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Implementation of Artificial Intelligence (AI)-Based Recruitment Models in the Selection of Lecturers and Educational Staff at the Academy of Hospital Administration Mataram (AARS)

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Abstract: The Academy of Hospital Administration Mataram (AARS) faces significant challenges in its recruitment process, which is often time-consuming and heavily reliant on the subjectivity of decision-makers, particularly during the initial screening and interview stages. A major difficulty lies in selecting candidates who align with academic and administrative needs in the absence of an integrated technological system. The implementation of Artificial Intelligence (AI) has the potential to enhance efficiency by conducting preliminary screenings, evaluating applicants' suitability based on data, and recommending the most appropriate candidates. The aim of this study is to evaluate the potential implementation of AI-based recruitment models in the selection process of lecturers and educational staff at AARS, with a particular focus on examining AI's role in reducing bias in recruitment. This research employed a qualitative evaluative method using a case study approach at AARS. Data were collected through participatory observation, in-depth interviews, documentation studies, and Focus Group Discussions (FGDs) to assess the effectiveness of AI in the recruitment process. Data analysis was carried out through data reduction, data display, source triangulation, and conclusion drawing. The findings reveal that AI-based recruitment at AARS significantly improves the effectiveness of the selection process for lecturers and educational staff. Furthermore, AI supports the enhancement of human resource quality because selected candidates are more aligned with organizational needs. Nevertheless, this study also identified several challenges, including infrastructure readiness, digital literacy among stakeholders, as well as regulatory and ethical considerations.

Keywords: Artificial Intelligence, Recruitment, Selection, Human Resources, Efficiency

INTRODUCTION

The Academy of Hospital Administration Mataram (AARS) is a vocational higher education institution that faces significant challenges in recruiting lecturers and administrative staff. The current selection process remains conventional, where applicants submit physical documents or applications via email, which are then manually reviewed by the recruitment team. This process is time-consuming and heavily dependent on decision-maker subjectivity,

particularly during the initial screening and interview stages. One of the main obstacles is the difficulty in filtering candidates who meet both academic and administrative requirements. In 2024, AARS received 27 applications for lecturer and staff positions, yet only 10% met the basic qualifications. The selection process took nearly two months to finalize the shortlist of eligible candidates. The high administrative workload and limitations in assessing candidate suitability efficiently highlight the urgent need for an automated system in academic and staff recruitment. At present, AARS does not have an AI-based recruitment system capable of streamlining the process. Artificial Intelligence (AI) offers the potential to increase efficiency by conducting preliminary screenings (Firdaus, 2024), assessing applicant suitability through data analysis, and providing recommendations for the most appropriate candidates. AI is capable of processing large volumes of data rapidly while supporting a more objective screening process (Rachman et al., 2024). A study conducted in China evaluated the impact of AI adoption on recruitment bias within the manufacturing sector, using survey data from 423 respondents. The findings demonstrated that AI presents an innovative solution to reduce longstanding biases in recruitment practices (Zheng et al., 2024). Another study analysed the role of AI in different stages of recruitment and highlighted how collaboration between recruiters and AI systems can minimize human prejudice in decision-making. The results showed that AI significantly improved recruitment efficiency, reducing hiring time by up to 40% compared to traditional methods (Chen, 2023).

The use of technologies such as Artificial Intelligence (AI), the Internet of Things (IoT), big data, and automation has increasingly shifted traditional approaches in human resource management (Rachman et al., 2024). Research findings indicate that artificial intelligence in the recruitment and selection process is highly effective, particularly in the initial stages, as it enhances efficiency in terms of time, effort, and costs for organizations (Juhari et al., 2024). Effective recruitment of academic and administrative staff is a crucial factor in improving the quality of higher education (Dessler, 2020). However, conventional selection processes often face challenges such as subjective assessments, lengthy procedures, and limitations in optimally filtering suitable candidates (Sedyowidodo, 2024). The application of AI in recruitment, performance management, and employee development enables organizations to process large volumes of data quickly and efficiently (Sedyowidodo, 2024).

Research Problem: How effective is the implementation of an AI-based recruitment model in improving the efficiency of the selection process and reducing subjectivity in the initial screening of lecturers and administrative staff at the Akademi Administrasi Rumah Sakit Mataram?

METHOD

This study employed a qualitative evaluative research design, focusing on stakeholder perceptions, contextual analysis, and meaning-making processes, with the aim of developing a comprehensive understanding of program quality in higher education (Lu & Wang, 2023). The research was conducted as a case study at the Akademi Administrasi Rumah Sakit Mataram (AARS). Data collection techniques included participant observation, in-depth interviews, document analysis, and focus group discussions (FGDs) (Sugiyono, 2022), which were designed to evaluate the effectiveness of AI implementation in recruitment and selection processes. The data analysis procedure followed the principles of data reduction, data display, source triangulation, and conclusion drawing, ensuring the credibility, dependability, and confirmability of the findings.

RESULTS AND DISCUSSION

Research Findings

Recruitment Process at AARS Prior to AI Implementation

Findings from interviews with the recruitment team and document analysis of the 2024 selection process indicate that the recruitment of lecturers and administrative staff at the Akademi Administrasi Rumah Sakit Mataram (AARS) was still conducted manually. Applicants submitted their documents either in physical form or via email, which were then reviewed one by one by the selection committee. Out of a total of 27 applicants, only about 10% met the basic qualifications. The screening process required an average of six to eight weeks due to the limited number of staff assigned to handle recruitment. Furthermore, subjectivity frequently emerged during the initial interview stage. Assessments often emphasized personal familiarity or first impressions rather than academic and administrative competencies. These findings highlight an urgent need to improve the recruitment system at AARS to make it faster, more efficient, and more objective.

Implementation of the AI-Based Recruitment System

At the beginning of 2025, AARS Mataram initiated the implementation of an Artificial Intelligence (AI)-based recruitment system to address the weaknesses of its previous selection process. The system operates through three main stages. First, application documents, including CVs and cover letters, are scanned using Natural Language Processing (NLP) algorithms, enabling candidate information to be automatically extracted and categorized. Second, the system assesses the alignment between applicants' competencies and the job descriptions provided, subsequently generating a match score. Third, the system produces a list of top-ranked candidates, which is then reviewed by the selection committee. This implementation has made the recruitment process more systematic, measurable, and accountable.

Efficiency of the Selection Process

Observations and document analyses revealed a significant improvement in the efficiency of the recruitment process. Previously, candidate screening required an average of six to eight weeks; however, following the adoption of AI, the same process could be completed in approximately two weeks. This improvement was primarily attributed to the system's ability to automatically and rapidly screen documents, thereby reducing the administrative workload by nearly 45%. These findings demonstrate that AI implementation has enabled AARS to optimize the use of time, effort, and costs that were previously consumed by manual administrative tasks.

Reduction of Subjectivity

The implementation of AI also had a positive impact on reducing subjectivity in the selection process. Findings from the Focus Group Discussion (FGD) with the selection committee revealed that most participants acknowledged the benefits of having AI-generated objective scores, which allowed them to concentrate more on candidates who genuinely met academic and administrative requirements. Data indicated that approximately 78% of internal respondents comprising senior lecturers and administrative staff reported that the AI-based system helped to minimize personal bias during the initial screening phase. Whereas personal considerations previously tended to dominate decision-making, the selection team now relies on quantitative benchmarks to evaluate applicants, thereby ensuring greater transparency and fairness in decision-making.

Stakeholder Perceptions

Stakeholders' perceptions of the AI-based recruitment system were generally positive. From the perspective of AARS leadership, the system increased transparency and accountability in the recruitment process, which had previously been criticized as overly

subjective. From the applicants' standpoint, many appreciated the clarity provided by the process, as they received feedback in the form of compatibility scores, enabling them to better understand their standing within the competition. Meanwhile, the selection committee perceived that their role was not diminished but rather refocused on the final stages of the process, such as conducting in-depth interviews and evaluating non-technical attributes, including soft skills, ethics, and organizational cultural fit. Thus, the application of AI was regarded as achieving a balance between technological efficiency and human judgment in the final decision-making process.

Discussion

Effectiveness in Enhancing Efficiency

The findings indicate that the implementation of AI has substantially improved both time and cost efficiency in AARS's recruitment process. Previously, the selection team required more than one month to complete the initial screening stage; however, with the adoption of the AI-based system, this process was shortened to just two weeks. This result is consistent with the study by (Chen, 2023), which reported that the use of AI in recruitment can accelerate the selection process by up to 40% compared to conventional methods. Thus, the integration of AI at AARS not only addresses the challenge of lengthy recruitment procedures but also provides tangible benefits in terms of reducing administrative workload and optimizing resource allocation for the recruitment team.

Reduction of Subjectivity in Evaluation

Beyond efficiency, an equally critical aspect addressed in this study is the reduction of subjectivity during the initial screening stage. Traditionally, early candidate assessments were often influenced by personal familiarity or the subjective perceptions of interviewers. However, with the introduction of objective scoring generated by the AI system, the selection committee was able to focus more on candidates whose competencies aligned with academic and administrative needs. This finding supports (Zheng et al., 2024), who emphasized that AI adoption can significantly minimize human bias in recruitment. Consequently, the AI-based system not only accelerates the process but also enhances objectivity and fairness in candidate selection factors that are essential to upholding the integrity of higher education institutions.

Relevance to Human Capital Theory

The implementation of AI in recruitment at AARS is also highly relevant to the principles of Human Capital Theory (Becker, 1993), which posits that human resources are valuable economic assets and that investment in effective recruitment processes yields long-term benefits. By leveraging AI, AARS can systematically identify the most promising candidates for development, thereby strategically enhancing the overall quality of human capital. This aligns with recent findings indicating that the integration of artificial intelligence in human resource management not only improves employee engagement and productivity but also strengthens organizational competitiveness (Gusti et al., 2024). Hence, the adoption of AI can be viewed as a long-term strategic investment in human capital development within higher education institutions.

CONCLUSION

This study concludes that the implementation of Artificial Intelligence (AI) in the recruitment process at the Academy of Hospital Administration (AARS) Mataram has significantly enhanced the effectiveness of faculty and staff selection. Compared to conventional methods, which are often time-consuming and influenced by assessor subjectivity, the AI-based system enables a faster, more objective, and more accurate recruitment process. Moreover, the adoption of AI contributes to improving the quality of human resources, as

selected candidates are more closely aligned with the institution's organizational needs. AI implementation at AARS Mataram can therefore be viewed as a strategic investment, not only in terms of recruitment efficiency but also in fostering institutional productivity and competitiveness. Nevertheless, this study also highlights challenges that must be addressed, including infrastructure readiness, stakeholders' digital literacy, and regulatory as well as ethical considerations, to ensure the optimal implementation of AI in higher education recruitment.

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