

A SYSTEMATIC REVIEW OF THE EFFECTS OF TALENT, DIGITAL TRAINING, AND CAREER DEVELOPMENT ON PERFORMANCE THROUGH JOB COMPETENCY

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Abstract

This article aims to systematically examine the relationship between talent development, digital skills training, and career advancement opportunities on employee performance, with job competency serving as an intervening variable. The approach employed is a Systematic Literature Review (SLR) based on the PRISMA protocol, analyzing 67 Scopus-indexed scientific articles published within the last five years. The synthesis results reveal that all three core variables consistently contribute positively to performance improvement, both directly and indirectly through job competency. The findings also highlight that most existing studies remain fragmented and have not yet fully integrated a comprehensive multi-path mediation model. Furthermore, there is a prevailing tendency toward descriptive approaches and a lack of cross-cultural and cross-sectoral empirical testing. This study proposes a new conceptual model based on the integration of strategic HRM variables and offers a theoretical contribution to the development of competency-based performance frameworks. The practical implications are directed toward organizations in designing adaptive, digital-based, and sustainability-oriented human resource development strategies.

Keywords: *Talent development, Digital skills training, Career advancement opportunities, Job competency, Employee performance, Systematic Literature Review.*

Introduction

In the era of digital transformation and increasingly complex globalization dynamics, the role of human resource management (HRM) has shifted from an administrative function to a core strategic element for building sustainable competitive advantage. Organizations are required to ensure that each individual not only adapts effectively but also contributes optimally toward achieving strategic goals. In this context, talent development, digital skills training, and career advancement opportunities serve as key pillars within an HRM framework responsive to disruption. Talent development has been shown to contribute significantly to enhancing employee capability and productivity (Sandeepanie et al., 2024; Pham-Duc et al., 2023; Razali et al., 2024; Zairbani & Prakash, 2025). With the accelerating pace of digitalization, digital training is considered effective in improving both efficiency and work performance (Shiferaw & Birbirs, 2025; Sánchez-Canut & Usart-Rodríguez, 2023; Ma et al., 2025; Fernández-Luque et al., 2021; Revuelta-Domínguez & Guerra-Antequera, 2022). Meanwhile, career advancement opportunities have been associated with increased employee loyalty and motivation (Kaul et al., 2024; Hladchenko, 2022; Dvorakova, 2022; Zakaria et al., 2024; Soehaditama et al., 2024).

Despite the growing body of literature on this topic, several research gaps remain. First, most existing studies are partial and have not yet integrated all three variables simultaneously (Churiyah et al., 2024; Martínez Aragón & Morales, 2023). Second, the role of job competency as a mediating variable has not been thoroughly explored (Lusa et al., 2023). Third, evidence-based systematic approaches are still limited (Mohanty & Christopher, 2024). Fourth, studies on employee engagement have not comprehensively linked talent development and career dimensions (Khan & Singh, 2025). Fifth, learning organizations have yet to emphasize the integration of competency, digital training, and career development (Martínez Aragón & Morales, 2023). Sixth, synergy between digital leadership, training, and career development remains minimal (Chiarini et al., 2023). Seventh, a holistic approach that combines the aspects of talent–technology–career is still rarely observed (Khaw et al., 2022). Eighth,

multicultural and gender aspects continue to receive insufficient attention in organizational performance research (Mohammadi et al., 2023; de las Heras-Pedrosa et al., 2024). Ninth, the impact of burnout as a consequence of digital skills, competencies, and performance has not been extensively explored (Amri et al., 2025). Tenth, studies on work behavior and satisfaction remain limited to conceptual approaches without integrating career and training elements (Pratama et al., 2023). Eleventh, the theoretical construction surrounding work-life balance and career remains underdeveloped (Zakaria et al., 2024). Twelfth, the contribution of digital skills and career development to performance in the tourism sector has yet to be elaborated comprehensively (Pan, 2020).

In response to these background issues and research gaps, this article aims to systematically examine the relationship between talent development, digital skills training, and career advancement opportunities on employee performance, with job competency serving as an intervening variable. The research is centered on three key questions: 1) What are the patterns of relationships between talent development, digital skills training, and career advancement opportunities with employee performance in the scholarly literature?; 2) What is the mediating role of job competency in bridging these relationships?; 3) How have the methodologies, variables, and theoretical approaches used in related studies evolved over the past five years?

Research Method

This study employs a Systematic Literature Review (SLR) approach to trace, evaluate, and synthesize scientific findings concerning the influence of talent development, digital skills training, and career advancement opportunities on employee performance, with job competency as an intervening variable. This approach was chosen for its ability to provide a systematic, transparent, and replicable foundation for both theoretical and practical synthesis (Snyder, 2019; Tranfield et al., 2003; Page et al., 2021).

The SLR was conducted manually. Literature was sourced from the Scopus database using the following combinative keywords: "Talent Development AND employee performance", "Digital Skills Training AND employee performance", "Career Advancement AND employee performance", and "Job Competency employee performance", with Boolean operators applied (Gough, Oliver, & Thomas, 2017). Inclusion criteria included peer-reviewed articles published between 2019 and 2024 that are relevant to the focus of the study and available in full-text format. The analysis was carried out narratively and thematically through a critical content review of the articles. Classification was based on publication year, research methods, journal origin, and major conceptual themes. The thematic approach was guided by the Braun and Clarke (2021) framework to regularly identify patterns and themes within the literature.

Results and Discussion

A. General Description of the Literature

Theme 1: Organizational Agility & Employee Resilience

A systematic review of 16 international scientific articles published between 2020 and 2025 reveals that talent development has evolved into a central strategy in driving productivity, innovation, and sustainable organizational performance. The literature analyzed reflects a rich conceptual foundation, diverse methodological approaches, and varied theoretical perspectives in the discourse of contemporary human resource management. A significant surge in publications has occurred over the past five years, particularly in 2023 and 2024, as evidenced by the works of Martínez Aragón and Morales (2023), Lusa et al. (2023), Mohammadi et al. (2023), and de las Heras-Pedrosa (2024), which underscores the strategic linkage between talent development and organizational performance. The most recent trend in 2025, as indicated by Zairbani and Prakash (2025) and Khan and Singh (2025), emphasizes the integration of talent development into frameworks of competitive advantage and digitally driven engagement.

Methodologically, most articles adopt a Systematic Literature Review (SLR) approach, as seen in studies by Churiyah et al. (2024), Khaw et al. (2022), and Martínez Aragón and Morales (2023). Other studies employ bibliometric analysis to broadly map research directions and trends, such as those conducted by Razali et al. (2024), Pham-Duc et al. (2023), and Khan and Singh (2025). A qualitative approach is present in the study by Atiya et al. (2024), which explores the relationship between work ethics and talent development in relation to productivity. Meanwhile, a mixed-methods approach, as seen in Sudirman et al. (2023), provides a more comprehensive analysis through a combination of SLR and bibliometric methods.

These articles were published in high-impact journals, the majority classified in Q1 and Q2 categories, as demonstrated by Mohanty and Christopher (2024) and Razali et al. (2024), reflecting recognized academic quality within the global scholarly community. From a geographical perspective, these studies represent a cross-regional distribution—Europe, Asia, and the Middle East. Contributions from Vietnam and Iran are evident in the works of Pham-Duc et al. (2023) and Mohammadi et al. (2023), while Indonesia's relevance is underscored through the studies by Churiyah et al. (2024) and Sudirman et al. (2023), reinforcing the local and global relevance of talent development.

Thematic mapping revealed five major currents in the discourse on talent development. First, talent development as an organizational strategy is examined in the works of Zairbani and Prakash (2025), Wibowo et al. (2020), and Lusa et al. (2023), emphasizing its role in achieving competitive advantage. Second, the integration of talent development and technology is addressed in the studies of Khaw et al. (2022) and Chiarini et al. (2023), highlighting the role of digital transformation in HR management. Third, the contribution of leadership in talent development is elaborated in Wibowo et al. (2020) and Kustiwi (2024), focusing on the importance of authentic and green leadership in driving performance. Fourth, the dimensions of diversity and work ethics are discussed in Mohammadi et al. (2023), Atiya et al. (2024), and de las Heras-Pedrosa (2024), emphasizing the need for cultural value harmonization. Fifth, talent development as part of organizational learning is presented in the articles by Martínez Aragón and Morales (2023) and Sudirman et al. (2023), showing the contribution of learning organizations to productivity.

Theme 2: Digital Skills Training and Employee Performance

Digital transformation has prompted organizations to reformulate their HRM strategies, positioning digital skills training as a strategic instrument to enhance workforce efficiency, productivity, and adaptability. Based on a systematic analysis of 14 Scopus-indexed scientific articles, digital training has been proven to be a critical foundation in supporting performance improvements across various sectors, including education, healthcare, technology, and organizational management. Most publications originate from the 2022–2025 period, reflecting growing academic interest in this issue, particularly in the post-pandemic context. Early studies by Revuelta-Domínguez and Guerra-Antequera (2022), Basantes-Andrade and Casillas-Martín (2022), and Karakose et al. (2022) laid the groundwork for mapping the connection between digital competence and work performance. This trend continues in the works of Sánchez-Canut and Usart-Rodríguez (2023), Ma et al. (2025), Shiferaw and Birbirsa (2025), and Amri et al. (2025), which reaffirms the relevance of digital training in enhancing self-efficacy and productivity.

From a methodological standpoint, Systematic Literature Review (SLR) dominates in 15 articles, including studies by Sánchez-Canut and Usart-Rodríguez (2023), Shiferaw and Birbirsa (2025), and Khaw et al. (2022). Several articles adopt a bibliometric approach, such as those by Santi and Kustiawan (2023), Karakose et al. (2022), and Guerra-Antequera (2022), while Amri et al. (2025) employ a mixed-methods design. Qualitative approaches and traditional literature reviews also appear in studies such as Reyes and Morales (2021). The majority of the articles are published in reputable (Q1 and Q2) journals, with institutional contributions from countries such as Spain, Ethiopia, Indonesia, Colombia, and Turkey. Studies by Khaw et al. (2022), Sánchez-Canut and Usart-Rodríguez (2023), and Basantes-Andrade and Casillas-Martín (2022) strengthen the argument for the central role of digital training in global HR development.

Five major thematic categories are identified in the literature mapping. First, Digital Skills Training for Operational Efficiency (Shiferaw & Birbirsa, 2025; Sánchez-Canut & Usart-Rodríguez, 2023). Second, Digital Training and Work Self-Efficacy (Ma et al., 2025; Amri et al., 2025; Kassaw et al., 2024). Third, Digital Training in Modern HR Practices (Khaw et al., 2022; Shiferaw & Birbirsa, 2025). Fourth, Digital Competence in Education and Health Sectors (Fernández-Luque et al., 2021; Revuelta-Domínguez & Guerra-Antequera, 2022; Novoa-Hernández et al., 2022). Fifth, Digital Training for Transferable Skills and Adaptability (Kassaw et al., 2024; Reyes & Morales, 2021). All findings affirm that digital training is a key element in strengthening employee performance and readiness to face the dynamics of today's technological work environment.

Theme 3: Career Advancement Opportunities and Employee Performance

Career advancement opportunities represent a strategic instrument for building loyalty, enhancing intrinsic motivation, and promoting employee engagement, which directly impacts performance improvement. A structured career system not only reinforces individual goal orientation but also shapes a more meaningful professional identity. This systematic review affirms the significant role of career advancement as a determinant of performance through an examination of 19 reputable scientific articles published between 2020 and 2025, all sourced from Scopus-indexed journals. Most publications are from 2022–2024, with peak contributions in 2023–2024, indicating heightened scholarly interest in the topic (Suwardi et al., 2023; Dvorakova, 2022; Zakaria et al., 2024; Kaul et al., 2024; Maral, 2024). Bibliometric methodologies dominate in 12 articles, such as those by Zakaria et al. (2024), Ay (2025), Rodríguez et al. (2022), Kosyakov and Pislyakov (2024), and Kişi (2023). Empirical quantitative approaches are used in six studies (Suwardi et al., 2023; Kaul et al., 2024; Soehaditama et al., 2024; Ayodele and Chang-Richards, 2020), while qualitative approaches are found in the works of Hladchenko (2022), Dvorakova (2022), and Hidayat et al. (2023). Some studies also combine SLR with bibliometrics, as seen in Pham-Duc et al. (2023).

Geographically, the articles come from Q1 and Q2 journals with representation from Eastern Europe, Southeast Asia, and Latin America, highlighting the relevance of career opportunities in various global organizational contexts (Dvorakova, 2022; Rodríguez et al., 2022; Cruz-Ausejo and Vera-Ponce, 2023). Thematic synthesis reveals five key clusters. First, career advancement as a driver of work productivity (Suwardi et al., 2023; Maral, 2024; Ayodele and Chang-Richards, 2020). Second, the role of career opportunities in academic and scientific publication contexts (Hladchenko, 2022; Sasvari et al., 2022; Kosyakov and Pislyakov, 2024; As-Salafiyah and Rusydiana, 2023). Third, the relationship between career growth, psychological empowerment, and employee engagement (Kaul et al., 2024; Kişi, 2023). Fourth, the link between quality of work life and career development (Zakaria et al., 2024; Soehaditama et al., 2024; Cruz-Ausejo and Vera-Ponce, 2023). Fifth, the concepts of sustainable careers and green jobs as long-term, future-oriented career dimensions (Kozar and Sulich, 2023).

Theme 4: Job Satisfaction and Employee Performance

Job satisfaction is a fundamental determinant in the development of both individual and organizational performance. It reflects not only employees' psychological conditions but also the quality of organizational work systems. Based on a systematic review of 20 reputable scientific articles published between 2020 and 2025, job satisfaction is proven to play a strategic role in enhancing work effectiveness, loyalty, and organizational outcomes across sectors, including higher education, healthcare, the public sector, and tourism.

Most publications are from 2023–2024, reflecting heightened scholarly focus on this issue (Suwardi et al., 2023; Putra et al., 2023; Pratama et al., 2023; Soehaditama et al., 2024; de las Heras-Pedrosa, 2024). The methodological approaches are diverse, ranging from empirical quantitative methods (Hamed, 2023; Mgammal & Al-Matari, 2021; Suwardi et al., 2023), systematic/literature reviews (Holúbek & Rózsa, 2023; Gutiérrez-Banegas, 2022; Soehaditama et al., 2024), bibliometric analyzes (Zakaria et al., 2024; Kişi, 2023; Resende et al., 2023), to conceptual review combinations (Pan, 2020; Chang et al., 2025). Most articles come from Q1–Q2 Scopus-indexed journals, with institutional contributions from Spain, Indonesia, Turkey, Peru, Slovakia, and Malaysia, reinforcing job satisfaction as a global research agenda.

Thematic analysis identifies five key clusters. First, job satisfaction as a driver of intrinsic motivation and psychological performance (Alper Ay, 2025; Mgammal & Al-Matari, 2021; Putra et al., 2023). Second, its contribution to service quality improvements in the public and healthcare sectors (Hamed, 2023; Cruz-Ausejo & Vera-Ponce, 2023; Chang et al., 2025). Third, its relationship with empowerment and leadership styles in driving work effectiveness (Chiarini et al., 2023; Suwardi et al., 2023). Fourth, job satisfaction as an outcome of work-life balance and a supportive work environment (Zakaria et al., 2024; Gutiérrez-Banegas, 2022). Fifth, its role in promoting organizational inclusiveness and diversity-based productivity (de las Heras-Pedrosa, 2024).

Thematic Analysis: Clustering Based on Variable Focus

Theme 1: Career Development and Employee Performance

Career development has emerged as a strategic pillar in performance-based human resource management. The analyzed systematic literature confirms that career development is not merely about job progression, but serves as a foundation for building motivation, engagement, and work productivity. An analysis of 16 selected articles identifies several thematic clusters that elaborate the linkage between career development and employee performance.

The first cluster, “Career Development as a Strategic Instrument for Performance Enhancement,” is highlighted in studies by Sandeepanie et al. (2024) and Zairbani & Prakash (2025), which show that career development contributes to shaping systems that enhance work quality, directly influencing organizational outcomes. Razali et al. (2024) also affirm the effectiveness of talent management in boosting academic productivity. Career development is increasingly embedded in macro-organizational policies, no longer limited to the individual domain.

The second cluster, “Technological Transformation and Digitalization in Career Development,” is discussed by Khaw et al. (2022) and Chiarini et al. (2023), who emphasizes how the digital environment expands access to training and opens new adaptive career paths. The gamification approach highlighted by Mohanty & Christopher (2024) strengthens employee engagement through gamified learning, proven to enhance self-development and performance.

The third cluster, “Learning Organization and Knowledge Management,” is addressed by Martínez Aragón & Morales (2023) and Lusa et al. (2023), who underscore the importance of integrating organizational learning and career development. This model promotes horizontal competency enhancement through collaboration and knowledge sharing, reinforcing collective performance.

The fourth cluster, “The Role of Leadership and Cultural Values,” appears in studies by Wibowo et al. (2020), Kustiwi (2024), and Atiya et al. (2024), emphasizing that the effectiveness of career development is heavily

influenced by leadership styles, including authentic leadership, green leadership, and value-based work ethics such as Islamic work ethics, which are shown to strengthen loyalty and productivity.

The fifth cluster, “Inclusive and Diversity-Based Careers,” is explored in the works of Mohammadi et al. (2023) and de las Heras-Pedrosa (2024), highlighting the urgency of incorporating gender, cultural, and background diversity in career system design. Inclusive careers are shown to support sustainable performance improvement.

The sixth cluster, “Project-Based Learning as a Tool for Career Development,” is illustrated in Sudirman et al. (2023), showing that project-based learning in real work environments is effective in developing applied competencies that contribute directly to improved work output.

The seventh cluster, “Career Development within Competitive Advantage Strategies,” is supported by Zairbani & Prakash (2025) and Pham-Duc et al. (2023), who assert that career development should be part of strategic organizational planning to shape unique, inimitable capabilities.

These findings reinforce the position of career development as a key catalyst in forming superior performance and organizational competitiveness. Adaptive, participative, and value-based career strategies reflect not only technocratic approaches but also encompass psychological, cultural, and structural dimensions within modern management systems.

Theme 2: Digital Skills Training and Employee Performance

Digital transformation has had a significant impact on human resource management practices. One strategic dimension of this change is digital skills training as a means of competence development to support improved organizational performance. Based on a systematic analysis of 14 Scopus-indexed scientific articles published between 2021 and 2025, several thematic clusters were identified reflecting the contribution of digital training to employee performance.

The first cluster highlights digital training as a driver of work efficiency and organizational productivity. Studies by Sánchez-Canut and Usart-Rodríguez (2023), Shiferaw and Birbirsa (2025), and Ma et al. (2025) show that improved digital competence contributes to work output, process efficiency, and team collaboration. Notably, Sánchez-Canut and Usart-Rodríguez (2023) emphasize the importance of professional digital competence in fostering adaptive work environments.

The second cluster emphasizes the role of digital training in shaping self-efficacy and psychological resilience. Research by Amri et al. (2025), Ma et al. (2025), and Kassaw et al. (2024) revealed that digital training enhances not only technical aspects but also builds confidence, self-efficacy, and intrinsic motivation. In this context, digital training becomes a tool for psychological empowerment that contributes to sustained performance.

The third cluster demonstrates the integration of digital training into modern HRM practices. Studies by Shiferaw and Birbirsa (2025), Karakose et al. (2022), and Khaw et al. (2022) show that digital training has become an inherent part of responsive and agile digital work systems. In addition to supporting individual efficiency, such as training strengthens digital leadership, accelerates technological adaptation, and shapes a flexible and productive workforce.

The fourth cluster underscores the relevance of digital training in the education and public service sectors. Revuelta-Domínguez and Guerra-Antequera (2022), Fernández-Luque et al. (2021), and Novoa-Hernández et al. (2022) show that strengthening the digital competence of educators and healthcare workers impacts service quality, management effectiveness, and cross-functional performance.

The fifth cluster emphasizes digital training as a means for developing transferable and cross-functional skills. Kassaw et al. (2024) and Reyes and Morales (2021) argue that digital training not only teaches specific skills but also prepares individuals to navigate dynamic work contexts, creating multi-competent and adaptive human resources.

The sixth cluster reflects the importance of digital training standardization as a strategy for enhancing HR quality. Basantes-Andrade and Casillas-Martín (2022) and Sánchez-Canut and Usart-Rodríguez (2023) stress that training frameworks based on digital competency standards support performance consistency and development program effectiveness.

This synthesis confirms that digital skills training is a strategic element in achieving sustainable performance. It enhances not only technical capabilities but also psychological aspects, operational efficiency, and preparedness for technological disruption. Therefore, organizations that integrate digital training into their HR development strategies will gain a competitive advantage in facing the challenges of Industry 5.0.

Theme 3: Career Advancement Opportunities and Employee Performance

Career advancement opportunities are a strategic element in performance-oriented modern human resource management. Contemporary scientific literature shows that structured career systems not only strengthen work motivation but also have a direct impact on both individual and organizational work effectiveness. Based on a systematic mapping of 19 international scientific articles published between 2020 and 2025, several thematic clusters have been identified that confirm the contribution of career advancement to employee performance.

The first cluster highlights career advancement as a driver of motivation and psychological empowerment. Kaul et al. (2024) show that career opportunities strengthen psychological empowerment, which in turn enhances performance. Alper Ay (2025) emphasizes that career growth boosts work motivation and productivity. Kişi (2023) adds that career opportunities improve employee engagement, a key predictor of organizational performance.

The second cluster situations career advancement within the academic context and scientific productivity. Hladchenko (2022) and Dvorakova (2022) show that a clear career system in academic institutions promotes higher research output. Sasvari et al. (2022), Rodríguez et al. (2022), and Kosyakov & Pilyakov (2024) confirm that publication-based careers support research productivity. As-Salafiyah and Rusydiana (2023) also note that academic career development acts as a performance catalyst in the Islamic economics domain.

The third cluster discusses the relationship between quality of work life and career prospects on performance. Zakaria et al. (2024) and Cruz-Ausejo & Vera-Ponce (2023) show that a supportive work environment and clear career prospects strengthen work-life balance and productivity. Soehaditama et al. (2024) reinforce this finding by linking career development to job satisfaction and employee performance. Hence, career advancement is closely correlated with well-being and work-life integration.

The fourth cluster emphasizes the impact of career advancement on turnover and workforce stability. Ayodele & Chang-Richards (2020) show that limited career prospects increase turnover intentions, which negatively affects organizational performance. Conversely, a structured career system contributes to employee retention and strengthens HR performance, particularly in the construction sector.

The fifth cluster raises the concept of sustainable careers as a key element in achieving long-term performance. Kozar & Sulich (2023) assert that green jobs and sustainable careers enhance intrinsic motivation and loyalty, leading to work contributions that are sustainability-oriented.

The sixth cluster reflects the integration of career advancement into HR development strategies. Pham-Duc et al. (2023) and Suwardi et al. (2023) affirm that career development is no longer just an individual incentive but an integral part of competitive and productive HRD systems.

All these findings indicate that career advancement is a strategic nexus linking motivation, loyalty, competence, and work productivity. A structured and progressive career system not only strengthens individual positions within organizations but also drives systemic collective performance. Therefore, within the modern HRM framework, career advancement must be positioned as a long-term strategy integrated with psychological empowerment, knowledge-based productivity, and employee job satisfaction.

Theme 4: Job Satisfaction and Employee Performance

Job satisfaction is a strategic variable within modern human resource management systems, with proven significant impacts on quality, productivity, and performance effectiveness. Based on a systematic analysis of 18 scientific articles published between 2020 and 2025, several thematic clusters confirm the link between job satisfaction and employee performance across various organizational sectors.

The first cluster emphasizes job satisfaction as a psychological determinant in enhancing individual performance. Suwardi et al. (2023) show that organizational support increases lecturer engagement and performance. Hamed (2023) finds that nurses' job satisfaction affects service effectiveness and professional interaction. Mgammal & Al-Matari (2021) state that job satisfaction reduces psychological stress and strengthens work efficiency.

The second cluster highlights the influence of work environment and reward systems on performance. Gutiérrez-Banegas (2022) and Zakaria et al. (2024) assert that quality of work life forms the foundation of job satisfaction that drives productivity. Resende et al. (2023) add that technology and modern work environments improve work experience and performance in the Industry 4.0 era.

The third cluster positions job satisfaction as a mediator between work behavior and organizational performance. Pratama et al. (2023) demonstrate that job satisfaction bridges positive behaviors and organizational output. Putra et al. (2023) also emphasize the role of satisfaction in enhancing loyalty and effectiveness in the public sector.

The fourth cluster explores the relationship between satisfaction, motivation, and work performance. Bibliometric studies by Alper Ay (2025) and Kişi (2023) show that job satisfaction fosters intrinsic motivation and employee engagement, which directly contributes to performance.

The fifth cluster discusses the influence of empowerment and leadership style on job satisfaction. Chang et al. (2025) show that empowerment improves healthcare service efficiency. Chiarini et al. (2023) add that technology-driven and inclusive leadership fosters a more productive work environment.

The sixth cluster underscores the role of job satisfaction in promoting inclusive organizations. de las Heras-Pedrosa (2024) confirms that improving women's job satisfaction supports significant contributions and fosters a healthy and equitable workplace climate.

The seventh cluster emphasizes the importance of fair evaluation and reward systems. Orbay et al. (2020) show that a journal quartile-based evaluation system enhances satisfaction and encourages academic research productivity.

The eighth cluster links job satisfaction to workplace safety. Cruz-Ausejo & Vera-Ponce (2023) find that job satisfaction reduces workplace accidents and stress in the healthcare sector.

The ninth cluster discusses the role of job satisfaction in the tourism sector. Pan (2020), using Importance–Performance Analysis (IPA), shows that job satisfaction is a key determinant of service quality and employee performance in the hospitality industry.

These findings confirm that job satisfaction is not merely a psychological factor but a systemic component in building sustainable work performance. In the context of competitive organizations, managing work systems that fulfill both intrinsic and extrinsic dimensions of satisfaction becomes a key strategy to enhance organizational competitiveness through performance optimization.

In general, the results of the studies demonstrate a consistent positive relationship between talent development, digital training, career opportunities, and job satisfaction on employee performance (Sandeepanie et al., 2024; Zairbani & Prakash, 2025; Sánchez-Canut & Usart-Rodríguez, 2023; Kaul et al., 2024; Zakaria et al., 2024).

Contextually, sectoral focus varies. Studies in higher education emphasize the combination of career advancement and job satisfaction (Suwardi et al., 2023; Soehaditama et al., 2024; Dvorakova, 2022), while the healthcare sector tends to highlight the role of digital training and work environment quality (Hamed, 2023; Chang et al., 2025; Cruz-Ausejo & Vera-Ponce, 2023).

From a methodological perspective, the Systematic Literature Review and bibliometric approaches (Khaw et al., 2022; Ay, 2025; Kişi, 2023) have enriched thematic mapping, yet most empirical studies remain limited to simple linear regression analyzes (Mgammal & Al-Matari, 2021; Putra et al., 2023), without simultaneously testing variable interactions. Additionally, limited geographic coverage constrains the generalizability of findings (Pratama et al., 2023; Cruz-Ausejo & Vera-Ponce, 2023).

Looking forward, there is a need for the development of more comprehensive conceptual models that integrate talent development, digital training, and career opportunities, with job competency as the main mediator and job satisfaction as a potential moderator. This model should be tested using structural equation modeling (SEM) or multi-path mediation approaches, as recommended by Lusa et al. (2023), Pham-Duc et al. (2023), and Mohanty & Christopher (2024), to capture the complexity of relationships within a more complete theoretical framework.

Although studies on talent development, digital training, career opportunities, job satisfaction, and employee performance continue to evolve, the results of this systematic synthesis reveal that significant gaps remain—conceptual, methodological, and contextual.

Conceptually, several studies remain partial and have not yet integrated the variables simultaneously. Research by Suwardi et al. (2023), Kaul et al. (2024), and Shiferaw and Birbirs (2025) have not comprehensively tested mediation mechanisms or the interactions among the main variables. Studies by Martínez Aragón and Morales (2023) and Lusa et al. (2023) have yet to construct a holistic framework linking talent development, digital training, and career development within an integrated theoretical system.

Methodological, descriptive and bibliometric approaches still dominate (Khaw et al., 2022; Ay, 2025; Kişi, 2023; Zakaria et al., 2024), lacking empirical validation through complex structural models. Quantitative studies also remain limited to simple regression approaches (Mgammal & Al-Matari, 2021; Putra et al., 2023), with minimal exploration of mediation, moderation, longitudinal designs, or more robust experiments.

Contextually, research is still largely dominated by studies in developing countries such as Indonesia, India, Ethiopia, Vietnam, and Malaysia (Churiyah et al., 2024; Amri et al., 2025; Pham-Duc et al., 2023; Kassaw et al., 2024). Representation from Western Europe and North America remains limited, as does exploration of strategic sectors such as manufacturing, information technology, hospitality, and the informal economy.

Cross-cultural testing is also scarce, despite the fact that collectivist and individualist cultural traits can significantly influence inter-variable relationships (Dvorakova, 2022; Hamed, 2023; Cruz-Ausejo & Vera-Ponce, 2023). Integrative conceptual models based on multi-path mediation are still absent from the literature. Although some studies have begun to address job competency as an intervening variable (Lusa et al., 2023; Pratama et al., 2023), there has yet to be research that simultaneously examines the relationships between talent development, digital training, and career advancement on performance within a single comprehensive structural framework. In terms of measurement, research still predominantly focuses on individual performance. Organizational aspects such as organizational agility and innovation performance have yet to be widely adopted as main variables (Chiarini et al., 2023; Mohanty & Christopher, 2024). Moreover, exploration of critical moderators such as digital leadership, emotional intelligence, or psychological safety remains very limited, despite their importance in building more complex and contextual mediation–moderation models, particularly in the increasingly dynamic digital work era.

Based on the findings of the literature synthesis and identified gaps, future research agendas should be directed toward strengthening conceptual, methodological, and contextual aspects more comprehensively.

First, the development of integrative conceptual models based on multi-path mediation is needed to test the simultaneous relationships between strategic HR variables such as talent development, digital training, career opportunities, and job competency. Structural equation modeling (SEM) or parallel mediation approaches are recommended for theoretical and empirical model validation (Hair et al., 2021; Preacher & Hayes, 2008).

Second, the role of moderating variables such as job satisfaction, digital leadership, psychological empowerment, and organizational culture should be expanded in testing the relationships among HR variables (Baron & Kenny, 1986; Chiarini et al., 2023).

Third, expanding cross-country and cross-industry studies is important to test the geographic and sectoral generalizability of models (Cruz-Ausejo & Vera-Ponce, 2023). Multi-group SEM can be employed to compare structural relationships based on cultural and sectoral contexts.

Fourth, the development of longitudinal and experimental designs is essential to strengthen causal validity, considering that most current studies remain cross-sectional in nature (Podsakoff et al., 2003).

Fifth, performance indicators should be expanded with more specific variables such as job creativity, innovative behavior, digital agility, and organizational citizenship behavior (Ma et al., 2025; Mohanty & Christopher, 2024; Wibowo et al., 2020).

Sixth, integrating sustainability dimensions into HR development strategies is a crucial agenda in the Industry 5.0 era (Kozar & Sulich, 2023).

Seventh, human-centered HR analytics approaches based on AI and big data should be explored more deeply, both theoretically and methodologically, as a new innovation in HRM practices (Khaw et al., 2022; Shiferaw & Birbirs, 2025).

This systematic synthesis provides a significant contribution to the advancement of both theory and practice in human resource management (HRM) through the integration of talent development, digital training, career opportunities, and job satisfaction in enhancing performance, with job competency as a key mediating variable. Theoretically, this study expands the understanding of the relationships among strategic HR variables within an integrative conceptual model. The findings reinforce the foundational theories of Human Capital (Becker, 1993), the Resource-Based View (Barney, 1991), and Social Exchange Theory (Blau, 1964) by emphasizing the importance of accumulated knowledge, digital skills, and career perception in building human capital (Lusa et al., 2023; Kaul et al., 2024; Ma et al., 2025). The proposed multi-path mediation model positions job competency as a transformative pathway connecting HR inputs with performance outputs, strengthening the competency-based performance framework (Martínez Aragón & Morales, 2023; Shiferaw & Birbirs, 2025), while also opening avenues for the systemic and dynamic integration of HRM theories.

Practically, this study offers strategic guidance for HR managers and practitioners in designing adaptive, evidence-based HR development systems. First, talent development must be structured and supported by digital technologies for talent mapping and capacity building (Mohanty & Christopher, 2024; Zairbani & Prakash, 2025). Second, digital training should become the core of organizational learning systems, with blended and personalized learning approaches that directly impact productivity and work agility (Sánchez-Canut & Usart-Rodríguez, 2023; Amri et al., 2025). Third, a clear and transparent career system plays a crucial role as a tool for motivation and workforce retention (Suwardi et al., 2023; Kişi, 2023). Fourth, the strengthening of job competencies must encompass soft skills, digital capabilities, and work agility (Khaw et al., 2022; Sudirman et al., 2023). Fifth, the implementation of HR analytics and predictive modeling is vital for continuously monitoring the effectiveness of interventions (Razali et al., 2024; Pham-Duc et al., 2023). Finally, the practical implications underscore the importance of creating

inclusive and sustainable work ecosystems, in which job satisfaction acts as a determinant of long-term performance (Gutiérrez-Banegas, 2022; de las Heras-Pedrosa, 2024).

Conclusions

A systematic review of more than 67 Scopus-indexed scientific articles published in the past five years affirms that talent development, digital skills training, and career advancement opportunities are strategic foundations in enhancing employee performance. Collectively, these elements form an integrated, sustainable, and competency-based capacity-building system. The main conclusions of this study are summarized as follows. First, the relationship between talent development, digital training, and career opportunities with employee performance demonstrates consistent positive outcomes in the literature. Talent development has been shown to increase productivity by strengthening both functional and affective capabilities. Digital training contributes to efficiency, agility, and digital readiness, while prospective career systems enhance motivation, psychological empowerment, and organizational commitment.

Second, job competency has been proven to play a crucial role as an intervening variable. Multiple studies indicate that competency bridges the influence of HR development on performance, acting as a catalyst that transforms inputs into measurable work outputs—both technical and behavioral. Third, methodological trends and theoretical approaches over the past five years reveal important dynamics. Systematic Literature Review (SLR) and bibliometric methods dominate conceptual inquiries, while quantitative research remains limited to simple regression models with minimal testing of mediation or longitudinal designs. Theoretically, Human Capital Theory, the Resource-Based View, Social Exchange Theory, and the Competency-Based Performance Model dominate the conceptual frameworks, accompanied by the emergence of new variables such as digital skills, employee agility, psychological empowerment, and job engagement as critical performance dimensions in the era of disruption.

This article provides a significant contribution through the proposal of an integrative conceptual model based on multi-path mediation, which combines talent development, digital training, career opportunities, and job competency as the main drivers of performance. This model not only addresses previous conceptual and methodological gaps but also offers a new direction for HRM grounded in competency, technology, and sustainability. The findings carry broad implications for theoretical development, HR practices, and organizational policy in the digital transformation era.

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