVA Test

ANOVA					
Sum					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	43846.638	294	5986.375	1132.710	.000
Within Groups	583.539	367	5.285		
Total	44,430.177	661			

This inquiry has resulted in a significant discovery. In this context, F=1132.710 is statistically significant, as the p-value of 0.000 is below the 0.05 alpha threshold. The researcher has dismissed the null hypothesis and determined that "H_1: There is a significant influence of E-HRM on talents acquisition activities" is accepted.

9. Discussion

The connections between AI recruitment and the spectrum of human-AI interaction are underscored by the implications of ambidexterity theory for organizations employing AI in talent acquisition. It underscores the need of possessing relational and transactional abilities during the recruiting process. In theory, relational and transactional competence evaluations should complement one other in the workplace. Nonetheless, talent acquisition is predominantly mechanical, prioritizing operational variables above relationship ones. Most e-HRM research have concentrated on the transactional function of the word or its capacity as an administrative support, utilizing the internet as the primary definition. Decreased expenses, superior applicant quality, and a condensed hiring process contribute to enhanced operational performance, a prevalent objective of electronic recruitment.

Nonetheless, the transactional elements of e-recruitment have gained greater prominence than the relationship parts. Online recruitment is subject to specific limitations regarding effective communication and involvement. The findings unequivocally indicate that both relational and transactional AI components are essential for delivering effective recruitment services. The utilization of technology significantly enhances the overall quality of staffing services. Transformations are necessary in three fundamental domains of E-HRM: context, stakeholders, and long-term results. This study highlights the significance of considering various contextual aspects while examining the supplemental features of transactional and relational

components in AI recruiting. Ultimately, in the context of AI-driven recruitment, effective electronic human resource management ensures a sophisticated interplay between transactional and relational competencies. Organizations that want to use technology to their advantage in talent acquisition through AI and other cutting-edge technologies must have a firm grasp of the significance of these tools and the impact of contextual variables on how they are integrated.

10. Conclusion

The paper emphasizes two primary advantages of AI integration in E-HRM from a transactional perspective. Initially, there has been a significant transformation in traditional practices due to the automation of administrative tasks, encompassing document screening and preliminary candidate assessments. Besides automating these operations, AI can ensure a level of consistency and precision unattainable by human screening. Secondly, conversational AI, including chatbots, is integral to the assessment process, where intelligent automation has been observed. These AI systems automate preliminary evaluations, surpassing conventional screening methods. C Hatbots enhance automation by interacting with applicants during the conversation phase to clarify discrepancies or acquire further information. The objective of these automated interactions is to maintain a personal connection while effectively replicating the relational aspect of recruitment. Consequently, for a company to enhance its efficiency in time and cost-effective personnel acquisition, it must integrate AI into its E-HRM development initiatives.

Author Statements:

- **Ethical approval:** The conducted research is not related to either human or animal use.
- **Conflict of interest:** The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper
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