

Digital workplace technologies and tacit knowledge sharing on employees' digital competency: A systematic review

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Abstract: This systematic review explores digital workplace technologies (DWT) and tacit knowledge sharing (TKS) on employees' digital competency (EDC). The review aims to synthesize empirical evidence on how DWT and TKS influence EDC. We draw on Van Laar et al. [1]'s theoretical model of six domains of digital workplace transformation was adopted. The review adopted PRISMA guidelines to compile and analysed peer-reviewed articles published between 2022 and 2025, retrieved from Scopus, Web of Science, PsycINFO, and EBSCOhost databases. Out of 847 records identified, 31 studies met the inclusion criteria and were subjected to narrative synthesis. Findings revealed that DWT significantly supports digital competency by enabling continuous informal learning, collaborative digital routines, and ICT-mediated task execution. TKS positively reinforces digital self-efficacy, autonomy, and contextual tool proficiency through trust-driven peer exchange, and organizational knowledge enablers. The review was limited to English-language peer-reviewed articles and the dominance of cross-sectional survey designs, constituting 87.1% of the articles reviewed. This review advances knowledge by integrating a unified competency lens that explains digital competency as both a socio-technical and socially constructed outcome of DWT and TKS. It advances the Van Laar framework by integrating TKS as a digital-learning mechanism and provides multi-regional insights for future global research.

Keywords: *Digital workplace technologies, Employee digital competency, Tacit knowledge sharing.*

1. Introduction

Advancements in digital workplace technologies (DWT) have changed the nomenclature of workplace activities across various economic sectors. Attaran, et al. [1] defined digital workplace technologies (DWT) as the collection of digital tools within an organization that enable employees to perform their duties, including intranet, email, calendars, cloud-based collaboration systems, artificial intelligence, virtual coordination tools, customer relationship management systems, human resource systems, and other digital tools that support workplace daily operations. These DWT have become central to organizational operations and support real-time connectivity.

Audrin, et al. [2] emphasize that digital workplace technologies have become pervasive in most workplaces, which has tremendously impacted work and job markets. Consistent with this, the authors further affirmed that many organizations now demand digital competencies from their employees. This development has increased access to knowledge and enabled greater exchange of ideas among employees. The emergence of digital workplace technologies has increasingly shaped organizations' daily operations. This aligns with the views of Bynghall and Fagan [3], who reported that digital workplace technology encompasses digital tools used in an organization to perform daily activities as well as enable employees to perform their duties.

Digital workplace technology has taken center stage in workplaces across the globe. Fjeldheim, et al. [4] justified this claim and provided an account of its adoption in social work education by social workers, equipping them with the necessary skills to meet the needs of clients in a digitalized workplace. Its application in the workplace has improved both employee upskilling and organizational efficiency [5]. In the same vein, Appio, et al. [6] emphasized that the adoption of DWT in organizations has helped to streamline operations and foster innovation. Thus, workplaces are experiencing rapid digital transformation, moving both employers and employees from manual operations and labour to an evolving knowledge-driven digital environment.

Previous research has established that digital technology is a critical component of promoting workforce competitiveness in an organization [7, 8]. Considerable literature has indicated that digital technologies function not simply as informational tools but as strategic resources that influence work processes and organizational outcomes through improved communication, task automation, and collaborative capabilities [9]. Such technologies, therefore, play a vital role in shaping employees' interactions [10] and have been linked to improved workplace flexibility and performance when aligned with organizational objectives.

In today's fast-paced digital ecosystem, DWT has consistently provided employees with critical digital competencies and knowledge required to remain competitive in a rapid labour market. According to Attaran, et al. [1], it was reflected that digital workplace technology enables employees to task and increases their operational efficiency. In turn, it increases employees' competencies and organizational performance, particularly in a dynamic workplace. Similarly, it was reported that DWT are enablers and drivers of flexible working hours at the workplace that enable employees to work at their own pace.

Our review aims to contribute to the existing literature on tacit knowledge sharing (TKS), as one of the independent variables in the review, and represents another critical aspect of the contemporary workplace. The concept of TKS is vast and does not have a universally accepted definition. Currently, literature utilizes various terms to describe it. TKS, according to Nazim and Mukherjee [11], is personal knowledge that members of an organization acquire through daily experience and learning by doing, and apply to their work. As a result, tacit knowledge sharing can be viewed as experiential and personal knowledge [12].

Tacit knowledge is experience-driven, rooted in personal skills, making it inherently difficult to formalize or articulate. The acquisition of tacit knowledge represents an important organizational process that promotes innovation. Scholars have made significant contributions and offered their unique perspectives on TKS as a mechanism for promoting knowledge, ideas, and innovations in a dynamic work environment. TKS constitutes a fundamental and strategic competency that significantly shapes the creation of competitive advantage and sustained organizational performance [13, 14]. Previous studies found a significant impact of TKS on employee competency, as Zhao [15] acknowledged that tacit knowledge sharing provides individuals with the opportunity to demonstrate their skills, abilities, and proficiency in a certain field. Thus, engaging in tacit knowledge sharing allows individuals to develop their skills, contributing to mastery and competence [15].

Employees' digital competency (EDC) has emerged as a subject of debate within the academic field and policy circles. It has received greater attention from scholars across multiple fields such as psychology, management, social science, engineering, and ICT. The review aims to explore the interaction between DWT and TKS on the outcomes of employees' digital competencies. Therefore, employees' digital competency (EDC) refers to the ability of employees to effectively and critically use different digital tools to perform tasks and solve problems. Rosita, et al. [16] justified this claim, that enterprises are now ensuring their employees possess digital skills to adapt to rapid workplace technological changes. This indicates that organizations harness their employees' competencies needed in the knowledge-driven workplace.

Existing studies have demonstrated that digital competencies and underlying technological tools enable workers to perform effectively in their daily activities [17]. In the same vein, Wang and Allen [18] noted that digital technologies play a vital role in equipping the workforce with the necessary

skills and knowledge to contribute to the economy in a technology-driven environment. To this end, this systematic review highlights how the literature supports employee digital competency to foster innovation and collaboration in digitally inclined workplace settings. Employees equipped with high levels of digital competency are better positioned to navigate complex digital ecosystems, engage in knowledge-sharing practices, and contribute to workplace effectiveness in an increasingly digital world [19].

2. Theoretical Model

This review was theoretically framed around Van Laar, et al. [20] model to conceptualize workplace digital competency. Van Laar, et al. [20] identified six core 21st-century digital skill domains: information, communication, collaboration, critical thinking, creativity, and problem-solving. The framework operationalizes digital competency through a validated survey instrument measuring both technical and cognitive-social competencies required in modern workplaces. Empirical evidence supports that digital technologies accelerate workplace transformation and intensify competitive pressure, requiring continuous employee upskilling to remain digitally competent [21].

The review further built on the conceptual Tacit Knowledge Sharing (TKS) framework, rooted in knowledge-based and social learning perspectives. It complements the DWT framework by explaining how experience-embedded, difficult-to-codify knowledge sharing occurs between employees through observation, imitation, collaboration, and informal digital interaction [22]. The framework sheds more light on current system review positions, with DWT and TKS as independent variables and employees' digital competency (EDC) as the dependent outcome. This framework is significant for understanding how DWT and TKS influence EDC. We found Van Laar, et al. [20]'s framework unique because it enables a structured synthesis of empirical evidence explaining how digital tools and tacit knowledge interactions enhance workplace digital competency.

3. Problem Statement

Over the years, scholars have built different themes around digital workplace technologies (DWT) and tacit knowledge sharing (TKS), with considerable literature on employee competency or capability outcomes. However, no literature or empirical evidence synthesizes or explores these two dimensions (DWT and TKS) with their influence on employees' digital competencies. Existing studies acknowledge that organizations increasingly demand digital competencies, yet the literature is fragmented across disciplines, employs inconsistent conceptualizations, and lacks a unified understanding of the mechanisms through which digital workplace technologies and tacit knowledge shape employees' digital competency. This gap constrains organizations' ability to systematically leverage DWT and TKS to build employee digital competency, particularly in knowledge-driven and digitally inclined work environments. Against this background, this research underscores the need for a systematic review to synthesize existing studies that consolidate evidence on the influence of DWT and TKS on employees' digital competency and to inspire future research directions. This review attempts to answer the following research questions:

RQ1: How does the previous empirical research on digital workplace technologies connect with employees' digital competency?

RQ2: What is the relationship between tacit knowledge sharing and employees' digital competency?

4. Methodology

This methodology adopted Preferred Reported Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. Moher, et al. [23] reported that most review works followed the literature search protocol of PRISMA to reduce risks related to publication, increase the acceptability of the work, and ensure methodological accuracy.

4.1. Search Strategy

We searched for peer-reviewed articles across reputable academic databases, including Scopus, Web of Science, EBSCOhost, and PsycINFO. The justification for using these databases was to ensure broad scholarly coverage of indexing high-quality peer-reviewed articles and the robustness of the review process [24]. We aimed to focus our search strategy on previous research discussing digital workplace technologies and tacit knowledge sharing, with outcomes on employees' digital competencies across different regions of the world. This was to ensure that the articles searched aligned with our research questions. Our search strategy prioritized articles published between 2022 and 2025, with searches conducted from October 7th to 26th, 2025.

To conduct an effective search, Boolean operators were used to refine our search string with the combination of keywords across selected databases: ("digital workplace technologies" OR "enterprise social networks" OR "virtual work platforms" OR "digital work tools") AND ("tacit knowledge sharing" OR "knowledge management") AND ("digital competence" OR "digital skills development" OR "employee digital capability" OR "ICT proficiency"). Harari, et al. [25] emphasize that a well-designed literature search is crucial for the quality and accuracy of systematic literature reviews, as the databases and methods used greatly influence the conclusions. In addition, we based our search string on articles published within the fields of Psychology, Business, Accounting, Management, Social Science, Information, and Computer Science.

4.2. Selection Criteria

We set out the inclusion and exclusion criteria to streamline the data generated from the databases. Our review was limited to articles published in English, with a primary focus on digital workplace technologies and tacit knowledge sharing, and outcomes related to employees' digital competencies. Studies involving professional environments, qualitative, quantitative, or mixed-methods designs were considered eligible. However, we excluded studies focused on explicit/codified knowledge systems, those not investigating knowledge sharing, studies that do not examine employee outcomes, non-empirical studies, theses, conference abstracts, and non-English publications [26]. As a result, the inclusion/exclusion parameters are essential (See Table 1).

Table 1.
Inclusion/Exclusion Criteria.

Inclusion Criteria	Exclusion Criteria
Peer-reviewed articles (empirical)	Non-empirical articles (editorials or opinion papers)
Published in English	Non-English publications
Published between 2022 and 2025	Studies published before 2022
digital workplace technologies and tacit knowledge sharing	Studies focusing solely on explicit/codified knowledge systems
Reported outcomes related to employees' digital competencies	Studies that do not investigate employee outcomes
Adults in professional or organizational environments	Studies involving students, children, or non-workplace populations
Qualitative, quantitative, or mixed-methods research designs	Theses, dissertations, conference papers/abstracts

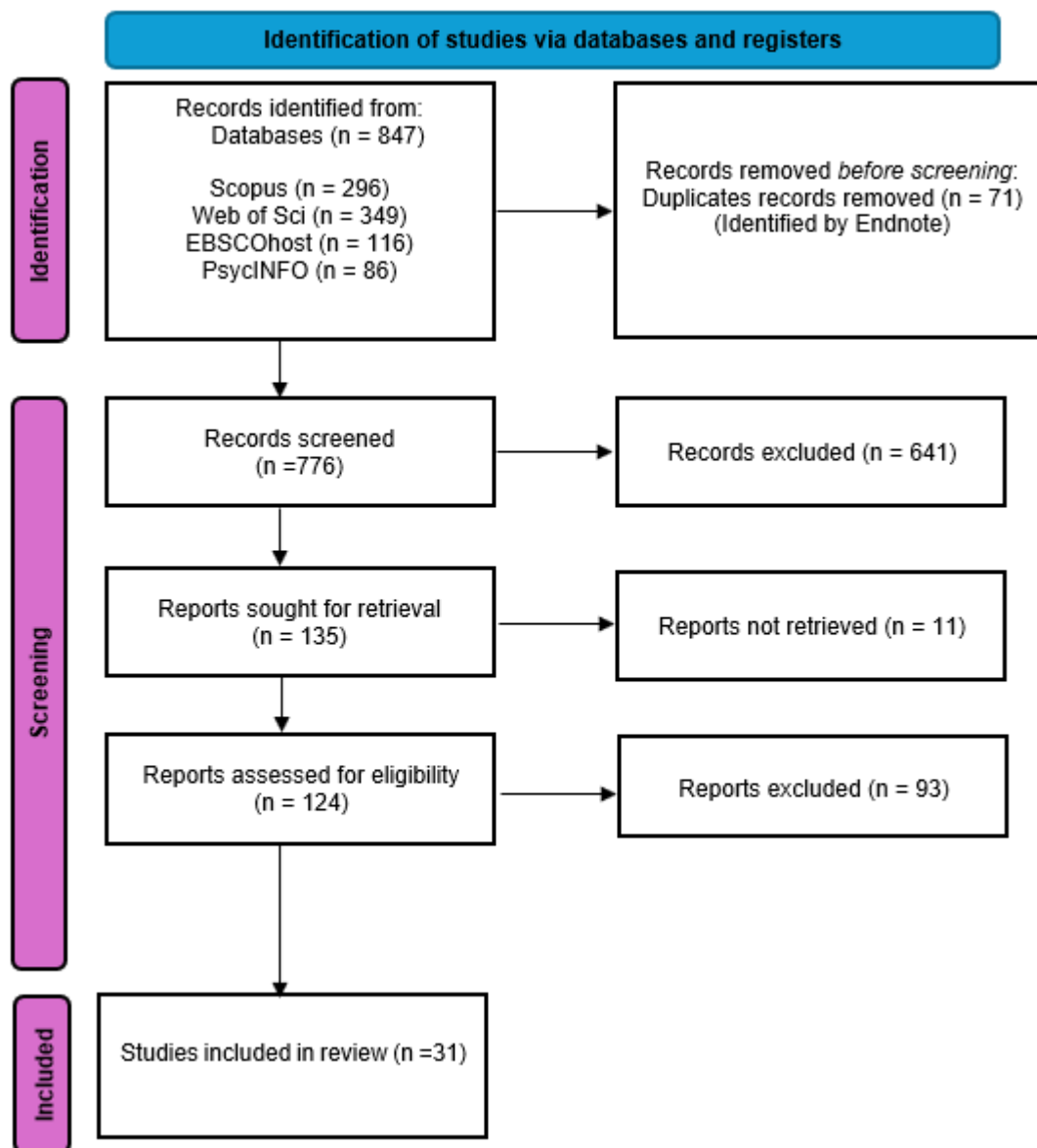


Figure 1.
PRISMA Framework flow diagram for study selection (2022–2025).
Source: Authors' compilation based on PRISMA Framework.

4.3. Selection Process and Data Extraction

All data that met the inclusion criteria identified through databases were downloaded and exported into EndNote referencing manager software, and duplicate records were removed. To avoid bias, we invited independent reviewers to evaluate the risk of bias in each study, considering the specific criteria and guidelines to ensure accuracy and consistency. Discrepancies observed by reviewers were mutually resolved through one-on-one discussion. After screening and eligibility assessment, 847 records from the initial search across four databases were used, with the breakdown as follows: Scopus (n=296), Web of Science (n=349), EBSCOhost (n=116), and PsycINFO (n=86). To ensure the robustness of the review process [24]. Duplicate records were removed before screening (n=71), identified by EndNote. A total of (n=776) articles were screened based on the keywords. Inclusion and exclusion criteria were used to

remove articles that are not related to the topic and the scope ($n=641$) through EndNote. Furthermore, ($n=11$) reports were not retrieved. ($n=93$) articles were excluded from ($n=124$) reports assessed for eligibility. After thorough screening, a total of ($n=31$) studies met the inclusion criteria, directly addressed the review topic and were retained for synthesis. The studies were summarized by author(s), title/focus area, methodology, findings, and country, as presented in Figure 1 and Table 2.

Table 2.

List of Articles eligible for the Review.

S/N	Authors	Title/ Focus Area	Methodology	Findings	Country
1	Khan, et al. [27]	“AI in the Workplace: Driving Employee Performance Through Enhanced Knowledge Sharing and Work Engagement”	Quantitative	“The results found a positive correlation between AI and knowledge sharing among employees.”	China
2	Lin and Wu [28]	“AI Technology Adoption, Knowledge Sharing, and Manufacturing Firms’ Innovation Performance: The Moderating Effect of Absorptive Capacity”	Quantitative	“The findings show that AI facilitates both knowledge sharing and innovation, which are significantly strengthened by higher absorptive capacity.”	China
3	Li, et al. [29]	“Examining the role of organizational justice in enhancing tacit knowledge sharing and its influential mechanism.”	Quantitative	“The results reveal that tacit knowledge sharing and perceived organizational justice are correlated with psychological capital serving as a mediator.”	China
4	Cavicchioli, et al. [30]	“Employees’ attitudes and work-related stress in the digital workplace: an empirical investigation”	Quantitative	“Findings indicate that digital actions and virtual meetings have a significant impact and reduce work-related stress.”	Italy
5	Awada and Haj Youssef [14]	“Tacit knowledge sharing in a Lebanese family business: the influence of organizational structure and tie strength”	Mixed method	“The findings reveal that managers to design organizational structures that maximize tacit knowledge flow, fostering innovation and competitiveness.”	Lebanon
6	Al-Busaidi and Al-Wahaibi [31]	“Sharing knowledge through social media platforms: critical system characteristics for knowledge workers.”	Quantitative	“This study found that knowledge sharing behavior is significantly impacted by social media platforms.”	Oman
7	Arboh, et al. [32]	“From fear to empowerment: the impact of employees’ AI awareness on workplace well-being - a new insight from the Job Demands-Resources (JD-R) model.”	Quantitative	“The results revealed that a high level of health workers’ AI awareness on their learning behaviour.”	Ghana
8	Albishri, et al. [33]	Developing knowledge in digital workplaces: a sociomaterial- socialization, externalization, combination, internalization (SECI) integrative framework	Quantitative	“The findings indicate that digital workplaces promote SECI.”	Saudi Arabia
9	Audrin, et al. [2]	“Digital skills at work - Conceptual development and empirical validation of a measurement scale”	Quantitative	“The outcome highlights the current gap in digital skills at work and managing work-life balance.”	Switzerland

10	Abendroth and Reimann [34]	“Organizational inhibition and promotion of flexible working in digitalized work environments”	Quantitative	“Findings showing that employees worked less flexibly in terms of time and location due to work-related uses of ICT presence in the organization.”	Germany
11	Bhatti, et al. [35]	“The impact of digital platforms on the creativity of remote workers through the mediating role of explicit and tacit knowledge sharing”	Quantitative	“The findings confirmed that remote workers' tacit knowledge sharing capabilities are influenced by digital platforms.”	UK
12	Capestro, et al. [36]	“Enabling digital technologies adoption in industrial districts: The key role of trust and knowledge sharing.”	Quantitative	“The results reveal that digital technology adopted in an organizational influence tacit knowledge sharing.”	Italy
13	Castaneda and Ramírez [37]	“Organizational conditions associated with the sharing of tacit and explicit knowledge in the financial sector in Colombia”	Quantitative	“The result was found that tacit knowledge had a significant relationship on organizational culture.”	Colombia
14	Cetindamar, et al. [38]	“Explicating AI Literacy of Employees at Digital Workplaces”	Qualitative	“The results demonstrate that AI literacy skills influence employees' learning.”	Australia
15	Cirillo, et al. [39]	“Digital technologies, labor market flows and training: Evidence from Italian employer-employee data.”	Quantitative	“The findings revealed that digital technologies are associated with workplace training.”	Italy
16	Olan, et al. [40]	“Incentivizing Tacit Knowledge Sharing in Competitive and Heterogeneous Environments”	Quantitative	“The results show that using AI technologies alone does not sufficiently improve HRM interactions.”	UK
17	Mungra, et al. [41]	“Impact of Digital Competence on Employees' Flourishing Through Basic Psychological Needs Satisfaction”	Quantitative	“The findings show that all three components of basic psychological needs satisfaction (BPNS) are positively impacted by employees' digital competence.”	Cross Courtiers study (North America, EU and the UK)
18	Luo, et al. [42]	“Workplace Exclusion Impacts on Knowledge-Sharing via Moderation of Digital Media and Organizational Culture”	Quantitative	“The results found that the digital media workplace has a significant impact on knowledge sharing.”	China.
19	Duan, et al. [43]	“Exploring the impact of digital work on work-life balance and job performance: a technology affordance perspective.”	Quantitative	“The study shows that the use of digital technologies enhances individual knowledge sharing, resulting in better work-life balance and job performance.”	Australia
20	Deng, et al. [44]	“Influence of employees' perception of digital transformation meaning on work engagement and well-being”	Quantitative	“The results showed that digital transformation promotes work engagement.”	China

21	Boamah, et al. [45]	“The mediating role of social dynamics in the influence of absorptive capacity and tacit knowledge sharing on project performance”	Quantitative	“The results show that tacit knowledge sharing and governance are prerequisites for increasing the project's absorptive capability.”	China
22	Bernhardt, et al. [46]	The Data-Driven Workplace and the Case for Worker Technology Rights	Qualitative	“The result reveals that digital technologies help employers to collect, analyze employee data, and electronically monitor their employees.”	USA
23	Abidi, et al. [47]	“Online meeting tools, tacit knowledge sharing and entrepreneurial behaviours among knowledge workers during COVID-19”	Quantitative	“The results indicate that tacit knowledge sharing has a positive impact on workers' entrepreneurial behaviors.”	Australia
24	Cillo, et al. [48]	“Inside talent management: the strategic role of knowledge sharing and ICT capabilities in MNEs' performance.”	Quantitative	“The findings reveal that talents have the capacity to share knowledge.”	Italy
25	Kucharska and Erickson [13]	“Tacit knowledge acquisition & sharing, and its influence on innovations: A Polish/US cross-country study.”	Quantitative	“The findings demonstrated the stronger influence of conscious tacit knowledge on innovation.”	Poland & USA
26	Nazem, et al. [49]	“Cybersecurity Determinants in Iraq's Digital Workplace: Attitude, Policy, and Compliance Roles”	Quantitative	“The results revealed the significant influence of the digital workplace on cybersecurity.”	Iraq
27	Al-Mawali and Al-Busaidi [50]	“Knowledge Sharing Through Enterprise Social Media in a Telecommunications Context”	Quantitative	“This finding indicated that organizational and technological motivators have a major influence on employees' sharing of implicit knowledge.”	Oman
28	Alam, et al. [51]	“Drivers and challenges of tacit knowledge sharing in automotive workshop employees”	Qualitative	“The result shows that tacit knowledge shared is found to have a significant influence on employees in the automotive workshop sector.”	Pakistan
29	Alzoubi, et al. [52]	“Exploring the relationships among tacit knowledge sharing, communities of practice, and employees' abilities: the case of KADDB in Jordan.”	Quantitative	“The results revealed a significant relationship between knowledge sharing and employees' abilities.”	Jordan
30	Hwang, et al. [53]	“Do an Organization's Digital Transformation and Employees' Digital Competence Catalyze the Use of Telepresence?”	Quantitative	The result of the analysis found that telepresence influences digital.	Korea
31	Hwang [54]	“Sharing tacit knowledge in small-medium regional construction companies in the U.S: the current status and the impact of organizational ecology.”	Quantitative	“The finding reveals that tacit knowledge sharing is an important asset.”	USA

5. Results and Data Synthesis

Table 2 shows the results of the 31 reviewed articles that met the inclusion criteria. We analyzed our review using explanatory qualitative synthesis. Turney [55] justified the claim for adopting qualitative synthesis to provide an understanding of a new conceptual framework and identify patterns within the narrative data from multiple sources. Also, Lachal, et al. [56] reported that qualitative syntheses provide an appropriate balance between a rigorously scientific approach to data analysis. Our review identified 27 quantitative studies, comprising 87.1%, followed by 3 qualitative studies (9.7%), and only 1 article published with mixed methods (3.2%), indicating that current evidence linking digital workplace technologies and tacit knowledge sharing phenomena with digital competency development is largely grounded in survey-based and variable-testing traditions. The distribution of percentages is presented in Figure 2.

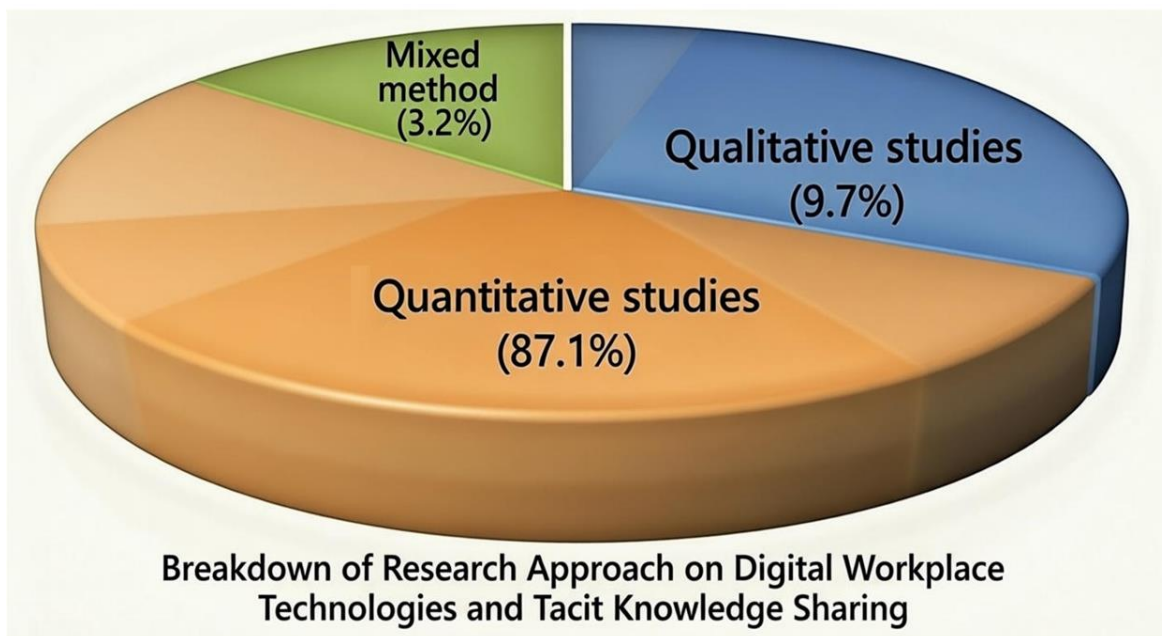


Figure 2.
Breakdown of Approaches on Digital Workplace Technologies and Tacit Knowledge Sharing.

Geographically, research on DWT and TKS cases spans Asia, Australia, America, Europe, Latin America, the Middle East, and Africa. Table 3 shows the number of publications from 2022 to 2025 across countries. This distribution highlights a strong regional emphasis in China and Europe on AI-driven knowledge-sharing ecosystems, while studies from Africa and the Middle East are emerging but remain comparatively fewer.

Table 3.
Publications distribution by Countries.

Country	No Publications output met the inclusion criteria	Percentage
China	8	25.8%
Australia	4	12.9%
USA	3	9.7%
Italy	3	9.7%
Korea	2	6.5%
Oman	2	6.5%
Germany	1	3.2%
UK	1	3.2%
Iraq	1	3.2%
Ghana	1	3.2%
Pakistan	1	3.2%
Cross-country studies	3	9.7%

Our systematic review relates to a novel approach that groups 31 articles into two thematic categories: (Theme 1) Forms and Processes of Informal Learning, and (Theme 2) Determinants of Knowledge Sharing.

Theme 1: The Link Between Digital Workplace Technologies and Employees' Digital Competency

Here, our primary focus was on digital workplace technologies with emphasis on employees' digital competencies, underscoring rapid growth in research interest in the adoption of digital technologies, ICT affordances, and digital competence as drivers of learning-related workplace capability. This finding demonstrates that digital technologies strengthen and enable the exchange of knowledge, ideas, creativity, and innovation, all of which feed digital competency pathways. However, the general pattern of results found a positive link between digital technologies and significantly improved employee digital competencies [2, 27, 32, 41]. Literature and empirical evidence showed that employees increasingly used digital technologies at their various workplaces to perform daily tasks [46].

Theme 2: Tacit Knowledge Sharing and Employees' Digital Competency

We further our thematic synthesis review of studies discussing the relationship between TKS and EDC. The findings reveal the following dominant patterns: (1) organizational enablers (culture, structure, communities of practice, knowledge governance, organizational ecology), (2) relational enablers (trust, tie strength, cognitive trust, absorptive capacity), and (3) technology affordances (AI platforms, enterprise social media, online meetings, digital platforms). Furthermore, several studies have consistently reinforced that tacit knowledge sharing practices strongly influence employee capability in workplace settings [30, 50, 51].

6. Discussion of Findings

With the growing importance of digital workplace technologies, it has promoted a smooth and healthy work environment across various economic sectors. However, empirical findings demonstrate that DWT is strongly linked to employees' digital competency, primarily by serving as a continuous learning environment that shape both foundational and higher-order digital skills. This paradigm shift is fundamental for facilitating employees' digital competencies, which organizations increasingly value in a dynamic workplace. This finding is consistent with the study of Cirillo, et al. [39], emphasizing that digital technologies have a correlation with workplace training.

Literature consistently identifies sustained engagement with digital platforms such as enterprise collaboration tools, intranets, ERP, and CRM systems as significant predictors of digital competency development [1, 57]. The finding reveals that DWT contributes to more advanced dimensions of digital competency beyond basic tool familiarity. This finding corroborates the views of Weritz [58] that employees operating in technologically advanced environments tend to develop adaptive skills in data interpretation, cybersecurity awareness, digital teamwork collaboration, and innovative-driven digital thinking. To sum up, the findings support the assumption that DWT connects employees' digital

competency through literature evidence. Research findings of Reddy, et al. [59] revealed that individuals need digital technology skills to adapt to new innovations. Therefore, employee digital competency often serves as the core mechanism linking technology adoption to improved workplace outcomes. Employees' digital competencies are essential in the context of digital transformation [60].

In response to RQ2, through empirical evidence, we observed a positive relationship between tacit knowledge sharing and employees' digital competencies. Prior research demonstrated that when employees informally exchange experiential digital know-how and contextual tool usage, it significantly influences their digital performance and competency [27]. This suggests that digital competency development is not only a function of tool exposure but is also socially constructed through knowledge sharing embedded in daily digital interactions. The finding supports the perspective that employees' willingness to share knowledge can excel. TKS is critical in ICT-driven workplaces, where digital tools shape learning, collaboration, and competency development [61].

In support of this finding, Chandra, et al. [62] opined that TKS is often considered an important component of self-directed learning in developing professional skills. This study indicates that TKS has a significant impact on employees' digital self-efficacy, which supports competency in digitally advanced organizations. Previous research shows that tacit knowledge exchange increases employees' confidence in performing digital tasks, thereby accelerating competency development and digital autonomy [14, 40].

7. Theoretical Implications

Our systematic review advances knowledge by presenting a novel conceptualization of the theoretical framework based on Van Laar, et al. [20]'s 21st-century digital skill model to conceptualize workplace digital competency. In line with this theory, our review study shows the operationalization and validation of a six-domain model (information, communication, collaboration, critical thinking, creativity, and problem-solving) as a robust lens for understanding competency development in digitally intensive workplaces [20]. Additionally, the review shows that digital workplace technologies (DWT) act as sociotechnical ecosystems that operationalize these six domains, confirming that digital competency is not merely technical but a cognitive-social construct reinforced through digital affordances such as AI collaboration, cloud systems, and enterprise platforms. Moreover, the review theoretically strengthens the model by positioning tacit knowledge sharing (TKS) as a social learning mechanism that enables the internalization of experiential digital know-how, thereby enriching the collaboration and problem-solving domains of Van Laar's framework.

8. Practical Implications

Practically, the review provides actionable insights for Industrial and Organizational Psychology (IOP) practitioners, Human Resource practitioners, and business owners, offering a novel approach for improving employee digital competency. First, organizations should design digitally embedded learning templates (e.g., AI-supported communities of practice, digital mentoring, peer demonstration via enterprise social media, and collaborative virtual work routines) to accelerate competency outcomes aligned with information processing, communication, and teamwork collaboration. The second insight proposes that managers and organizational leaders should foster digital-driven knowledge cultures and encourage peer-to-peer problem resolution to strengthen digital confidence and autonomy.

9. Limitations and Future Research Directions

Despite the contributions and novelty of this systematic review, some limitations could be addressed in future research. We limited the search to English-only, peer-reviewed empirical studies, excluding earlier studies, non-English, and non-academic sources. Articles published between 2022 and 2025 were included and considered for review. The synthesis was also based predominantly on cross-sectional survey designs (87.1%), limiting causal inference regarding how DWT and TKS shape employees'

digital competency over time. Additionally, inconsistencies in how tacit knowledge sharing and digital competency are operationalized across studies posed challenges for direct comparability, despite the use of Van Laar, et al. [20] model as a guiding framework. Finally, the review cut across multi-regional evidence; studies from Africa and the Middle East are fewer, reflecting uneven geographical spread in the literature. Future research could usefully address these limitations.

This systematic review aims to synthesize scholarly writings on DWT and TKS across global regions, drawing implications for employee digital competency. Future research should utilize qualitative, quantitative, and mixed-method designs to examine the relationship between independent variables DWT and TKS and EDC as a dependent variable. Qualitative studies can uncover process mechanisms of tacit digital know-how exchange, while quantitative and mixed-method approaches can test variable relationships and triangulate findings for stronger inference and theoretical progress.

Second, future research could also investigate cross-cultural comparative studies between developed and developing economies, with intentional inclusion of African workplace contexts where empirical evidence on DWT and TKS influences on EDC remains limited. This will advance knowledge by unpacking contextual enablers, including cultural, structural, and trust-based determinants, while increasing regional representation to generate globally balanced theoretical insights on informal digital learning and competency development.

Finally, future research might focus on exploring the adoption of AI assistants within dynamic workplace ecosystems to determine how AI awareness, usage behavior, and AI-supported tacit knowledge strengthen employee digital competency outcomes. This direction will expand understanding of how AI-enabled digital workplaces accelerate confidence in tool usage, collaborative problem-solving, and continuous upskilling in knowledge-intensive and digitally evolving organizational settings.

10. Conclusion

This systematic review aims to synthesize empirical evidence on the interaction between digital workplace technologies, tacit knowledge sharing, and employees' digital competency. It has attracted attention from scholars and practitioners across fields such as psychology, management, social science, and engineering. However, the literature primarily focuses on DWT and TKS concerning outcomes on EDC. The review was guided by Van Laar, et al. [20]'s six-domain digital skills model as a theoretical framework, providing insights for developing digital learning ecosystems that enhance both technical skills and competencies. The review indicates that previous empirical research on DWT and TKS has shown significant positive effects on EDC. Despite increasing scholarly interest, the evidence is mainly derived from cross-sectional survey designs, with uneven geographic representation. Fewer studies from Africa and the Middle East highlight opportunities for future research. Overall, the review concludes that digital competency development is best explained through a dual pathway: (1) technology-enabled competency acquisition (DWT → EDC) and (2) socially mediated competency reinforcement (TKS → EDC).

Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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