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Adoption of Artificial Intelligence in Human Resource Management and Employee Acceptance of Digital HR Systems in Nigerian Universities

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ABSTRACT: The adoption of Artificial Intelligence (AI) in human resource management (HRM) and the acceptance of digital HR systems by employees in higher education institutions have become important factors in the management of the workforce in these institutions. This study aims to present a systematic literature review on the available research on the adoption of AI in HRM in higher education institutions and the factors that influence employee acceptance of digital HR systems. The available literature on the adoption of AI in HRM in higher education institutions was identified using the PRISMA approach, and relevant literature was identified from Scopus, Web of Science, Google Scholar, and Africa Journals Online (AJOL) databases, with the publication dates ranging from 2019 to 2026. The literature review indicates that the adoption of AI in HRM in higher education institutions is mainly in administrative functions, not in strategic functions, and that the adoption is influenced by technological, organisational, and environmental factors, while the barriers to adoption include infrastructural, cost, skill, and ethical factors. Employee acceptance is influenced by perceived usefulness, ease of use, trust, and organisational support, but resistance is driven by fear, ethics, and threats to professional autonomy. These findings are discussed using the Technology Acceptance Model (TAM), the Unified Theory of Acceptance and Use of Technology (UTAUT), and the Diffusion of Innovation (DOI) theory, which offer a comprehensive understanding of the technology and socio-organisational factors that influence AI adoption in HE HRM. In the final section, recommendations are offered for policy, practice, and further research, which highlight the importance of strategic alignment, capacity building, ethics, and contextual approaches to AI adoption and employee engagement with HR technology.

KEYWORDS: Artificial Intelligence, Digital HR Systems, Employee Acceptance, Universities, Human Resource Management, Systematic Literature Review

1.0 INTRODUCTION

Human Resource Management (HRM) has undergone a significant transformation in the past few decades, from an administrative role with a focus on maintaining records, processing salaries, and ensuring compliance to a more strategic role for the organisation with a focus on talent management, workforce optimisation, and organisational effectiveness (Tiwari & Voon, 2025). HRM research in the present day suggests the evolution of the role to encompass a wider range of responsibilities that include the integration of human capital with organisational effectiveness, strategic planning, learning and development, and employee engagement (Murugesan et al., 2023) .This evolution of the HRM role is also a result of the realisation of the importance of HRM to organisational competitiveness, particularly in knowledge-based organisations such as the university, where the primary resource is human capital. The literature suggests that HRM practitioners must operate in complex socio-technical systems where strategic decision-making is an important aspect of the organisational effectiveness of the university.

Parallel to these developments, the emergence of digital technologies and Artificial Intelligence (AI) has changed the way organisational processes are carried out in various sectors of the economy, thereby changing the way HR functions are carried out (Tanantong & Wongras, 2024). AI technologies such as machine learning, natural language processing, and predictive analytics are being integrated into HR processes such as recruitment, performance evaluation, training, etc., to improve the accuracy, efficiency, and responsiveness of HR AI-based digital HR systems can automate tasks, reduce errors, and facilitate real-time data-driven decision-making, thereby allowing HR practitioners to focus more on strategic activities (Adamu et al., 2024). However, the

literature also suggests that the effectiveness of AI technologies is subject to organisational readiness, ethical use, and the ability of the workforce to adapt to digital technologies.

In the case of Nigerian universities, HRM is subject to various structural and operational challenges that may impede the adoption and implementation of digital technologies. For instance, these institutions are characterised by limited funding, bureaucratic culture, poor technological base, and skills deficiency among HRM practitioners and employees, which may limit the successful implementation of digital and AI-based HRM systems (Tuffaha & Rosario, 2022). Moreover, resistance to organisational changes and the prevalence of manual culture in many organisations may also limit the successful transition from less sophisticated HRM systems to more technologically oriented ones. Empirical research on the Nigerian public sector environment indicates that, despite the adoption of digital HR systems, such as Human Resource Information Systems (HRIS), factors such as poor ICT base, poor electricity supply, and training remain major impediments to their successful implementation processes (Wongras & Tanantong, 2023).

However, despite these limitations, the African HRM studies point towards an increasing interest in the use of AI and digital technologies for enhancing administrative effectiveness and strategic decision-making in HEIs. However, the use of AI and digital technologies is still in its infancy and faces several challenges in the context of Nigerian universities. Some of the challenges identified include costs, technical and digital literacy capabilities, and employee acceptance (Khan et al., 2024). Employee acceptance is also an important factor that needs to be considered because even if HRM interventions based on digital and AI technologies are implemented effectively, the outcomes may not be realized if the employees do not accept these technologies. Hence, there is a need for exploring the employee acceptance of AI and HRM technologies in Nigerian universities (Shadrach & Umemezia, 2025).

The role of Artificial Intelligence (AI) in the Human Resource Management (HRM) function has been recognized as an enabler for increasing the efficiency of organisations, improving the quality of decision-making, and enhancing the quality-of-service delivery (Anushiem, 2024a). The use of AI systems in HRM can lead to an accelerated recruitment process, data-driven performance appraisal systems, predictive workforce planning systems, and enhanced employee self-service systems. For a knowledge-based organisation like a university, where human resources are the primary enablers for achieving the institutional goals of teaching, research, and community service, the use of AI systems in HRM is promising (Obeta & Edwin, 2025). However, the successful implementation of these benefits is not only linked to the availability of AI systems but also to the employees' acceptance and use of the systems. Employee acceptance is an important area that needs to be understood because resistance to the use of AI systems can lead to a negative impact on the benefits that can be achieved.

However, despite the potential advantages that can be derived from the adoption of AI in HRM, it is apparent that Nigerian universities have made little progress in the adoption and implementation of AI-enabled and digital HR systems. This is because most of the institutions are still using manual or semi-automated HR systems, which are characterised by inefficiencies, delays, and a lack of responsiveness in the delivery of HR services. In addition, the adoption of digital HR systems has been inconsistent and limited by infrastructural constraints, lack of skills, and resistance to change in the organisational setting (Iancu & Oprea, 2025). Moreover, the attitudes and acceptance of employees towards AI-driven HR systems are still not clear, which is a challenge to the management of universities in justifying the adoption of AI-driven HR systems.

1.1 Objectives of the Study

i. To evaluate employee acceptance of digital HR systems
ii. To identify barriers and enablers of AI adoption in Nigerian university HRM

2.0 CONCEPTUAL AND THEORETICAL FRAMEWORK

2.1 Artificial Intelligence in Human Resource Management

Artificial Intelligence (AI), in general, is the ability of computers and other machines to perform activities that require human intelligence, such as learning, reasoning, problem-solving, perception, and decision-making. In the initial stages, AI was conceived as the imitation of human intelligence. McCarthy (1956) defined AI as the science and engineering of making intelligent machines. Since then, the concept of AI has diversified to include various computational approaches that allow computers to process data, recognise patterns, and improve performance on their own. In the current literature, AI is not considered an isolated technology but is regarded as an overarching term that refers to various associated technologies that improve the performance of organisations and society.

AI can be broadly classified into various areas, including machine learning, deep learning, natural language processing, expert systems, and computer vision. Machine learning, in particular, has emerged as a key area of AI application because it can enable

systems to learn from data without being explicitly programmed (Wongras & Tanantong, 2023). These technologies help organisations process a large amount of data in a more efficient manner and provide predictive insights that help in decision-making. In an organisational context, AI systems are increasingly being integrated into digital platforms to automate routine tasks, minimize errors, and maximize efficiency (Song & Wu, 2021).

Within the field of management and organisational studies, AI is defined as a transformative technology that reconfigures work processes, decision-making, and human-technology relationships. AI is a labour-augmenting(Vazquez & Sunyer, 2021) technology, meaning that it does not substitute for human labor entirely but instead helps employees with complex cognitive tasks, thereby increasing productivity (Moghalu et al., 2025). Nevertheless, the implementation of AI is also associated with critical issues of ethics, transparency, data privacy, and bias. These issues have led to an increasing amount of academic discussion on responsible AI, focusing on the importance of developing governance structures that promote fairness, accountability, and trust in AI systems (Ogboe & Sowande, 2024)

In Human Resource Management (HRM), the conceptual application of AI is described as a strategic enabler of digital HR systems, which supports activities like recruitment, performance management, training, and employee analytics. The use of AI in HR applications is intended to enhance objectivity and efficiency in HR decision-making, as well as improve the employee experience through personalised and data-driven processes (Amie-Ogan, 2025) However, the potential of AI in HRM is also dependent on employee acceptance, organisational culture, and technology readiness. This implies that AI is not only a technological innovation but also a socio-technical phenomenon that needs to be aligned with technology, people, and context to achieve sustainable outcomes.

2.2 Digital HR Systems in Universities

The term "digital HR systems" refers to the use of information technology to manage and deliver human resource-related functions in a more efficient, transparent, and strategic way. In the university context, digital HR systems include various forms of Human Resource Information Systems (HRIS), electronic human resource management systems (e-HRM), cloud-based HR systems, as well as artificial intelligence-based HR systems. The use of digital HR systems is part of the broader movement toward digital transformation in higher education institutions, which is motivated by the need to manage increasingly complex academic and administrative workforces (Elegunde & Osahie, 2020). The setting of universities is an interesting scenario for the implementation of digital HR systems. Universities have a dual system of administration and academics. Unlike other corporate organisations, universities have different categories of staff, including academic faculty, administrative staff, and supporting staff. Digital HR systems in universities are meant to cover a variety of needs, including the recruitment of staff, payroll systems, promotion and tenure systems, training and development, and even employee self-service systems. These systems enable the HR department to efficiently manage day-to-day operations while ensuring transparency and consistency in the operations of the HR function (Singh & Pandey, 2023).

The importance of digital HR systems in the university context is the potential of these systems to enable the transformation of the HR function from a transactional to a more strategic role. In the university context, there is a need to account for the performance of each employee, and this is where digital HR systems can play a critical role in the creation of a platform for linking the performance of each employee with the goals of the institution (González et al., 2025) (Stone et al., 2015). In addition, the use of analytics tools enables the creation of insights regarding the productivity of each employee. However, the implementation of digital HR systems in universities can be hampered by various factors. These factors include the lack of proper ICT infrastructure, lack of funding, security of data, and resistance from university staff (Shaikh et al., 2025). University staff may view digital HR systems as a means of controlling them, thus reducing their autonomy as professionals (Oyovwedjebre et al., 2025). This indicates that digital HR systems are socio-technical in nature, as the success of technology is largely dependent on the acceptance of users.

2.3 Employee Acceptance of Digital Technologies

Employee acceptance of digital technologies is defined as the degree to which employees are willing to accept and integrate digital technologies into their daily work activities. Employee acceptance of digital technologies is an important factor that influences the success of digital transformation in an organization (Palos-Sánchez et al., 2022). Digital technologies have been shown to fail in many instances because employees do not accept them. Digital technologies in contemporary organisations include information systems, artificial intelligence applications, and automated technologies. The importance of employee acceptance of digital technologies lies in the fact that it is crucial to both practice and theory (Attamah, 2025). Digital technologies have become an essential aspect of work activities in many contemporary organisations. Therefore, employee acceptance of digital technologies is important. Employee acceptance is based on behavioural and cognitive assessments of technology, which centre on perceptions

of usefulness and ease of use. Employees will accept digital technologies if they perceive these technologies as helpful in enhancing their performance, making their work less burdensome, and making their work more efficient. Conversely, technologies that are perceived as complex, unreliable, or incompatible with their work will generate resistance to these technologies (Johnson et al., 2022). Besides these instrumental factors, acceptance is further moderated by affective factors such as anxiety, self-confidence, and threat to security.

Organisational and social factors have been shown to have an important impact on employee acceptance of digital technologies (Adeyosola, 2025). Leadership support, organisational culture, peer influence, and training/technical support have all been shown to have an impact on employee acceptance of digital technologies. Research indicates that employees are more likely to accept digital technologies when organisations provide adequate support and communicate the benefits of digital technologies to employees (Awad et al., 2025). Furthermore, research indicates that employees are more likely to accept digital technologies when they are involved in the process of implementing digital technologies The importance of social influence is likely to be particularly salient in a knowledge-intensive environment. Trust and ethics have increasingly become important factors in employee acceptance in the digital age. Issues such as data privacy, surveillance, and fairness may play a critical role in influencing employee acceptance of digital technologies. Technologies that are not transparent and are seen as instruments of excessive surveillance may lead to resistance, even if they provide benefits (Asabor & Alordiah, 2025). With the increasing adoption of AI-enabled technologies in organisations, employee acceptance is closely linked to ethics and employee rights.

3.0 THEORETICAL REVIEW

3.1 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) is arguably the most frequently used conceptual model to explain and predict individual-level information system and technology adoption. The TAM was conceptualised by Davis (1989) and is based on the Theory of Reasoned Action. The model asserts that two salient beliefs, perceived usefulness and perceived ease of use, drive individuals' attitudes toward a technology, which in turn drives intention to use and actual use. The TAM has enjoyed broad appeal due to its simplicity, parsimony, and empirical support in various technology contexts, ranging from organisational technologies to e-learning and technology-based HR interventions. The TAM has emerged as a preeminent model in technology adoption studies. Despite the popularity of TAM, it has been widely criticised from a theoretical perspective. One of the major criticisms of TAM is that it oversimplifies the complex social and organisational factors that influence technology adoption. By concentrating on the individual cognitive perceptions of users, TAM ignores the importance of contextual factors such as organisational culture, power relations, and technological infrastructure (Bagozzi, 2007). In a complex setting such as a university, where the use of technology is part of a bureaucratic system and professional autonomy, mere usefulness and ease of use cannot adequately explain the acceptance of technology. Another significant issue that arises from the use of TAM is the static and deterministic nature of the model. TAM assumes that there is a linear relationship between beliefs, attitudes, and usage intentions. In other words, the model assumes that technology adoption is a rational process. However, several empirical studies have shown that technology adoption is not necessarily a static process. For instance, Venkatesh & Davis (2000) found that technology adoption is often a dynamic process that changes over time as users become more familiar with the technology or as they experience limitations in the technology. Similarly, organisational changes can also influence technology adoption.

Moreover, TAM has been criticized for its lack of consideration for the ethical, emotional, and trust-related aspects of technology adoption. In today's digital context, particularly in the context of AI-based systems, issues of data privacy, surveillance, bias, and job security have played a critical role in shaping user acceptance (Stone et al., 2015). These issues go beyond the cognitive appraisals of usefulness and ease of use, which are the primary concerns of TAM. With the increasing role of digital technology in shaping employment relations and decision-making practices, researchers have argued that models of acceptance need to take into account moral, emotional, and trust-related considerations to remain theoretically valid (Gefen et al., 2003). In response to these limitations of the original TAM model, several extensions of the model have been developed, including TAM2, TAM3, and the unified theory of acceptance and use of technology (UTAUT). These models have been developed in an attempt to overcome some of the limitations of the original TAM model by adding social influences, facilitating conditions, and individual differences to the model (Venkatesh et al., 2003). However, the extensions of the original TAM model have been criticised for retaining the fundamental individualistic focus of the original model while failing to adequately account for the institutional and political aspects of technology adoption. In this sense, the original TAM model is now seen as a limited but useful tool that should be integrated with broader socio-technical or organisational theories.

3.2 Unified Theory of Acceptance and Use of Technology (UTAUT)

The Unified Theory of Acceptance and Use of Technology (UTAUT) was developed by Venkatesh, Morris, Davis, and Davis (2003) to provide a comprehensive framework for explaining user intentions and actual usage of information systems. The theory synthesises elements from eight prominent technology acceptance models, including the Technology Acceptance Model (TAM), the Theory of Reasoned Action, and the Diffusion of Innovation Theory. UTAUT proposes that four core constructs, performance expectancy, effort expectancy, social influence, and facilitating conditions, directly influence behavioural intention and technology use. Additionally, the model incorporates moderating variables such as age, gender, experience, and voluntariness of use, thereby offering a more nuanced understanding of technology adoption across different user groups.

Performance expectancy, which refers to the degree to which an individual believes that using a system will enhance job performance, is considered the strongest predictor of behavioural intention in UTAUT. In the context of organisational technologies, employees are more likely to accept and use systems they perceive as improving efficiency, accuracy, or decision-making. Effort expectancy, defined as the perceived ease associated with system use, further shapes acceptance by influencing users' confidence and willingness to engage with new technologies. These constructs are particularly relevant in complex organisational environments such as universities, where administrative staff and academics may vary significantly in their technological competence and workload pressures.

Social influence, another key construct of UTAUT, captures the extent to which individuals perceive that important others believe they should use a particular technology. In institutional settings, such as universities, managerial directives, peer usage, and professional norms can significantly shape employees' acceptance of digital HR systems. Facilitating conditions, which refer to the availability of organisational and technical infrastructure to support system use, further determine whether intention translates into actual usage. Empirical studies suggest that training, technical support, and reliable digital infrastructure are critical in promoting sustained use of HR technologies, particularly in developing country contexts (Venkatesh et al., 2003).

The relevance of UTAUT to the present study lies in its ability to explain employee acceptance of AI-enabled digital HR systems within Nigerian universities. As universities increasingly adopt AI-driven platforms for recruitment, performance management, and HR analytics, employees' perceptions of system usefulness, ease of use, social expectations, and institutional support become central to successful implementation. UTAUT provides a robust theoretical lens for examining how these factors interact to influence acceptance and usage behaviours among university staff, whose work environments are shaped by both administrative structures and professional autonomy.

3.3 Diffusion of Innovation (DOI) Theory

The Diffusion of Innovation (DOI) Theory, developed by Rogers (2003), is a foundational framework for understanding how new ideas, technologies, and practices spread within a social system over time. The theory explains diffusion as a process through which an innovation is communicated via certain channels among members of a social system. According to Rogers, diffusion is not an instantaneous event but a gradual process shaped by social interactions, institutional structures, and individual perceptions. DOI has been widely applied across disciplines, including sociology, management, information systems, and education, making it particularly relevant for analysing the adoption of digital technologies in organisational contexts.

Central to the DOI theory is the innovation-decision process, which outlines five stages through which individuals or organisations pass when adopting an innovation: knowledge, persuasion, decision, implementation, and confirmation. At the knowledge stage, potential adopters become aware of the innovation and gain some understanding of how it functions. This is followed by persuasion, where attitudes toward the innovation are formed based on perceived advantages or disadvantages. The decision stage involves acceptance or rejection, while implementation focuses on actual use. The confirmation stage occurs when users seek reinforcement for their adoption decision, often influenced by observed outcomes and feedback from peers. This processual perspective distinguishes DOI from more static acceptance models by emphasising adoption as an evolving and socially embedded phenomenon.

DOI theory also identifies five key attributes of innovations that influence adoption rates: relative advantage, compatibility, complexity, trialability, and observability. Relative advantage refers to the degree to which an innovation is perceived as better than existing alternatives, while compatibility reflects alignment with users' values, experiences, and needs. Complexity addresses the perceived difficulty of understanding or using the innovation, whereas trialability and observability relate to opportunities to experiment with and observe the benefits of the innovation. These attributes have been shown to significantly affect adoption decisions, particularly in organisational settings where employees evaluate new technologies against established routines and norms.

Another important contribution of DOI theory is its classification of adopters into categories based on their propensity to adopt innovations: innovators, early adopters, early majority, late majority, and laggards. This categorisation highlights the heterogeneity of adoption behaviors within a social system and underscores the role of opinion leaders in shaping diffusion patterns. In institutional environments such as universities, early adopters often influence broader acceptance by legitimising new technologies and demonstrating their utility. This aspect of DOI is particularly useful for understanding how digital systems gain momentum over time within complex organizations.

4.0 METHODOLOGY

This study adopts a systematic literature review (SLR) design to examine the adoption of artificial intelligence (AI) in human resource management (HRM) and employee acceptance of digital HR systems in universities. The SLR approach is appropriate because it allows for a structured, transparent, and replicable synthesis of existing research. Unlike narrative reviews, a systematic review minimises bias by applying predefined criteria for study selection and analysis. It also facilitates the identification of research trends, knowledge gaps, and patterns across multiple studies, which is critical for consolidating evidence on AI adoption and digital HR system acceptance in higher education contexts (Hmoud & Várallyai, 2020)

4.1 Search Strategy

A comprehensive literature search was conducted across multiple academic databases, including Scopus, Web of Science, Google Scholar, and Africa Journals Online (AJOL). These databases were selected for their coverage of peer-reviewed journals, conference proceedings, and regionally relevant publications. The search employed a combination of keywords and Boolean operators to capture studies relevant to AI adoption, digital HR systems, and employee acceptance in university settings.

4.2 Inclusion and Exclusion Criteria

The selection of studies was guided by clearly defined inclusion and exclusion criteria. Included studies were those published between 2019 and 2025 to ensure relevance to contemporary digital HR practices, peer-reviewed journal articles, conference proceedings, and book chapters, studies focused on universities or other higher education institutions, and research that was empirically or theoretically relevant to AI adoption in human resource management or employee acceptance of digital HR systems. Conversely, studies were excluded if they were non-English publications, focused exclusively on corporate or non-educational contexts without transferable insights to higher education, or consisted of opinion pieces, editorials, or reports that lacked adequate methodological rigour.

4.3 Data Extraction and Analysis

Data from the selected studies were systematically extracted using a predefined template, capturing details such as author, year, country, study context, research method, digital HR system type, AI application, and key findings. Coding and thematic synthesis were applied to identify recurring patterns, emerging themes, and gaps in the literature. The analysis employed an analytical framework linking study findings to theoretical models such as TAM, UTAUT, and Diffusion of Innovation (DOI), allowing the review to integrate conceptual, empirical, and contextual insights on AI adoption and employee acceptance.

5.0 FINDINGS OF THE REVIEW

5.1 Trends in AI Adoption in HRM within Universities

The review of the literature indicates a growing interest in the adoption of Artificial Intelligence (AI) in human resource management (HRM) within universities**,** reflecting broader trends in digital transformation across higher education institutions (Obi, 2025). AI applications in HRM have increasingly been integrated into processes such as recruitment, employee performance management, training and development, talent analytics, and administrative automation. In recruitment, AI-driven tools are used to screen CVs, rank candidates, and conduct preliminary assessments, reducing time-to-hire and enhancing objectivity. Performance management systems incorporate predictive analytics and machine learning algorithms to monitor staff productivity, identify training needs, and support strategic workforce planning. Similarly, AI-enabled learning platforms provide personalised professional development opportunities for university staff, aligning training with both individual and institutional objectives (Madanchian & Taherdoost, 2025).

In terms of levels and patterns of adoption**,** the literature shows that AI adoption is still in its early to moderate stages in many universities, particularly in developing country contexts such as Nigeria. Large, research-intensive institutions are often early adopters, integrating AI tools into centralised HR platforms, while smaller universities tend to adopt AI more selectively or rely on standalone digital HR applications (Menyechi & Authors, 2025). Adoption patterns also vary by function; administrative tasks such

as payroll and leave management are more widely automated, whereas strategic functions like talent analytics and performance prediction are less common due to infrastructure, cost, and skill limitations. Additionally, studies highlight a gradual shift from pilot implementations to broader institutional integration, often starting with modules that require low-risk experimentation and gradually expanding to more complex AI-driven decision-making systems (Lutfi & Mohammadi, 2025)

5.2 Drivers of AI Adoption in University HRM

The literature indicates that the adoption of Artificial Intelligence (AI) in university human resource management (HRM) is influenced by a combination of technological, organisational, and environmental drivers**.** Technological drivers include the availability, sophistication, and usability of AI-enabled HR platforms (Opara, 2023). Universities are more likely to adopt AI when systems are perceived as reliable, efficient, and capable of automating routine HR tasks while providing advanced analytics for decision-making. The rapid development of machine learning, predictive analytics, and AI-enabled HR software has increased the accessibility and functionality of digital HR tools, making them attractive for universities seeking to improve HR efficiency, accuracy, and strategic workforce management (Rooshma et al., 2024)

Organisational drivers refer to internal factors within universities that facilitate AI adoption. Key organisational enablers include leadership support, strategic alignment of digital initiatives with institutional goals, availability of skilled personnel, and effective IT infrastructure (Okoro, 2024). Studies suggest that universities with a strong commitment to digital transformation, robust ICT support, and dedicated HR technology teams are more successful in implementing AI systems (Adias, 2025). Organisational culture also plays a critical role; institutions that foster innovation, collaboration, and openness to change are more likely to embrace AI technologies. Furthermore, employee readiness and training programs enhance the capability of staff to engage with AI systems, reducing resistance and improving acceptance.

Environmental drivers capture external pressures and opportunities that influence AI adoption in university HRM. Regulatory requirements, competitive pressures, and global trends in digitalisation act as motivating factors for universities to integrate AI into HR practices. For instance, universities operating in highly competitive educational markets may adopt AI to improve operational efficiency, enhance staff performance, and attract top talent. Collaboration with technology vendors, access to national and international research networks, and benchmarking against best practices also encourage the adoption of innovative HR solutions. Additionally, external funding opportunities, governmental ICT policies, and professional accreditation requirements may incentivise universities to adopt AI-enabled HR systems to meet compliance and performance standards (Al-Alawi et al., 2023).

5.3 Barriers and Challenges to AI Adoption

Despite the potential benefits, the adoption of AI in university HRM faces multiple barriers and challenges that hinder effective implementation. One of the primary challenges is **i**nfrastructure, particularly inadequate ICT facilities, unreliable internet connectivity, and insufficient server capacities, which limit the ability of universities to deploy advanced AI systems. Many institutions, especially in developing countries, lack integrated HR platforms capable of supporting AI-enabled functionalities, resulting in fragmented or inefficient HR processes (Ezeneme, 2024)

Cost is another significant barrier. The acquisition, implementation, and maintenance of AI systems involve substantial financial investment, which may be prohibitive for universities with limited budgets. High costs are compounded by the need for regular system updates, licensing fees, and investments in staff training, making long-term sustainability a concern (Okolie & Egbon, 2023).

Skills and human capacity challenges also impede adoption. AI systems require staff who are digitally literate and capable of interpreting analytics outputs. Universities often face shortages of personnel with technical expertise in AI, HR analytics, and data management, which can slow implementation and reduce system effectiveness. Training programs and continuous professional development are necessary to bridge these gaps (Epebinu et al., 2024).

Ethical and regulatory issues present critical constraints. Concerns over data privacy, algorithmic bias, surveillance, and fairness can limit adoption or generate resistance among staff. Universities must comply with national data protection laws and institutional policies, ensuring that AI-driven HR decisions are transparent, accountable, and ethically sound. Failure to address these considerations may not only reduce trust but also expose institutions to legal and reputational risks (Anushiem, 2024b)

5.4 Employee Acceptance of Digital HR Systems

Employee acceptance is an important determinant that influences the success of digital HR systems in universities. The literature points out various important factors that determine employee acceptance, including perceived usefulness, ease of use, trust, and organisational support. Perceived usefulness is the degree to which employees perceive the usefulness of the system in improving their performance, efficiency, and decision-making, while ease of use is the degree to which employees find the system easy to

use (Bamigbola & Joseph, 2025). Trust, especially in the case of AI-based HR systems, is an important factor because employees need to be confident and trust the decision-making processes and the fairness of the system. Organisational support also plays an important role in the acceptance of the digital HR system (Revillod, 2025)

On the other hand, there are several factors that contribute to resistance, fear, and ethical issues. Resistance may stem from concerns over job security, fear of being monitored more closely, or discomfort with new technologies. In addition, ethical issues may involve data privacy, biases in AI technologies, and a lack of transparency in HR decisions. There may also be fear of losing control over HR activities or feeling that technology erodes professional autonomy, especially for academic staff in university settings where autonomy is highly valued (Obeta & Edwin, 2025). The interplay of all these factors highlights the socio-technical nature of digital HR systems, as it is clear that technology alone is not sufficient to ensure the adoption of HR systems. Rather, it is crucial to create positive employee perceptions, build trust, and address various ethical and psychological issues. Universities that effectively integrate various strategies to promote the adoption of AI-driven HR systems will be able to attain higher levels of employee acceptance of such systems (Pedrami & Vaezi, 2025).

6.0 THEMATIC SYNTHESIS AND DISCUSSION

The synthesis of the literature review points to several themes and patterns that emerge regarding the adoption of AI in university HRM and the acceptance of the technology by employees (Kambur & Yildirim, 2023). One major theme that is evident is that the adoption of AI is a function-specific and incremental process, where universities tend to adopt AI in administrative functions such as recruitment, payroll, and leaves before strategic functions such as performance analytics and talent management. Additionally, the acceptance of the technology by employees is also a function of the usefulness and ease of use of the technology, as well as the trust that employees have in the reliability of the technology and the availability of organisational support. Thus, it can be inferred that the successful implementation of AI technology is a function of both the technology and the employees (Amoako et al., 2023) By comparing the pattern of AI adoption and acceptance in different universities, it has been found that large research-intensive universities with better ICT infrastructure and financial as well as human resource capabilities are more likely to be early adopters of AI technologies. On the contrary, small-scale universities with limited financial and resource capabilities are more likely to be selective in adopting AI technologies. Moreover, it has been found that employees in administrative positions tend to be more accepting of AI systems compared to academic employees, who might resist AI technologies due to their perception of AI as an invasive technology undermining professional autonomy (Alam et al., 2020).

The findings show strong consistency with the Technology Acceptance Model (TAM), the Unified Theory of Acceptance and Use of Technology (UTAUT), and the Diffusion of Innovation (DOI) theory, providing a strong foundation from which to understand the concept of technology adoption and acceptance (Ramachandran et al., 2024). The concepts of Perceived Usefulness and Perceived Ease of Use, as proposed by the TAM model, provide strong support for the understanding of why employees might be more inclined to accept and adopt AI technology that can assist them in being more efficient and effective in their work. The UTAUT model takes this understanding a step further by including the concepts of Social Influence and Facilitating Conditions, providing further insight into the factors that can impact the adoption and acceptance of technology (Babayayi et al., 2025). The DOI theory also provides an interesting perspective on the concept of technology adoption and acceptance, focusing on the characteristics of the innovation, including relative advantage, compatibility, complexity, trialability, and observability. The above theories provide strong support for the understanding that the adoption and acceptance of AI technology in the university HRM function is a technological and socio-organisational construct (Maheswari et al., 2024)

The review also points out the variation that exists between different institutions and countries. In developed countries, the research shows that the use and adoption of AI technology are more widespread and integrated. This is because these countries have the appropriate digital infrastructure and human capacity to support the use and adoption of AI technology. However, in universities in developing countries such as Nigeria, the infrastructural challenges and lack of digital literacy among the workforce act as barriers and moderating factors in the adoption and acceptance of AI technology by the employees (Ahmed, 2018). Cultural issues and the organisational hierarchy also play a role in the acceptance and perception of AI technology by the employees. These issues point out the need for the appropriate and context-specific strategies that take into account the technological readiness and the local context in which AI technology is being implemented (Awad et al., 2025)

7.0 CONCLUSION AND RECOMMENDATIONS

7.1 Conclusion

This study is a systematic literature review that aimed to identify the adoption of Artificial Intelligence (AI) in human resource management (HRM) and the acceptance of HR digital technologies by employees within the university context. The results showed that the adoption of AI in HRM in universities is incremental and functional in nature. , Administrative HR functions, such as recruitment, payroll, and leaves, are more likely to be adopted than strategic HR functions such as performance prediction and employee analytics. The driving forces behind the adoption include technology readiness, organisational support, and environmental pressures. In contrast, the major impediments include infrastructural issues, costs, technical competency, and ethical issues. Acceptance by employees was found to be an important determinant in the successful integration of AI. Perceived usefulness, ease of use, trust in system reliability, and the availability of support from the organisation were found to be important determinants of employee acceptance. On the other hand, resistance, fear of replacement, and ethical issues related to data privacy and bias were found to be limiting factors. The review also found that the adoption and acceptance levels of AI differ from one institution to another and from one country to another, with universities in developed countries showing greater adoption and favourable employee perceptions compared to developing countries, including Nigeria. The results, therefore, highlight the socio-technical nature of the integration of AI in the HRM function of universities, suggesting that the level of technology alone does not ensure the integration or use of the technology. Instead, there is a need to ensure that the technology is aligned to the organisational strategy, the employees have the necessary competencies and trust in the technology, and the contextual, cultural, and ethical factors are taken into consideration. Theoretical frameworks, such as TAM, UTAUT, and Diffusion of Innovation, offer useful perspectives on the integration and acceptance of technology, including the role of perceptions, social factors, innovation, and facilitating conditions.

7.2 Recommendations

Based on the findings, the following recommendations are proposed for universities, policymakers, and future research:

Strategic Planning and Leadership Support: Universities need to incorporate the adoption of AI technology in their HRM strategy. In this regard, there is a need to ensure that there is leadership support and championing of the adoption and implementation of digital technologies. Communication regarding the need, benefits, and outcomes of implementing AI technology in HRM may improve employee adoption and reduce any potential resistance to change.

Capacity Building and Training: Universities need to invest in training programs aimed at improving employees' digital literacy and technical skills. Such training may improve employee confidence and positive perceptions regarding the usefulness and usability of AI technology in HRM.

Infrastructure and Resource Investment: Universities need to invest in ICT infrastructure, such as networks, servers, and data storage systems, to support the adoption and implementation of AI technology in HRM. There is a need to ensure adequate funding and resource allocation.

Ethical and Transparent AI Practices: The adoption of AI must follow ethical standards that ensure data privacy, fairness in AI decision-making, and transparency. Universities must have appropriate policies and systems in place to ensure trust and address employee concerns regarding surveillance and the misuse of employee data.

Employee Involvement and Change Management: Employee involvement in the development, testing, and evaluation of AI systems can enhance employee acceptance of AI. Change management approaches provide employees with opportunities to contribute to the process, making them feel valued and more willing to embrace digital HR technologies.

Context-Specific Implementation: The adoption of AI must take into consideration the specific context of each university and nation. The availability of resources, organisational culture, and workforce characteristics must be taken into consideration. Pilot programs can be implemented before full-scale adoption.

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