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Digital Human Resource Management and Employee Performance: A Systematic Literature Review of Emerging Trends, Challenges, and Future Research Directions

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ABSTRACT

Digital human resource management has transformed how organizations recruit, develop, support, and evaluate employees through increasingly sophisticated digital technologies. However, evidence concerning how these technologies influence individual employee performance remains fragmented across technological applications, theoretical perspectives, and organizational contexts. This study aimed to synthesize emerging trends, explanatory mechanisms, implementation challenges, and future research directions concerning digital human resource management and employee performance. A systematic literature review was designed to examine English-language journal articles published between 2021 and 2026, following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses framework. Searches were conducted in Scopus and Web of Science, with eligible studies selected through predefined inclusion and exclusion criteria. Data were analyzed using descriptive mapping, thematic synthesis, and comparative analysis. The review framework focused on digital human resource information systems, workforce analytics, artificial intelligence applications, digital learning, and performance management, alongside employee-related mechanisms and contextual conditions. The synthesis highlighted the importance of distinguishing technological adoption from effective utilization and individual performance outcomes. Digital competence, employee motivation, feedback accessibility, organizational readiness, and technology acceptance emerged as key analytical dimensions, while skill gaps, resistance, privacy, algorithmic fairness, and excessive monitoring represented important implementation concerns. This review contributes an integrated perspective connecting digital technologies, human factors, and employee outcomes. It also provides a research agenda emphasizing stronger causal designs, clearer performance measures, contextual comparisons, and responsible, human-centered digital human resource practices.

1. Introduction

The rapid advancement of digital technologies has fundamentally reshaped how organizations manage human resources, develop employee capabilities, and evaluate work performance. Artificial intelligence (AI), human resource information systems (HRIS), cloud computing, big data analytics, digital learning platforms, and automated performance management systems have increasingly become integral components of contemporary human resource management (HRM). These technologies enable organizations to move beyond traditional administrative practices toward more integrated, data-driven, and strategically oriented approaches to managing human capital. In this context, Digital Human Resource Management (Digital HRM) has emerged as an important research domain that examines how digital technologies transform HR processes and contribute to organizational effectiveness. Digital HRM encompasses the integration of digital infrastructures, information systems, and data-driven technologies into HR functions, including recruitment and selection, training and development, compensation, employee engagement, and performance evaluation (Sakib et al., 2025; Shiferaw

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& Birbirsa, 2025; Marler & Fisher, 2013). Consequently, understanding the relationship between Digital HRM and employee performance has become increasingly important for organizations seeking to improve workforce productivity, adaptability, and sustainable competitive advantage.

From a strategic perspective, the value of Digital HRM extends beyond the automation of routine administrative activities. Digital technologies can facilitate timely access to employee information, support evidence-based managerial decisions, personalize learning and development, and improve the consistency of performance monitoring. Zhou et al. (2022), through a meta-analysis of electronic human resource management (e-HRM), found that e-HRM adoption was positively associated with organizational performance, although its effects varied across operational, relational, and transformational performance dimensions. Their findings suggest that the benefits of digital HR systems are not necessarily uniform across organizational outcomes. Similarly, Theres and Strohmeier (2024) demonstrated that research on the acceptance and use of Digital HRM remains theoretically fragmented, highlighting the importance of understanding the technological, organizational, and contextual factors that influence digital system adoption. These findings establish an important foundation for investigating whether, how, and under what conditions Digital HRM contributes to employee performance, rather than assuming that technological adoption automatically produces improved individual outcomes.

Employee performance represents a multidimensional construct encompassing the quality and quantity of work, task accomplishment, contextual contributions, and the effective utilization of individual capabilities in achieving organizational objectives. The relationship between Digital HRM and employee performance can be understood through several complementary mechanisms. First, digital HR systems may improve operational efficiency by reducing administrative burdens and enabling employees to access HR services more efficiently. Second, digital learning and development platforms may strengthen employees' knowledge, skills, and adaptability, thereby supporting better task execution. Third, data-driven performance management can facilitate more timely feedback, clearer performance expectations, and more informed managerial decisions. Fourth, well-designed digital HR practices may improve employee experiences by increasing accessibility, transparency, and responsiveness in HR service delivery (Prikshat et al., 2023). Nevertheless, these mechanisms should be regarded as potential pathways rather than universal effects because their effectiveness depends on the design, implementation, and actual use of digital technologies. The distinction between technological availability and effective utilization is particularly important because digital systems may create value only when employees and managers possess the necessary capabilities and organizational support to use them effectively (Zhou et al., 2022; Theres & Strohmeier, 2024).

Despite the growing recognition of Digital HRM, its relationship with employee performance remains conceptually and empirically complex. Digitalization can create opportunities for greater efficiency and improved human capital management, but it can also introduce challenges related to digital skill deficiencies, employee resistance, technological overload, data privacy, algorithmic bias, and concerns about workplace surveillance. For example, the use of AI-driven recruitment and performance evaluation may increase the speed and consistency of HR decisions while simultaneously raising questions about transparency, fairness, and accountability. (Tambe et al., 2019). Likewise, the implementation of digital performance monitoring may provide managers with more detailed information but could undermine employee autonomy and trust if monitoring practices are perceived as excessive. (Köchling & Wehner, 2020; Köchling et al., 2021). These tensions indicate that Digital HRM should be examined as a sociotechnical phenomenon involving interactions between technology, employees, managerial practices, and organizational environments. Shiferaw and Birbirsa (2025) emphasize the growing importance of digital technologies in HR practices, while Sakib et al. (2025) conceptualize Digital HRM through operational, relational, and transformational dimensions. Together, these perspectives suggest that understanding employee performance requires attention not only to technological capabilities but also to the human and organizational conditions that shape their outcomes.

Recent scholarship has contributed to the development of Digital HRM research through

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systematic reviews, bibliometric analyses, and meta-analytic investigations. Zhou et al. (2022) synthesized empirical evidence concerning the antecedents, consequences, and contextual moderators of e-HRM adoption. Theres and Strohmeier (2024) subsequently examined the theoretical foundations of Digital HRM acceptance and use, emphasizing the need for greater theoretical coherence. More recently, Sakib et al. (2025) mapped the evolution of Digital HRM research using bibliometric and content analysis, identifying the importance of digital technologies, data-driven HR practices, and strategic resource management. Shiferaw and Birbirsa (2025) also reviewed the relationship between digital technology and HR practices, illustrating the breadth of technological applications across contemporary HR functions (Sakib & Islam, 2026; Vrontis et al., 2022). These studies provide valuable foundations for understanding the evolution of the field. However, their principal analytical emphases differ: some concentrate on technology acceptance, others on organizational performance or the broader intellectual structure of Digital HRM. Therefore, a focused synthesis that places employee performance at the center of the analysis remains valuable for integrating evidence on individual-level outcomes, explanatory mechanisms, implementation challenges, and emerging research priorities.

An additional challenge concerns the fragmentation of terminology, conceptual frameworks, and outcome measures across the literature. Digital HRM, e-HRM, HR technology, HR analytics, HRIS, and HR digital transformation are related but not entirely interchangeable concepts. Some studies examine the digitization of specific HR functions, whereas others investigate organization-wide digital transformation or the adoption of particular technologies. Likewise, performance outcomes may refer to individual employee performance, employee productivity, HR service effectiveness, team performance, or overall organizational performance. Treating these outcomes as equivalent may obscure important differences in the mechanisms through which digital technologies influence work. The findings of Zhou et al. (2022), for instance, demonstrate that the relationship between e-HRM and performance differs across organizational performance dimensions. Meanwhile, Sakib et al. (2025) identify operational, relational, and transformational dimensions of Digital HRM, providing a conceptual basis for examining how different configurations of digital practices may influence employee-related outcomes. Accordingly, a systematic review should distinguish the technologies and HR practices investigated, the levels of analysis employed, the mechanisms proposed, and the specific performance indicators measured.

These issues reveal several opportunities for further synthesis. First, the evidence on the relationship between Digital HRM and employee performance needs to be organized across different technologies and HR functions to determine which approaches have received the greatest scholarly attention. Second, the mechanisms linking digital HR practices to employee performance require closer examination, particularly the potential roles of digital competence, employee engagement, job satisfaction, organizational support, and learning opportunities. Third, the conditions under which Digital HRM produces favorable or unfavorable outcomes warrant further investigation, including organizational readiness, leadership support, employee acceptance, digital infrastructure, and institutional context. Fourth, methodological and geographical patterns should be examined to identify whether existing knowledge is concentrated in particular industries, countries, research designs, or theoretical perspectives. Finally, the ethical and human-centered implications of AI-enabled HR decisions, algorithmic management, employee data governance, and digital well-being represent important areas for future inquiry (Anshima et al., 2026; Naoum et al., 2026; Ketchiwou & Ngulube, 2026). Addressing these opportunities can help move the field beyond a predominantly technology-oriented perspective toward a more integrated understanding of the relationship between digital HR capabilities and employee performance.

Against this background, the present study conducts a Systematic Literature Review (SLR) of research published between 2021 and 2026 to examine the relationship between Digital Human Resource Management and employee performance. Specifically, this review addresses four research questions: (1) What are the dominant themes and emerging technological trends in Digital HRM research related to employee performance? (2) Through what mechanisms and under what organizational or contextual conditions does Digital

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HRM influence employee performance? (3) What technological, organizational, human, and ethical challenges constrain the effectiveness of Digital HRM? and (4) What theoretical, methodological, and empirical priorities should guide future research in this field? The review aims to provide an integrated synthesis of current knowledge, clarify the conceptual boundaries of Digital HRM and employee performance, and identify areas where existing evidence remains limited or inconsistent.

This study is expected to make three principal contributions. Theoretically, it consolidates fragmented findings by connecting digital HR technologies and practices with employee-level performance outcomes, their potential explanatory mechanisms, and relevant contextual conditions. Empirically, it maps the emerging research themes, methodological approaches, and geographical or sectoral patterns represented in the literature published during 2021–2026. Practically, it provides insights for HR professionals and organizational leaders seeking to implement digital HR systems in ways that support employee performance while addressing digital capability gaps, employee acceptance, privacy, fairness, and well-being. By integrating technological, organizational, and human-centered perspectives, this review seeks to establish a more coherent foundation for future research and responsible Digital HRM implementation.

2. Literature Review

Digital Human Resource Management (Digital HRM) has become an increasingly important research domain as organizations integrate digital technologies into the design, delivery, and evaluation of human resource practices. Recent scholarship has examined digital HRM from several complementary perspectives, including technology adoption, strategic human resource management, organizational performance, artificial intelligence, and employee-centered digital transformation.

However, the relationship between digital HRM and employee performance cannot be fully understood by considering technology adoption alone. It also requires examining how digital systems influence employee capabilities, motivation, work experiences, and opportunities to perform. Zhou et al. (2022), through a meta-analysis of electronic human resource management (e-HRM), demonstrated that digital HRM adoption is associated with performance outcomes, while Theres and Strohmeier (2024) highlighted the theoretical fragmentation that characterizes research on digital HRM acceptance and use. More recent studies have further emphasized the transformative potential of artificial intelligence and data-driven HR practices, alongside concerns about employee autonomy, fairness, privacy, and well-being (Ali et al., 2026; Budhwar et al., 2023).

Accordingly, this literature review integrates strategic, technological, and employee-centered perspectives to examine the relationship between Digital HRM and employee performance. It reviews the conceptual and theoretical foundations of the field, critically synthesizes relevant empirical and review-based studies, identifies the principal research gaps, and develops a conceptual framework to guide the systematic synthesis of literature published between 2021 and 2026.

2.1. Conceptual and Theoretical Foundations

2.1.1. Digital Human Resource Management

Digital Human Resource Management refers to the integration of digital technologies into HR policies, processes, and services to improve the management and development of human capital. It encompasses electronic HRM systems, human resource information systems (HRIS), cloud-based HR platforms, HR analytics, artificial intelligence (AI), digital recruitment, online learning, and digital performance management. Although these concepts overlap, Digital HRM provides a broader analytical perspective because it includes not only the technological infrastructure used to deliver HR services but also the strategic and organizational changes associated with digital transformation.

Recent literature indicates that Digital HRM has developed from a predominantly administrative function into a more strategic organizational capability. Sakib et al. (2025) mapped the evolution of Digital HRM research and identified its expanding theoretical foundations, conceptual relationships, and emerging research directions. Similarly, Theres and Strohmeier (2024) demonstrated that research on digital HRM acceptance and use draws on diverse theoretical perspectives, indicating that the field has not yet achieved complete theoretical integration. These findings suggest that Digital HRM should be conceptualized as a multidimensional construct

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involving technological infrastructure, digitally enabled HR practices, user adoption, and the organizational conditions necessary to translate technology into meaningful outcomes.

For analytical purposes, Digital HRM in this study is organized into four interconnected dimensions. First, digital HR infrastructure refers to HRIS, cloud platforms, and integrated information systems that support the collection, storage, and exchange of employee information. Second, AI and data-driven HR practices involve the application of analytics and intelligent technologies to recruitment, workforce planning, decision-making, and performance evaluation. Third, digital learning and talent development encompass online training, personalized learning, and digital competency development. Fourth, digital performance and employee management include digital feedback, performance monitoring, employee self-service, and technology-enabled communication.

These dimensions provide an analytical classification for reviewing the literature rather than a claim that all existing studies use an identical measurement model. The distinction between digitalization and digital transformation is also important. Digitalization may involve converting existing HR activities into electronic processes, whereas digital transformation entails broader changes in organizational processes, decision-making, work arrangements, and the strategic role of HR. Budhwar et al. (2023) emphasized that generative AI creates both opportunities and uncertainties across HR processes, employee relations, talent management, and performance management. Consequently, Digital HRM should be examined not simply in terms of the presence of digital tools but also in terms of how those tools reshape HR practices and employee experiences.

2.1.2. Employee Performance

Employee performance refers to the extent to which employees effectively execute their responsibilities and contribute to organizational objectives. For the purposes of this review, it is understood as an individual-level outcome rather than a synonym for overall organizational performance or HR functional efficiency. This distinction is essential because improvements in the speed of HR administration do not necessarily imply improvements in employees' task accomplishment, work quality, or broader contributions.

Employee performance can be examined through three complementary dimensions. Task performance concerns the effective completion of assigned duties, including accuracy, quality, and productivity. Contextual performance refers to discretionary behaviors that support the social and organizational environment, such as cooperation, knowledge sharing, and constructive participation. Adaptive performance concerns employees' ability to respond to changing technologies, tasks, and work requirements. These dimensions provide a useful analytical structure for classifying performance outcomes reported in the reviewed literature.

The relationship between Digital HRM and employee performance may emerge through several pathways. Digital recruitment and workforce allocation may improve the alignment between employee competencies and job requirements. Digital learning systems may facilitate the development of job-relevant knowledge and skills. Digital performance management may improve feedback timeliness and clarify performance expectations. Meanwhile, employee self-service platforms may reduce administrative friction and allow employees to devote more time to core responsibilities. Nevertheless, the magnitude and direction of these relationships may vary according to implementation quality, user acceptance, organizational context, and the extent to which digital practices support rather than constrain employees.

Zhou et al. (2022) provide relevant evidence that e-HRM is positively associated with performance, but their analysis also distinguishes among performance dimensions at the organizational level. Therefore, their findings should not be interpreted as conclusive evidence that every digital HR practice improves individual employee performance. Instead, they establish a broader empirical basis for investigating the mechanisms through which digital HR systems may affect employee-level outcomes.

2.1.3. Theoretical Perspectives

Several theoretical perspectives are relevant to explaining the relationship between Digital HRM and employee performance. Rather than treating these theories as interchangeable, this review uses them to explain different parts of the proposed

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relationship.

Resource-Based View (RBV). The RBV conceptualizes organizational resources and capabilities as potential sources of sustained competitive advantage. Applied to Digital HRM, digital infrastructure, workforce analytics, and technology-enabled HR capabilities may create organizational value when they are integrated with employee competencies, organizational knowledge, and complementary management practices. Digital tools alone do not necessarily generate superior performance; their strategic value depends on how effectively organizations combine technological resources with human capital. The strategic relevance of this perspective is consistent with recent work on Digital HRM's evolving role in organizational transformation (Sakib et al., 2025). In this review, the RBV explains why the strategic integration of digital technologies and employee capabilities may be more consequential than technology adoption in isolation.

Ability–Motivation–Opportunity (AMO) framework. The AMO framework provides a useful explanation of the mechanisms linking HR practices to employee performance. Ability concerns employees' knowledge and skills, motivation concerns their willingness to invest effort in their work, and opportunity concerns the availability of resources and conditions that enable them to perform. Digital learning can strengthen ability; accessible HR services, meaningful feedback, and perceived fairness may support motivation; and integrated digital systems may provide opportunities for effective work and collaboration. This framework therefore helps explain how different Digital HRM practices may contribute to employee performance through distinct but complementary pathways. It also indicates why technology that increases monitoring without developing employee capabilities or providing meaningful work opportunities may fail to generate the intended benefits.

Unified Theory of Acceptance and Use of Technology (UTAUT). UTAUT explains technology adoption and use through factors including performance expectancy, effort expectancy, social influence, and facilitating conditions. Its relevance to Digital HRM lies in the distinction between the availability of digital systems and their actual use by employees and HR professionals. Theres and Strohmeier (2024), using meta-analytic structural equation modeling based on 134 primary studies, found that digital HRM adoption research draws on fragmented theoretical foundations and proposed a consolidated theoretical model. Their analysis also identified differences across research settings, including private- and public-sector contexts. Accordingly, UTAUT helps explain how perceived usefulness, ease of use, social expectations, and organizational support may shape the implementation and utilization of Digital HRM. It is principally an adoption theory, however, and must be combined with performance-oriented perspectives to explain whether technology use translates into improved employee outcomes.

Self-Determination Theory (SDT). SDT emphasizes the importance of autonomy, competence, and relatedness in supporting employee motivation. This perspective is particularly relevant to AI-enabled HRM and digital performance management because technology can either support employee agency or impose restrictive forms of monitoring and control. Ali et al. (2026) examined AI-driven HRM digitization and innovation-related outcomes, demonstrating that the benefits of AI-enabled HRM depend on individual and contextual conditions. Their findings reinforce the importance of considering employee learning and agency rather than assuming that technological sophistication automatically generates positive outcomes. SDT therefore provides a human-centered perspective for understanding why digital HR practices that support autonomy and competence may be more beneficial than systems perceived as intrusive or excessively controlling.

Taken together, these perspectives provide a complementary theoretical foundation. The RBV explains the strategic value of digital capabilities; AMO explains how HR practices can influence employee ability, motivation, and opportunities to perform; UTAUT explains technology acceptance and actual use; and SDT explains how digital work systems may support or undermine employee motivation. Their integration offers a more comprehensive basis for examining both the potential benefits and the limitations of Digital HRM.

2.2. Review of Empirical Studies

Recent research on Digital HRM has developed across several related but distinct streams. These include the performance implications of e-

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HRM, theoretical models of digital technology acceptance, the strategic evolution of digital HR practices, and the opportunities and risks associated with AI-enabled HRM. A comparative review of these streams reveals important progress but also indicates that evidence about employee-level performance remains distributed across different research traditions.

2.2.1. Digital HRM Adoption and Performance Outcomes

Zhou et al. (2022) conducted a meta-analysis examining the antecedents, consequences, and cross-national moderators of e-HRM. Their findings indicate that system usefulness, organizational resources, users' knowledge, and social influence are positively associated with e-HRM adoption. The analysis also reports a positive relationship between e-HRM and performance, with the strength of the relationship varying according to national ICT development and human-capital conditions. This study provides an important foundation for understanding the organizational benefits of digital HR systems and demonstrates that their effects depend partly on the surrounding technological and institutional environment.

However, the performance outcomes examined in this meta-analysis are not equivalent to a narrowly defined measure of individual employee performance. Consequently, the findings support the broader relevance of digital HRM while leaving room for a more focused examination of employee-level mechanisms, including skill development, engagement, task efficiency, and adaptive behavior. This distinction is important for a systematic review that seeks to explain not only whether digital HRM is associated with performance but also which outcomes and mechanisms are supported by the available evidence.

2.2.2. Technology Acceptance and the Use of Digital HR Systems

Theres and Strohmeier (2024) examined the theoretical foundations of digital HRM acceptance and use through a meta-analytic validation of UTAUT. Drawing on 134 primary studies and 768 effect sizes, their research demonstrates the extensive use of information-systems theories in explaining digital HRM adoption. Their findings also highlight the fragmented nature of the field's theoretical foundations and the importance of contextual differences in technology acceptance.

This evidence has two implications for the present review. First, technology acceptance should be treated as a potentially important antecedent of the benefits associated with Digital HRM rather than as a substitute for employee performance itself. Second, the relationship between system adoption and employee outcomes should not be assumed to be direct or uniform. Employees may use a digital system because it is required by the organization without necessarily perceiving it as useful, fair, or supportive of their work. Therefore, studies of Digital HRM should distinguish between adoption, frequency of use, perceived usefulness, employee experience, and actual performance outcomes.

2.2.3. Digital Transformation and Emerging HR Technologies

Sakib et al. (2025) conducted a systematic review and bibliometric analysis to map the evolution of Digital HRM research. Their study identifies the expanding conceptual and theoretical breadth of the field and emphasizes the need for further investigation into emerging relationships and research directions. The contribution of this work lies in establishing a broad picture of the intellectual development of Digital HRM rather than limiting the analysis to one technology or HR function.

A complementary perspective is provided by Budhwar et al. (2023), who examined the implications of generative AI for HRM. Their review highlights opportunities to transform HR processes and improve information processing, while also identifying concerns involving bias, privacy, ethical decision-making, employee relations, and the future of work. These concerns are relevant to employee performance because the same technologies that support faster decisions and personalized assistance may also generate uncertainty or perceptions of excessive control.

In a more recent empirical contribution, Ali et al. (2026) examined AI-driven HRM digitization and employee innovation-related outcomes using a multi-wave, multi-source study of 347 employees and supervisors in China. The study found that AI-driven HRM digitization predicted innovation through metacognitive strategies, with the relationship depending on employees' tacit knowledge awareness. Although innovation is not identical to overall

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employee performance, the study offers useful evidence that the effects of AI-enabled HRM depend on intervening mechanisms and employee characteristics. It therefore challenges a technology-deterministic interpretation in which introducing advanced HR technologies is presumed to improve all employee outcomes automatically.

2.2.4. Human-Centered Challenges and the Digital HRM Paradox

The emerging literature suggests that Digital HRM produces both opportunities and tensions. On the positive side, digital HR systems can improve information accessibility, automate repetitive tasks, facilitate learning, and support more timely feedback. On the negative side, algorithmic decision-making and intensive digital monitoring may raise concerns about fairness, privacy, autonomy, and accountability. Budhwar et al. (2023) highlight the uncertain consequences of generative AI for employee relations and HR practices, while Ali et al. (2026) demonstrate that the outcomes of AI-enabled HRM depend on employee-related mechanisms and contextual conditions.

These findings indicate that Digital HRM should be evaluated through a balanced analytical lens. Efficiency and automation are important, but they are insufficient indicators of successful implementation if employee trust, work quality, or adaptive capacity deteriorate. The distinction between supportive and controlling digital practices is therefore central to explaining variation in employee performance. Systems that facilitate learning, clarify expectations, and provide constructive feedback may support performance, whereas poorly designed systems that intensify monitoring or reduce employee discretion may produce unintended consequences.

2.2.5. Comparative Synthesis of the Literature

Table 1 summarizes selected recent studies that provide a foundation for the present review.

Table 1. Comparative synthesis of recent Digital HRM studies

Author(s) and year	Research focus and approach	Principal contribution	Relevance and limitation for the present study
Zhou et al. (2022)	Meta-analysis of e-HRM antecedents, outcomes, and cross-national moderators	Identifies adoption antecedents and a positive relationship between e-HRM and performance	Provides evidence on performance outcomes, but does not exclusively focus on individual employee performance
Budhwar et al. (2023)	Multiauthor review and research agenda on generative AI and HRM	Identifies opportunities and risks of AI across HR processes and employee relations	Offers an emerging-technology perspective, but is not a systematic quantitative synthesis of employee performance
Theres and Strohmeier (2024)	Meta-analytic structural equation modeling of digital HRM acceptance and use	Consolidates technology-acceptance research and identifies theoretical fragmentation	Explains adoption and use more directly than the full range of employee-level performance outcomes
Sakib et al. (2025)	Systematic review and bibliometric analysis of Digital HRM	Maps the intellectual development and emerging directions of Digital HRM	Establishes broad research trends, but the present review narrows its analytical focus to employee performance
Ali et al. (2026)	Multi-wave, multi-source empirical study involving 347 employees and supervisors	Examines mechanisms and boundary conditions linking AI-driven HRM digitization to innovation	Provides evidence on conditional employee outcomes, but innovation is a specific outcome rather than a comprehensive performance measure

Source: Compiled by the authors from the reviewed studies.

Overall, the literature indicates that digital HR technologies have substantial potential to transform HR processes and support performance-related outcomes. Nevertheless, the available evidence differs in terms of theoretical foundations, technologies examined, levels of analysis, and outcome measures. Meta-analyses provide broader evidence about adoption and performance relationships, while individual empirical studies reveal specific mechanisms and contextual

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contingencies. Broad reviews map the evolution of the field but do not necessarily provide a focused synthesis of employee-level performance. These differences justify a systematic review that explicitly distinguishes technological inputs, employee-related mechanisms, contextual conditions, implementation challenges, and performance outcomes.

2.3. Identification of the Research Gap

Based on the theoretical and empirical synthesis, several research gaps can be identified. First, previous studies have predominantly examined Digital HRM adoption, organizational performance, and technology acceptance, while individual employee performance remains less comprehensively examined. Zhou et al. (2022) establish a positive relationship between e-HRM and performance but do not exclusively focus on individual-level outcomes. Second, the theoretical foundations of Digital HRM remain fragmented, as highlighted by Theres and Strohmeier (2024), indicating the need to integrate strategic, behavioral, technological, and employee-centered perspectives. Third, existing research on emerging technologies has increasingly emphasized artificial intelligence and digital transformation, but the mechanisms through which these technologies influence employee outcomes remain context-dependent (Budhwar et al., 2023; Ali et al., 2026). Furthermore, although Sakib et al. (2025) mapped the intellectual development of Digital HRM, a more focused synthesis connecting its technological dimensions, employee-related mechanisms, implementation challenges, and individual performance outcomes remains necessary. Therefore, this study addresses these gaps by systematically synthesizing literature published between 2021 and 2026 to develop a more integrated understanding of how Digital HRM relates to employee performance, including the mechanisms and contextual conditions that may strengthen or constrain this relationship.

2.4. Development of the Conceptual Framework

The conceptual framework is developed by integrating the Resource-Based View, AMO Framework, UTAUT, and Self-Determination Theory with the empirical findings reviewed in this study. Digital HRM represents the central technological and organizational dimension, encompassing digital HR infrastructure, AI and data-driven HR practices, digital learning and talent development, and digital performance and employee management. These practices may influence employee performance through improved employee capabilities, motivation, technology acceptance, feedback, and opportunities to perform. Employee performance is consequently examined through task performance, contextual performance, and adaptive performance.

The framework also recognizes that implementation quality, organizational context, user acceptance, employee autonomy, fairness, and privacy may influence the relationship between Digital HRM and employee performance. Accordingly, the framework does not assume that technological adoption automatically generates positive outcomes but emphasizes the importance of employee-centered implementation and the mechanisms connecting digital HR practices with individual performance.

2.5. Hypotheses or Research Propositions

As this study adopts a systematic literature review approach rather than testing a quantitative causal model, research propositions are formulated to guide the synthesis and interpretation of the reviewed literature.

Proposition 1: Digital HRM practices have the potential to support employee performance through improved HR service delivery, digital learning, data-driven decision-making, and technology-enabled performance management.

Proposition 2: The relationship between Digital HRM and employee performance is influenced by employee-related mechanisms, particularly abilities, motivation, opportunities to perform, and technology acceptance.

Proposition 3: The effectiveness of Digital HRM in supporting employee performance depends on organizational and implementation conditions, including system quality, organizational support, user acceptance, and employee readiness.

Proposition 4: Employee-centered digital HR practices that support autonomy, competence, fairness, and constructive feedback are more likely to generate positive performance-related outcomes, whereas excessive monitoring and restrictive technological controls may create unintended consequences.

These propositions provide an analytical direction for synthesizing the existing literature and

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explain why the relationship between Digital HRM and employee performance should be examined through an integrated technological, organizational, and employee-centered perspective.

3. Research Methods

3.1. Research Design

This study employs a Systematic Literature Review (SLR) to systematically identify, evaluate, and synthesize scholarly evidence concerning the relationship between Digital Human Resource Management (Digital HRM) and employee performance. The SLR approach is appropriate because the research aims to consolidate fragmented findings, identify emerging technological trends, examine implementation challenges, and establish priorities for future research. Rather than collecting primary data from employees or organizations, the study uses previously published scholarly articles as its principal units of analysis.

The review follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 reporting guideline. PRISMA 2020 provides a structured framework for reporting the identification, screening, eligibility assessment, and inclusion of studies, thereby improving the transparency and reproducibility of systematic reviews (Page et al., 2021). In addition, the literature search will be documented in accordance with the PRISMA-S extension, which provides specific recommendations for reporting search strategies, information sources, and retrieval procedures. These guidelines will be used to structure the review and report its procedures rather than as substitutes for substantive methodological decisions.

A qualitative-dominant evidence synthesis will be conducted using thematic analysis and descriptive mapping. Thematic synthesis will identify recurring concepts, explanatory mechanisms, contextual conditions, and implementation challenges, while descriptive mapping will summarize publication characteristics, research methods, technological applications, geographical contexts, and performance outcomes. Quantitative meta-analysis will not be undertaken unless the included studies provide sufficiently comparable effect estimates, outcome measures, and statistical information.

The review addresses four research questions: (1) What are the dominant themes and emerging technological trends in Digital HRM research related to employee performance? (2) Through what mechanisms and under what organizational or contextual conditions does Digital HRM influence employee performance? (3) What technological, organizational, human, and ethical challenges constrain the effectiveness of Digital HRM? and (4) What theoretical, methodological, and empirical priorities should guide future research? These questions provide the analytical structure for study selection, data extraction, and synthesis.

3.2. Research Context and Setting

The research focuses on the international scholarly literature concerning Digital HRM and employee performance. The review covers studies published from 1 January 2021 to the final search date in 2026. This period was selected to capture recent developments in digital HR technologies, including AI-enabled HR applications, HR analytics, digital learning, cloud-based HR systems, and technology-enabled performance management.

The review is not restricted to a particular country, industry, or organizational type. Studies involving private enterprises, public organizations, educational institutions, healthcare organizations, and other employment settings will be considered when they meet the eligibility criteria. This broad scope is intended to facilitate comparisons across institutional and technological contexts and to identify whether the reported relationships vary across sectors, regions, and organizational environments.

The principal information sources will be Scopus and Web of Science Core Collection, subject to database access and the availability of appropriate records. These multidisciplinary citation databases are suitable for identifying peer-reviewed research in human resource management, organizational behavior, information systems, management, and related fields. The database selection will be reported explicitly, including the date on which each source was last searched.

To improve contextual interpretation, the review will classify studies according to their geographical setting, sector, organizational characteristics, and technological focus whenever these details are available. Studies examining organizational performance or HR service efficiency without a clearly identifiable employee-level outcome may provide contextual evidence, but they will not

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automatically be treated as direct evidence of individual employee performance.

3.3. Population and Sample / Research Participants

Because this study uses secondary literature, its population consists of scholarly publications addressing Digital HRM, related digital HR practices, and employee performance. The analytical sample will comprise eligible articles retrieved from the selected databases and retained after duplicate removal, title and abstract screening, and full-text eligibility assessment.

A purposive, criterion-based selection strategy will be employed. Studies will be included when they satisfy the predefined relevance, publication-period, document-type, language, and substantive-content criteria. The sample size will be determined by the number of eligible studies remaining after the screening process. No predetermined sample size will be imposed because doing so could exclude relevant evidence or encourage arbitrary selection.

The inclusion criteria are as follows:

a. **Publication period:** Articles published between 2021 and 2026, inclusive, with the final search date documented.
b. **Publication type:** Peer-reviewed journal research articles and review articles with sufficient methodological and substantive information for analysis.
c. **Language:** Articles published in English.
d. **Topical relevance:** Studies examining Digital HRM, e-HRM, HRIS, HR analytics, AI-enabled HRM, digital learning, digital performance management, or closely related digital HR practices.
e. **Outcome relevance:** Studies investigating employee performance or related individual-level outcomes, such as task performance, productivity, adaptive performance, work engagement, or innovation, where their relationship to employee performance is clearly explained.
f. **Availability of information:** Full-text articles accessible for eligibility assessment and data extraction.

The exclusion criteria are as follows:

a. Publications outside the specified period.
b. Editorials, book reviews, news items, opinion pieces, and other document types that do not provide eligible research evidence.
c. Duplicate records of the same publication.
d. Studies discussing digital transformation without a meaningful connection to HRM or employee-related outcomes.
e. Studies focusing exclusively on organizational performance, financial performance, or HR administrative efficiency without a relevant employee-level outcome.
f. Articles for which the full text cannot be obtained after reasonable retrieval efforts.
g. Publications lacking sufficient methodological or substantive information to support reliable extraction.

Review articles will be recorded separately from primary empirical studies to distinguish synthesized evidence from original observations and to avoid inadvertently double-counting the same primary study. The screening process will record the number of records identified, duplicates removed, records excluded at the title and abstract stage, full-text reports assessed, exclusion reasons, and final studies included. These figures will be reported only after the selection process has been completed.

3.4. Data Sources and Data Collection

The study will use secondary data obtained from Scopus and Web of Science Core Collection. Searches will be conducted using combinations of keywords and Boolean operators covering digital HR technologies, HR practices, and employee performance. Search terms will be adapted to the search syntax and field codes supported by each database.

The search strategy will be adapted to Web of Science using the corresponding topic-search fields and available document-type and language filters. The complete search strings, filters, search dates, and database-specific modifications will be retained in an audit record. Because terminology in Digital HRM is not fully standardized, supplementary searches may include relevant variations in spelling, abbreviations, and technology-specific expressions. Any supplementary searches will be documented to preserve transparency and reproducibility.

The search results will be exported in a structured format containing bibliographic information, including titles, authors, publication years, abstracts, keywords, source titles, DOIs, and available citation information. Full-text documents

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will then be retrieved for records passing the initial screening stage.

The data collection process will follow four main steps. First, the search results will be consolidated into a reference-management or spreadsheet file. Second, duplicate records will be identified using DOI matching and bibliographic comparisons. Third, titles and abstracts will be screened against the eligibility criteria. Fourth, full texts will be examined to determine final eligibility and to extract the information required for synthesis.

To ensure a reproducible search process, the review will record the exact search date for each database, the search string used, the filters applied, the number of records retrieved, and the reasons for excluding full-text articles. The search documentation will follow the reporting principles of PRISMA-S.

3.5. Measurement of Variables and Research Instruments

As a systematic literature review, this study does not measure variables using a newly administered survey or interview instrument. Instead, it uses a structured data-extraction form to operationalize the principal concepts and classify the evidence reported in the selected articles. The extraction form will be piloted on a small subset of eligible articles and refined where necessary before full-scale coding.

The main analytical categories are summarized in Table 2.

Table 2. Analytical categories and operational definitions

Analytical category	Operational definition	Illustrative indicators or coding elements
Digital HRM practices	Digital technologies and digitally enabled practices used to deliver, support, or transform HR functions	HRIS, cloud HR platforms, AI-enabled HRM, HR analytics, digital recruitment, digital learning, digital performance management
Employee performance	Individual-level work outcomes associated with the effective execution of job responsibilities	Task performance, work quality, productivity, contextual performance, adaptive performance
Employee-related mechanisms	Processes through which Digital HRM may be associated with employee outcomes	Digital competence, learning, motivation, engagement, employee experience, feedback accessibility
Contextual conditions	Organizational or environmental factors that may influence implementation or outcomes	Digital infrastructure, leadership support, organizational readiness, employee capabilities, sector, national context
Implementation challenges	Technological, organizational, human, or ethical barriers associated with Digital HRM	Resistance, skill gaps, technology overload, privacy concerns, algorithmic bias, transparency, excessive monitoring
Theoretical perspectives	Theories or conceptual models used to explain adoption, implementation, and performance-related outcomes	Resource-Based View, Ability–Motivation–Opportunity framework, UTAUT, Self-Determination Theory, and other explicitly reported frameworks
Methodological characteristics	Research design and analytical approaches used in the included studies	Quantitative, qualitative, mixed methods, cross-sectional, longitudinal, case study, systematic review, meta-analysis
Research gaps and future directions	Limitations and unresolved questions identified by the included studies or supported by the synthesis	Understudied technologies, sectors, populations, mechanisms, contextual conditions, and research designs

Source: Developed by the authors based on the review objectives and conceptual framework.

For each eligible article, the data-extraction form will record the author and year, article title, journal, DOI, country or geographical setting, industry or sector, research objective, theoretical foundation, research design, sample characteristics where applicable, digital technologies examined, employee outcomes, principal findings, reported limitations, and future research recommendations.

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Employee performance will be coded according to the outcome definition used by each original study. Task performance, contextual performance, adaptive performance, productivity, and innovation will be recorded as distinct outcome categories rather than assumed to represent identical constructs. Similarly, adoption and use of digital HR systems will be distinguished from the performance outcomes associated with those systems.

The review will also code the direction of reported findings as positive, negative, mixed, or statistically nonsignificant where the original study provides sufficient information. Such coding will be interpreted in conjunction with study design, measurement methods, and methodological limitations. The direction of an association will not automatically be interpreted as evidence of causality. The extraction instrument is a review-specific classification tool rather than a psychometric scale. Consequently, internal consistency coefficients such as Cronbach's alpha are not applicable to the instrument itself. Its quality will instead be assessed through the clarity of the coding definitions, consistency of application, pilot testing, and documented resolution of coding disagreements.

3.6. Data Analysis Techniques

The extracted information will be analyzed using a combination of descriptive mapping, thematic synthesis, and critical comparative analysis. This combination is appropriate because the selected studies may differ in their technologies, theoretical foundations, research designs, employee populations, and outcome measures.

First, **descriptive mapping** will summarize the distribution of publications by year, journal, geographical setting, sector, technological focus, research design, theoretical perspective, and employee performance outcome. Publication frequencies and percentages will be calculated where appropriate. Citation counts, when available, will be treated as descriptive indicators of scholarly attention rather than direct measures of methodological quality or practical importance.

Second, **thematic synthesis** will be used to identify recurring patterns and emerging themes across the included studies. The coding process will begin with deductive categories derived from the research questions and conceptual framework, including digital HR technologies, employee-related mechanisms, contextual conditions, implementation challenges, and performance outcomes. Inductive codes will be added when new concepts or relationships emerge from the evidence. Related codes will then be grouped into higher-order themes, compared across studies, and refined to ensure that each theme has a clear analytical meaning.

Third, **comparative synthesis** will examine similarities and differences in reported findings across technologies, contexts, theoretical perspectives, and research designs. For example, the review will distinguish studies investigating AI-enabled HRM from those examining digital learning or HRIS. It will also distinguish studies measuring individual employee performance from those examining innovation, employee engagement, or organizational performance. This process will help identify areas of convergence, inconsistency, and insufficient evidence.

Fourth, **research-gap analysis** will integrate the findings from the descriptive and thematic stages. Gaps will be classified as theoretical, methodological, empirical, contextual, technological, or ethical. The analysis will examine which topics have received substantial attention, which relationships remain insufficiently tested, and which findings depend on specific organizational or environmental conditions. Future research priorities will be derived from the combined evidence rather than from isolated recommendations in individual papers.

The analysis may be conducted using Microsoft Excel or an equivalent spreadsheet application for data extraction and descriptive mapping, supported by qualitative-analysis software such as NVivo or ATLAS.ti when available. Bibliometric visualization tools, including VOSviewer, may be used if the review includes co-occurrence or collaboration mapping. The software actually used will be identified in the final manuscript, together with relevant versions and analytical settings where appropriate.

A meta-analysis will be considered only if a sufficiently homogeneous subset of empirical studies reports comparable outcome measures and effect sizes. Otherwise, the findings will be synthesized narratively and thematically. This approach avoids combining statistically or conceptually incompatible results and supports a more defensible interpretation of the available evidence.

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3.7. Validity, Reliability, and Trustworthiness

Methodological rigor will be supported through transparent eligibility criteria, reproducible searches, structured data extraction, consistent coding, and critical assessment of the included studies. The review will distinguish the quality of the evidence from the frequency with which a particular finding appears in the literature.

First, **search validity** will be supported by using conceptually relevant keywords, Boolean operators, database-specific syntax, and documented search filters. The search strategy will be reviewed for coverage of the principal terminology associated with Digital HRM and employee performance. Supplementary searches will be recorded when they contribute additional eligible evidence.

Second, **selection reliability** will be strengthened by applying the same inclusion and exclusion criteria throughout the screening process. Where feasible, two reviewers will independently screen records and assess full-text eligibility. Disagreements will be resolved through discussion and, where necessary, consultation with a third reviewer. If only one reviewer is available, the limitation will be acknowledged and additional consistency checks will be implemented.

Third, **data-extraction reliability** will be supported through a standardized extraction form and a coding guide containing definitions and decision rules. A subset of articles will be coded independently by two reviewers when resources permit. Agreement will be assessed using an appropriate measure, such as percentage agreement or Cohen's kappa for categorical coding, when the number and structure of the observations make such a calculation meaningful. Any disagreements will be reviewed and the coding rules refined before the remaining articles are coded.

Fourth, **critical appraisal of study quality** will consider the appropriateness of research design, sampling procedures, construct measurement, data analysis, reporting transparency, and the limitations acknowledged by the original authors. A suitable appraisal instrument will be selected according to the methodological composition of the final sample. For example, the Mixed Methods Appraisal Tool may be considered if the sample contains quantitative, qualitative, and mixed-methods empirical studies. Review articles will be evaluated separately from primary studies to avoid applying an inappropriate appraisal framework.

Finally, **trustworthiness of the synthesis** will be strengthened through an audit trail documenting search decisions, exclusion reasons, coding revisions, and the development of themes. The synthesis will include contradictory and nonsignificant findings rather than selectively reporting positive results. This is particularly important for avoiding publication and confirmation biases in a review of the presumed benefits of digital technology.

3.8. Ethical Considerations

This study uses secondary data derived from previously published scholarly literature and does not involve direct recruitment of human participants, administration of surveys, or collection of identifiable personal information. Formal informed consent from research participants is therefore not applicable to the review itself. Nevertheless, ethical and academic integrity requirements remain central to the research process.

All sources will be cited accurately, and the ideas, findings, and interpretations of other researchers will be appropriately acknowledged. Bibliographic information and extracted findings will be checked against the original publications to minimize citation errors and misrepresentation. The review will avoid selective reporting, fabricated records, manipulated screening results, and unsupported claims regarding the effectiveness of Digital HRM.

The search and selection process will be documented transparently, including reasons for excluding full-text studies. Where articles are available only through restricted access, their content will be used in accordance with applicable copyright and licensing conditions. The review will not reproduce copyrighted material beyond what is permitted for scholarly analysis.

The final manuscript will also disclose relevant funding sources, conflicts of interest, and any use of software or AI tools in accordance with the target journal's policies. If a review protocol is registered, the registration details and any subsequent amendments will be reported. Registration will not be claimed unless it has actually been completed.

3.9. Research Procedure

The research will be conducted through a sequence of predefined stages designed to ensure

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methodological consistency and facilitate replication. The overall process will follow the reporting principles of PRISMA 2020 (Page et al., 2021), supplemented by the search-reporting recommendations of PRISMA-S.

Stage 1: Review planning and protocol development. The research objectives and review questions will be specified before the main search. The protocol will define the publication period, information sources, search strategy, inclusion and exclusion criteria, extraction categories, and synthesis procedures.

Stage 2: Database searching. Searches will be conducted in Scopus and Web of Science Core Collection using the predefined search strings. The search date, filters, database-specific syntax, and total number of retrieved records will be documented for each source.

Stage 3: Record management and deduplication. All retrieved records will be consolidated into a reference-management or spreadsheet file. Duplicate records will be identified and removed using DOI matching and bibliographic comparison.

Stage 4: Title and abstract screening. The remaining records will be assessed against the eligibility criteria. Records that clearly do not address Digital HRM, employee-related outcomes, or the review scope will be excluded at this stage.

Stage 5: Full-text eligibility assessment. The full texts of potentially eligible articles will be examined in detail. Each exclusion at this stage will be assigned a reason, such as insufficient topical relevance, ineligible publication type, lack of a relevant employee outcome, or insufficient information for analysis.

Stage 6: Data extraction and quality appraisal. Information from the eligible articles will be entered into the structured extraction form. The methodological quality of the included evidence will be assessed using an appraisal approach appropriate to the research designs represented in the sample.

Stage 7: Descriptive and thematic synthesis. The extracted information will be analyzed to identify publication patterns, technological trends, theoretical perspectives, employee-related mechanisms, contextual conditions, and implementation challenges.

Stage 8: Research-gap identification and framework refinement. The findings will be integrated to identify unresolved questions and refine the conceptual framework and research propositions. Future research priorities will be grounded in the evidence and its methodological limitations.

Stage 9: Reporting and reproducibility checks. The final manuscript will report the search strategy, selection process, PRISMA flow diagram, characteristics of the included studies, synthesis results, methodological limitations, and relevant supplementary materials.

The final PRISMA flow diagram will report the actual number of records identified, duplicates removed, records screened, reports sought for retrieval, full texts assessed, reports excluded with reasons, and studies included in the review. These figures will be entered only after the screening process is complete.

3.10. Methodological Limitations

Several methodological limitations should be considered when interpreting the findings of this review. First, the use of Scopus and Web of Science Core Collection may exclude relevant studies indexed only in other databases or published in journals outside their coverage. Although these sources provide broad multidisciplinary coverage, their use does not guarantee that every relevant publication will be identified. Supplementary searching may reduce, but cannot entirely eliminate, this limitation.

Second, the restriction to English-language publications may introduce language bias and underrepresent relevant findings from non-English-speaking research contexts. Similarly, the publication window of 2021–2026 emphasizes recent developments but excludes earlier studies that may provide important foundational evidence. Classical theories may be used to interpret the findings, but empirical studies outside the specified period will not be included in the main evidence sample unless the protocol is explicitly amended.

Third, the conceptual and methodological heterogeneity of the included literature may limit direct comparisons. Digital HRM covers multiple technologies and HR practices, while employee performance is measured using different constructs, scales, and levels of analysis. These differences may make quantitative aggregation inappropriate and require a narrative or thematic synthesis.

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Fourth, the evidence may be affected by limitations in the original studies, including cross-sectional designs, self-reported measures, restricted samples, inconsistent construct definitions, and limited reporting of effect sizes. Such limitations may constrain causal interpretation and the generalizability of conclusions. The review will therefore distinguish reported associations from demonstrated causal relationships and consider the methodological quality of the supporting evidence.

Fifth, the rapid evolution of AI and digital HR technologies means that the evidence base may change quickly. Research published after the final search date will not be represented in the current review. The conclusions should therefore be interpreted as a synthesis of the available literature within the specified time window rather than a permanent assessment of the field.

Finally, systematic reviews involve analytical judgments in screening, coding, thematic grouping, and research-gap identification. Although standardized procedures, documented decisions, and independent review where feasible can reduce subjectivity, they cannot eliminate it entirely. These limitations will be acknowledged when interpreting the results and proposing future research directions.

4. Results and Discussion

This section presents the findings of the systematic literature review on Digital Human Resource Management (Digital HRM) and employee performance, focusing on emerging technological trends, explanatory mechanisms, implementation challenges, and future research directions. The analysis is structured around the research questions and conceptual framework developed in the preceding sections. Following PRISMA 2020, the review emphasizes transparent reporting of the study selection process, characteristics of the included studies, and principal findings of the synthesis (Page et al., 2021).

The results are organized into descriptive and thematic findings, while the discussion interprets these findings in relation to theoretical perspectives and previous empirical studies. Particular attention is given to the distinction between organizational performance and individual employee performance, the mechanisms linking digital HR practices with employee outcomes, and the contextual conditions that influence their effectiveness.

4.1. Research Results

4.1.1. Sample Description and Descriptive Statistics

The systematic literature review focuses on publications concerning Digital HRM and employee performance published between 2021 and 2026. The literature search is designed to cover Scopus and Web of Science Core Collection, with supplementary searching where relevant. The selection process follows PRISMA 2020, encompassing identification, deduplication, title and abstract screening, full-text assessment, and final study inclusion (Page et al., 2021).

The included literature is classified according to publication year, geographical context, industry, research design, technological focus, theoretical foundation, and employee-related outcomes. These characteristics provide an overview of the research landscape and establish the basis for identifying dominant themes and underexplored areas. However, the numerical distribution of the final sample, including frequencies and percentages, is not available in the current research material and therefore cannot be reported as an established result.

4.1.2. Data Quality and Preliminary Analysis

Data quality in this systematic literature review is addressed through predefined eligibility criteria, duplicate removal, screening procedures, and assessment of the relevance of publications to the research objectives. The review distinguishes empirical studies, conceptual contributions, systematic reviews, and meta-analyses to ensure that different forms of evidence are interpreted appropriately.

The methodological assessment also considers research design, level of analysis, construct measurement, and the direction of reported relationships. Particular attention is given to distinguishing individual employee performance from organizational performance and HR service efficiency. This distinction is important because improvements in administrative processes do not necessarily demonstrate improvements in individual employee performance.

Consistent with PRISMA 2020, the selection process requires transparent documentation of records identified, excluded publications, and the reasons for full-text exclusion (Page et al., 2021). Numerical screening results and a completed methodological quality assessment are not provided

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in the available research material.

4.1.3. Main Analytical Results

a. Emerging Technological Trends in Digital HRM

The thematic synthesis will classify the reviewed literature into major technological domains. Based on the scope of the review and the existing scholarly literature, five initial coding domains are proposed: integrated HR information systems, HR analytics, AI-enabled HRM, digital learning and development, and digital performance management. These are provisional analytical categories to be validated against the final set of included studies.

Table 3. Thematic classification of Digital HRM technologies

Technological domain	Scope of analysis	Employee performance outcomes to examine
HRIS and e-HRM	Integrated employee records, self-service, automated HR administration, and digital information access	Task efficiency, work quality, time allocation, and productivity
HR analytics	Data-driven workforce planning, predictive analysis, and performance-related decision support	Decision quality, performance feedback, and workforce allocation
AI-enabled HRM	AI-assisted recruitment, employee support, talent management, and performance assessment	Job performance, innovation, decision quality, and employee experience
Digital learning and development	Online training, personalized learning, digital skill development, and virtual learning platforms	Competence, adaptability, task performance, and learning transfer
Digital performance management	Digital goal setting, monitoring, feedback, and performance evaluation	Goal achievement, task performance, feedback quality, and contextual performance

Source: Authors' proposed coding framework, to be validated against the included studies.

For each domain, the analysis will identify the number of studies, the principal theories used, the research designs applied, the employee outcomes examined, and the direction of the reported findings. Studies reporting positive, negative, mixed, or statistically nonsignificant relationships will be distinguished. This procedure will prevent the review from treating all digital HR technologies as equivalent.

The final results should report the actual thematic frequencies and representative findings for each domain. For example, if HR analytics is frequently investigated in relation to managerial decision-making but rarely measured against individual task performance, that pattern should be reported as an evidence-distribution finding only after the coding results substantiate it.

b. Mechanisms Linking Digital HRM and Employee Performance

The second analytical dimension concerns the mechanisms through which Digital HRM may influence employee performance. The review will distinguish direct associations between digital HR practices and performance from relationships involving intervening mechanisms or contextual conditions.

Table 4. Analytical synthesis of potential performance mechanisms

Mechanism	Analytical focus	Evidence to extract
Digital competence and learning	Whether digital HR practices develop employees' job-relevant knowledge and skills	Competency measures, training outcomes, learning transfer, and performance associations
Employee motivation and engagement	Whether digital HR practices influence employees' willingness to invest effort in their work	Engagement, motivation, job satisfaction, and associated performance measures
Feedback and information	Whether digital systems improve the timeliness, clarity, and usability of	Feedback frequency, information quality, goal clarity, and employee

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accessibility	performance-related information	performance
Digital employee experience	Whether system usability, accessibility, and responsiveness support effective work	Perceived usefulness, user experience, technology acceptance, and employee outcomes
Employee autonomy and adaptive capability	Whether digital practices support discretion, learning, and adjustment to changing work requirements	Autonomy, adaptability, technology-related stress, and performance outcomes

Source: Authors' analytical framework based on the review objectives.

Each mechanism will be coded according to whether it is explicitly tested, discussed conceptually, or suggested as a future research direction. This distinction is essential because a mechanism proposed by a conceptual paper should not be reported as an empirically established mediator.

The final synthesis will also distinguish evidence on individual employee performance from evidence on organizational performance and HR service efficiency. This distinction is necessary because the improvement of an organization's administrative processes does not automatically establish an improvement in employee-level performance.

c. Implementation Challenges and Boundary Conditions

The review will classify the principal implementation challenges into technological, organizational, human, and ethical dimensions. These categories will be used to identify factors that may facilitate, constrain, or complicate the relationship between Digital HRM and employee performance.

Table 5. Classification of implementation challenges

Challenge category	Issues to be examined	Potential implications for employee outcomes
Technological	Inadequate infrastructure, system integration problems, reliability, and usability	Disruptions, additional work, or reduced system effectiveness
Organizational	Limited implementation readiness, weak leadership support, and insufficient resources	Uneven adoption and inconsistent use of digital HR practices
Human	Digital skill gaps, employee resistance, technology overload, and limited training	Difficulties in system use, employee strain, or reduced engagement
Ethical and governance	Privacy, algorithmic bias, transparency, accountability, and excessive monitoring	Concerns about fairness, trust, autonomy, and employee experience

Source: Authors' analytical classification informed by the scope of the reviewed literature.

The review will record whether each challenge is directly associated with a measured employee outcome, identified as an implementation barrier, or discussed as a conceptual concern. Where evidence is insufficient to establish a relationship with performance, the result will be reported as a research gap rather than as a demonstrated adverse effect.

d. Theoretical and Methodological Patterns

The included studies will also be classified according to their theoretical foundations and methodological approaches. The theoretical analysis will examine the use of the Resource-Based View, Ability–Motivation–Opportunity framework, technology-acceptance theories, Self-Determination Theory, and other relevant perspectives explicitly reported in the original articles.

The methodological analysis will record whether studies employ cross-sectional surveys, longitudinal designs, qualitative interviews, case studies, experiments, multi-source data, or evidence-synthesis methods. It will also document the extent to which the studies distinguish technology adoption from actual use and individual employee outcomes from organizational-level performance.

Table 6. Evidence-mapping matrix

Analytical dimension	Coding categories	Principal output

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Theoretical foundation	Strategic, behavioral, technology-acceptance, motivational, and integrated perspectives	Distribution of theories and identification of theoretical integration opportunities
Research design	Cross-sectional, longitudinal, qualitative, mixed methods, experimental, review-based	Methodological profile and design-related limitations
Level of analysis	Individual, team, HR function, organizational	Separation of employee-level and organizational-level evidence
Evidence direction	Positive, negative, mixed, nonsignificant, or insufficiently reported	Balanced synthesis of reported relationships
Context	Country, sector, organization type, and technological environment	Identification of contextual concentration and underrepresented settings
Future research	Theoretical, methodological, technological, contextual, and ethical priorities	Research agenda grounded in documented evidence gaps

Source: Authors' proposed evidence-extraction and synthesis framework.

The final results will report which theories and designs are most frequently represented in the included sample, alongside evidence of underrepresented perspectives. These findings will provide the empirical basis for assessing the explanatory coverage and limitations of current Digital HRM research.

4.1.4. Hypothesis Testing Results / Key Findings

The final synthesis will be organized to answer each research question explicitly.

Table 7. Research questions and synthesis outputs

Research question	Required analytical output
RQ1: What are the dominant themes and emerging technological trends?	Frequency and thematic distribution of technologies, HR practices, and publication trends
RQ2: Through what mechanisms and under what conditions does Digital HRM influence employee performance?	Synthesis of direct associations, proposed mechanisms, contextual factors, and the direction of findings
RQ3: What challenges constrain Digital HRM effectiveness?	Classification of technological, organizational, human, and ethical challenges and their documented implications
RQ4: What should future research prioritize?	Evidence-based research agenda covering theory, methods, outcomes, contexts, and emerging technologies

Source: Authors' synthesis plan.

The final version of this subsection will replace the proposed categories with actual findings from the coded articles. All frequencies, percentages, representative studies, and statements about the dominance of particular themes will be reported from the completed evidence base.

4.2. Research Discussion

4.2.1. Interpretation of Key Findings

a. Interpreting the Relationship Between Digital HRM and Employee Performance

The relationship between Digital HRM and employee performance should be interpreted as a multilevel and context-dependent phenomenon rather than a uniform consequence of technological adoption. Digital HR systems may improve the accessibility of information, facilitate HR service delivery, support employee learning, and provide performance-related feedback. Nevertheless, the extent to which these capabilities translate into better individual outcomes depends on whether the systems are appropriately implemented, accepted, and integrated into employees' daily work.

Zhou et al. (2022) provide an important foundation for this interpretation through their meta-analysis of e-HRM antecedents, consequences, and cross-national moderators. Their findings support the relevance of e-HRM to performance-related outcomes while highlighting variation across contexts. However, because organizational

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performance and individual employee performance are conceptually distinct, the findings cannot be generalized automatically to every employee-level outcome. The present review therefore treats the level of analysis as a central criterion when interpreting the evidence.

The distinction between digital infrastructure and effective utilization is equally important. Organizations may invest in sophisticated HR platforms without achieving corresponding improvements in employee performance if users lack the necessary skills, perceive the system as burdensome, or receive insufficient organizational support. Theres and Strohmeier (2024) demonstrate that the theoretical foundations of digital HRM acceptance and use remain fragmented, suggesting that adoption processes require more systematic explanation. Taken together, these perspectives support an interpretation in which Digital HRM represents an enabling capability whose performance implications depend on organizational and human factors.

The final review should establish whether this interpretation is supported consistently across the selected studies. In particular, it should distinguish technologies that primarily automate HR administration from those designed to develop employee competencies, support managerial decisions, or improve performance feedback. Such differentiation can reveal whether the mechanisms associated with Digital HRM vary according to the intended function of the technology.

b. Emerging Technological Trends and Their Implications

One important development in the literature is the expanding role of data-driven and AI-enabled technologies in HRM. Digital HR research increasingly encompasses integrated HR information systems, workforce analytics, AI-assisted decision-making, digital learning, and automated performance management. These technologies differ in their operational purposes and should not be assumed to generate identical employee outcomes.

Sakib et al. (2025) provide a broad overview of the evolution of Digital HRM through systematic review and bibliometric analysis. Their contribution establishes the growing conceptual breadth of the field and identifies directions for further research. However, mapping the intellectual development of Digital HRM is different from establishing the relative effectiveness of specific technologies in improving individual employee performance. The present review addresses this distinction by organizing technological trends around their relationship with employee outcomes.

Budhwar et al. (2023) similarly highlight the opportunities and uncertainties associated with generative AI in HRM. AI may support information processing, recruitment, talent management, and decision-making, but its consequences depend on the quality of the underlying information, the transparency of decision processes, and the organizational arrangements governing its use. These considerations are especially relevant when AI is applied to employee evaluation, performance monitoring, or career-related decisions.

The analytical implication is that technological sophistication should not be used as a proxy for effectiveness. A digital system should be evaluated according to its intended purpose, implementation quality, and documented outcomes. For example, an HR analytics platform may improve the information available to managers, but the resulting employee performance implications depend on how that information informs training, work allocation, feedback, or other management practices.

The review should therefore distinguish three analytical levels: technological capability, HR practice transformation, and employee-level outcomes. This distinction can help explain why the introduction of a new technology may improve administrative efficiency without producing a demonstrable improvement in task performance, engagement, or adaptability.

c. Employee-Related Mechanisms: Integrating RBV, AMO, UTAUT, and SDT

A major theoretical implication of this review is the need to integrate strategic, behavioral, and technology-acceptance perspectives when explaining the relationship between Digital HRM and employee performance.

From the Resource-Based View, digital HR capabilities can be interpreted as strategic resources that create value when integrated with employee knowledge, organizational processes, and complementary managerial capabilities. The acquisition of digital technology alone is insufficient to establish a competitive advantage. The value of

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digital resources depends on their effective combination with human capital and organizational practices.

The AMO framework provides a more direct explanation of employee-level mechanisms. Digital learning can strengthen ability, supportive feedback and fair HR processes may contribute to motivation, and accessible information systems can create opportunities for effective work. This perspective suggests that digital HR practices should be assessed according to the capabilities they develop and the conditions they create for employees to perform, rather than solely according to their degree of automation.

UTAUT complements this explanation by focusing on the acceptance and use of technology. Theres and Strohmeier (2024) demonstrate the importance of consolidating theoretical explanations of digital HRM acceptance and use. However, acceptance and usage are intermediate phenomena rather than definitive measures of employee performance. A system may be widely used because its adoption is mandatory, while its usefulness for improving actual work outcomes remains uncertain.

Finally, SDT highlights the importance of autonomy, competence, and relatedness in technology-mediated work environments. Digital HR systems may support employee development and access to information, but highly restrictive monitoring or opaque algorithmic decisions may create tensions between managerial control and employee autonomy. Budhwar et al. (2023) identify ethical and organizational uncertainties associated with generative AI, reinforcing the importance of examining employee experience alongside technological benefits.

Integrating these perspectives enables the review to develop a more comprehensive explanatory framework. The RBV explains the strategic value of digital capabilities, AMO explains the mechanisms through which HR practices may influence employee performance, UTAUT addresses the acceptance and use of digital systems, and SDT helps interpret employee motivation and responses to digital work arrangements. The final synthesis should assess which of these theoretical relationships are directly supported by the included studies and where empirical validation remains limited.

d. Digital HRM Challenges and the Possibility of Unintended Consequences

The performance implications of Digital HRM must also be evaluated in light of implementation challenges. Digital systems may improve information accessibility and decision support, but their effects can be constrained by digital skill gaps, inadequate infrastructure, employee resistance, poor system integration, and limited organizational readiness. These issues can reduce the effectiveness of digital initiatives even when the underlying technology is technically sophisticated.

Ethical challenges are particularly relevant to AI-enabled HRM. Algorithmic decisions may raise concerns about transparency, bias, privacy, and accountability. Digital performance monitoring can also create tension between the need for managerial information and employees' expectations of autonomy and fair treatment. Budhwar et al. (2023) emphasize that AI introduces both opportunities and significant uncertainties into HR practices and employee relations.

These challenges should not be treated as evidence that Digital HRM necessarily reduces employee performance. Rather, they represent potential boundary conditions and implementation risks that require empirical examination. The review should differentiate between documented adverse outcomes, employee perceptions of potential risks, and theoretical concerns that have not yet been tested adequately.

This distinction is important for maintaining analytical rigor. If a study identifies privacy concerns but does not measure employee performance, the review should report the ethical concern as a finding while avoiding the unsupported conclusion that privacy concerns caused lower performance. Similarly, studies reporting negative associations should be interpreted in relation to their design, measures, sample characteristics, and contextual conditions.

The resulting implication is that responsible Digital HRM requires both technological effectiveness and appropriate governance. Organizations need to consider data protection, transparency, employee participation, clear accountability, and opportunities for human review when designing digital HR processes. Such practices may help reduce implementation risks, although their effects on employee performance should be established through relevant evidence rather than

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assumed.

4.2.2. Comparison with Previous Studies

The findings are consistent with Zhou et al. (2022), who identified a positive relationship between e-HRM and performance while emphasizing the influence of national ICT development and human-capital conditions. However, the present review provides a more focused analytical perspective by distinguishing individual employee performance from organizational outcomes and examining multiple technological dimensions and employee-related mechanisms.

Theres and Strohmeier (2024) concentrated on the theoretical foundations of digital HRM acceptance and use, identifying fragmentation in the existing literature. The present review extends this discussion by connecting technology acceptance with employee-level performance outcomes, including competence, motivation, feedback, and adaptive capability.

Furthermore, Sakib et al. (2025) mapped the intellectual development of Digital HRM through systematic review and bibliometric analysis. Their contribution provides an overview of the conceptual development and emerging research directions of the field. The present study complements this perspective by emphasizing the relationship between technological developments, employee-related mechanisms, implementation challenges, and performance outcomes.

Budhwar et al. (2023) identified opportunities and uncertainties associated with generative AI in HRM, particularly regarding information processing, ethical decision-making, privacy, and employee relations. These findings reinforce the importance of evaluating digital technologies through both technological effectiveness and employee-centered considerations.

Ali et al. (2026) further demonstrated that AI-driven HRM digitization can influence employee innovation through metacognitive strategies, with the relationship depending on employees' tacit knowledge awareness. Although innovation is not equivalent to overall employee performance, this evidence supports the argument that the effects of digital HR technologies depend on intervening mechanisms and employee characteristics.

A further relevant comparison is provided by *Redesigning HRM for the Digital Era: Evidence from a Systematic Literature Review* (2026), which examines the transformation of HRM through digital technologies, including employee productivity and organizational adaptability. Although its scope overlaps with the present study, the contribution of this review is positioned around the more specific integration of employee-level performance, explanatory mechanisms, implementation challenges, and future research priorities.

4.2.3. Theoretical Contributions

The study contributes to the theoretical understanding of Digital HRM by integrating the Resource-Based View (RBV), Ability–Motivation–Opportunity (AMO) framework, Unified Theory of Acceptance and Use of Technology (UTAUT), and Self-Determination Theory (SDT).

From the RBV perspective, digital HR capabilities represent strategic organizational resources that create value when integrated with employee knowledge, organizational processes, and complementary managerial capabilities. The AMO framework explains how digital HR practices may improve employee performance through the development of abilities, motivation, and opportunities to perform. UTAUT explains the acceptance and actual utilization of digital systems, while SDT highlights the importance of autonomy, competence, and relatedness in technology-mediated work environments.

The integration of these perspectives provides a broader explanation of why similar digital technologies may produce different outcomes across organizations and employee groups. It also demonstrates that technological sophistication alone is insufficient to explain performance improvements. Instead, the strategic value of Digital HRM depends on the interaction between technological resources, employee capabilities, technology acceptance, and motivational conditions.

4.2.4. Practical and Policy Implications

The findings provide several implications for HR managers, organizational leaders, technology developers, and policymakers. For HR managers, digital investments should be aligned with clearly defined employee-related objectives, such as improving administrative efficiency, developing employee competencies, facilitating feedback,

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supporting workforce planning, and improving task performance.

For organizational leaders, Digital HRM implementation should involve employee training, effective communication, employee participation, and continuous evaluation of system usability. Performance evaluation should distinguish between improvements in digital administrative processes and actual improvements in employee outcomes.

For technology developers and HR analytics teams, system design should prioritize data quality, transparency, security, accessibility, and responsible data governance. Automated recommendations should be evaluated for accuracy and fairness, while consequential employment decisions should incorporate appropriate oversight and accountability.

For policymakers, the increasing application of AI-enabled HRM highlights the importance of governance arrangements concerning employee data protection, algorithmic accountability, transparency, and protection against discriminatory practices. These measures can support responsible technological innovation while maintaining appropriate safeguards for employees.

4.2.5. Integration with the Research Gap

This study addresses the identified research gaps by organizing the literature around individual employee performance rather than treating all Digital HRM outcomes as interchangeable. Previous studies have examined technology adoption, organizational performance, and the theoretical foundations of digital HRM, but the relationship between technological practices and individual employee outcomes requires a more integrated analytical perspective.

The review also addresses theoretical fragmentation by integrating strategic, behavioral, technology-acceptance, and motivational perspectives. Furthermore, it connects emerging technologies with employee-related mechanisms and implementation challenges, providing a broader understanding of the conditions under which Digital HRM may support or constrain employee performance.

The study therefore contributes an integrated analytical framework that distinguishes technological inputs, employee-related mechanisms, implementation conditions, and performance outcomes. Its originality lies in this employee-performance-centered synthesis rather than in claiming that Digital HRM has not previously been examined through systematic reviews.

4.2.6. Acknowledgement of Study Limitations

The interpretation of the findings should consider differences in research designs, construct measurements, sectoral contexts, and employee performance definitions across the reviewed literature. Studies using cross-sectional designs or self-reported measures may limit the ability to establish causal relationships. Similarly, findings concerning organizational performance should not be interpreted as direct evidence of individual employee performance.

The review may also be affected by publication and language bias, incomplete reporting, and uneven geographical or industry representation. Furthermore, rapid developments in AI and other digital technologies may influence the relevance of the conclusions beyond the final search date.

These limitations require cautious interpretation and emphasize the importance of distinguishing consistent empirical findings from preliminary evidence, inconsistent relationships, and theoretical propositions that require further investigation.

5. Conclusion

This systematic literature review examines the evolving relationship between digital human resource management (Digital HRM) and employee performance, with particular attention to emerging technological trends, underlying mechanisms, implementation challenges, and future research directions. The review positions Digital HRM as more than the digitization of traditional human resource management (HRM) processes. Rather, it represents a broader transformation in how organizations acquire, manage, develop, evaluate, and support their employees through digital technologies. The overall contribution of this study lies in integrating the technological, organizational, and human dimensions of Digital HRM into a coherent framework for understanding its potential implications for employee performance. However, the benefits of digital transformation should not be assumed to be automatic, as their realization depends on implementation quality, employee acceptance, organizational readiness, and appropriate

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governance.

5.1. Summary of Key Findings

The synthesis highlights five interconnected areas relevant to understanding Digital HRM and employee performance. First, the development of Digital HRM increasingly encompasses integrated human resource information systems, HR analytics, artificial intelligence (AI)-enabled HR processes, digital learning platforms, and digital performance management. These technologies can improve the accessibility, efficiency, and responsiveness of HR services while supporting more informed managerial decisions. Second, the relationship between Digital HRM and employee performance is best understood as a process rather than a simple direct association. Digital technologies may influence performance through intermediate mechanisms, including digital competence, access to learning opportunities, employee engagement, motivation, feedback quality, and the overall digital employee experience. Consequently, technology adoption alone is insufficient to establish performance improvement.
Third, the review identifies implementation challenges that require organizational attention. These include employees' digital skills gaps, resistance to technological change, system usability, data privacy concerns, algorithmic bias, perceived surveillance, and unequal access to digital resources. Such challenges may weaken the potential benefits of Digital HRM if they are not addressed through appropriate organizational practices and governance arrangements. Fourth, the implications of Digital HRM may vary according to organizational context, job characteristics, leadership support, employee readiness, and the level of digital maturity. The relationship between digital HR practices and employee performance should therefore be examined in relation to contextual conditions rather than treated as universally consistent across organizations.

Finally, the review highlights the need for more integrated and methodologically rigorous research. Future studies should distinguish between technology adoption, the actual use of digital HR systems, employee perceptions of these systems, and measurable performance outcomes. This distinction is essential for explaining when, how, and under what conditions Digital HRM contributes to individual and organizational effectiveness.

5.2. Theoretical Contributions

This study contributes to the Digital HRM literature by bringing together complementary theoretical perspectives to explain the relationship between digital HR practices and employee performance. From the resource-based view (RBV), digital HR capabilities may be understood as organizational resources whose value depends on how effectively they are combined with human expertise, organizational routines, and complementary capabilities. Digital infrastructure alone may not provide a sustained advantage unless organizations develop the capabilities required to use it effectively.

The ability–motivation–opportunity (AMO) framework provides a complementary explanation of how Digital HRM may influence performance. Digital learning and development can strengthen employee ability, digitally enabled recognition and feedback may support motivation, and accessible HR platforms may expand opportunities for participation and collaboration. This perspective emphasizes that digital.

5.3. Practical and Policy Implications

The findings provide several implications for HR managers, organizational leaders, technology developers, and policymakers. For HR managers, digital technology investments should be aligned with clearly defined employee-related objectives, including administrative efficiency, competency development, performance feedback, workforce planning, and employee productivity. Organizations should evaluate digital HR initiatives based on measurable employee outcomes rather than the extent of technology adoption alone.

For organizational leaders, successful Digital HRM implementation requires adequate digital infrastructure, employee training, organizational support, effective communication, and continuous evaluation of system usability. Employees should also be involved in digital transformation initiatives to ensure that technological changes support their work requirements and professional development.

For technology developers and HR analytics teams, system design should prioritize data quality, accessibility, security, transparency, and responsible data governance. AI-enabled recruitment, performance evaluation, and workforce management

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should incorporate appropriate safeguards against algorithmic bias and discriminatory decision-making.

For policymakers, the increasing application of AI-enabled HRM highlights the importance of regulations and governance arrangements concerning employee data protection, algorithmic accountability, transparency, privacy, and fairness. These measures are necessary to encourage responsible technological innovation while protecting employee rights and maintaining appropriate organizational accountability.

5.4. Limitations of the Study

Despite its contributions, this study has several limitations that should be considered when interpreting its findings. First, the scope of the review is limited to publications concerning Digital HRM and employee performance within the selected review period of 2021–2026. Consequently, relevant studies published outside this period may not be fully represented.

Second, the reviewed literature may differ in research designs, construct measurements, geographical contexts, organizational sectors, and definitions of employee performance. These differences limit the comparability of findings and require caution when generalizing conclusions across different organizational environments.

Third, the rapid development of artificial intelligence and other digital technologies may affect the continued relevance of the findings, particularly as new applications and organizational practices emerge. Furthermore, uneven representation across geographical regions and industries may limit the applicability of the synthesis to underrepresented organizational contexts.

These limitations do not diminish the contribution of the study but highlight the need to interpret the findings according to the scope and characteristics of the available evidence.

5.5. Directions for Future Research

Future research should further investigate the relationship between Digital HRM and employee performance through several directions. First, researchers should distinguish between different dimensions of employee performance, including task performance, contextual performance, adaptive performance, and innovation-related outcomes. This distinction would provide a more precise understanding of how different digital HR practices contribute to employee effectiveness.

Second, future studies should examine the mechanisms connecting Digital HRM with employee performance, particularly digital competence, employee motivation, engagement, technology acceptance, feedback quality, and employee autonomy. Longitudinal, multi-source, experimental, and quasi-experimental research designs could provide stronger evidence regarding the relationships between digital HR practices and employee outcomes.

Third, further research should investigate differences across organizational contexts, including public and private organizations, industries, occupational groups, and countries with different levels of digital infrastructure and organizational readiness. This would help establish the contextual conditions under which Digital HRM produces more effective outcomes.

Fourth, future studies should examine responsible AI-enabled HRM, particularly the relationships among algorithmic transparency, employee trust, privacy, fairness, autonomy, and performance. These investigations are important for understanding how organizations can balance technological efficiency with employee well-being and appropriate governance.

Finally, future research should strengthen theoretical integration by combining strategic capability perspectives with behavioral, motivational, and technology-acceptance theories. Such integration may provide a more comprehensive explanation of how digital HR practices translate into employee performance and under what conditions these relationships become more effective.

Overall, further research is needed to establish a more comprehensive understanding of Digital HRM as an organizational capability that integrates technological innovation, human resource development, employee experience, and responsible governance. By addressing these directions, future studies can strengthen the theoretical and empirical foundations of Digital HRM and provide more actionable insights for improving employee performance in increasingly digital organizational environments.

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