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Auditor Adaptability in the Digital Age: A Qualitative Literature Review on the Interplay of Expertise, IT Literacy, and Dynamic Capabilities

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Abstract. *This qualitative literature review examines auditor adaptability in the digital age by synthesizing prior research on the interplay between professional expertise, IT literacy, and dynamic capabilities. Drawing on multidisciplinary studies in auditing, accounting information systems, and organizational theory, the review explores how digital technologies—such as data analytics, artificial intelligence, and automated audit tools—reshape auditors' roles and competence requirements. The findings indicate that traditional audit expertise remains essential but is increasingly complemented by IT literacy, which enables auditors to effectively interpret technology-enabled evidence and reduce uncertainty in digital audit environments. Moreover, the dynamic capabilities framework explains how auditors continuously sense technological change, seize learning opportunities, and reconfigure audit practices to sustain audit quality. This review contributes to the auditing literature by conceptualizing auditor adaptability as a multidimensional and evolving capability, offering insights for audit firms, professional bodies, and educators in designing future-oriented competency development strategies.*

Keywords: *Auditor Adaptability, IT Literacy, Dynamic Capabilities, Digital Auditing, Audit Expertise*

INTRODUCTION

The auditing profession is undergoing profound transformation as digital technologies increasingly reshape organizational processes, financial reporting systems, and assurance practices. Advances in artificial intelligence (AI), data analytics, blockchain, cloud computing, and Industry 4.0 technologies have fundamentally altered how audit evidence is generated, processed, and evaluated (Abdullah & Almaqtari, 2024; Appelbaum et al., 2021; Manita et al., 2020). These developments challenge traditional audit methodologies that rely heavily on manual sampling, standardized procedures, and retrospective verification, demanding instead continuous, technology-enabled, and judgment-intensive audit approaches (Alles & Gray, 2020; Gu et al., 2024). Within this evolving landscape, the ability of auditors to adapt effectively to digital environments has emerged as a critical determinant of audit quality and professional relevance. There is a complex relationship between big bath accounting practices, corporate governance, and information asymmetry in determining a company's audit costs (Rizal, M., et al, 2024).

Auditor adaptability refers to an individual's capacity to adjust behaviors, skills, and cognitive frameworks in response to changing task demands, technological complexity, and environmental uncertainty (Andrade, 2021; Endres et al., 2018). In

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digital audit settings, adaptability encompasses openness to change, continuous learning orientation, psychological readiness, and the effective adoption of advanced technologies (Farcane et al., 2023; Ismail et al., 2024). Prior research suggests that auditors who fail to adapt risk reduced effectiveness, impaired professional judgment, and declining audit quality, particularly in data-intensive and automated environments (Betti & Sarens, 2021; Curtis et al., 2009). Consequently, adaptability has shifted from a desirable personal trait to a core professional capability in modern auditing. Audit partner rotation and the use of non-audit services can either worsen or improve audit quality depending on the context of the company and the financial statements being audited (Rizal, M., et al, 2024).

Central to auditor adaptability are two interrelated factors: professional expertise and IT literacy. Auditor expertise traditionally reflects accumulated experience, industry specialization, technical accounting knowledge, and audit judgment proficiency developed through repeated task exposure and learning-by-doing processes (Beck & Wu, 2006; Gissel & Johnstone, 2017). Expertise enhances auditors' ability to recognize anomalies, exercise professional skepticism, and make high-quality judgments under uncertainty (Hurtt et al., 2013; Nelson & Tan, 2005). However, the effectiveness of traditional expertise alone is increasingly constrained in digital audit environments where audit tasks require interaction with complex information systems, automated controls, and advanced analytics tools (Bierstaker et al., 2014; Ham et al., 2023). The use of AI and big data allows auditors to handle large volumes of data more quickly, while blockchain offers solutions to improve the security and integrity of audit evidence (Ruslaini, et al, 2024).

IT literacy, defined as the ability to understand, evaluate, and effectively use digital technologies and information systems, has therefore become a critical complement to traditional audit expertise (Appelbaum et al., 2021; Lindawati & Handoko, 2022). Auditors with higher IT literacy are better equipped to interpret system-generated evidence, assess technology-related risks, and leverage digital tools for audit planning and execution (Ba et al., 2020; Li et al., 2018). Conversely, limited IT literacy may restrict auditors' adaptability, creating cognitive overload, resistance to technology adoption, and reliance on outdated procedures (Feliciano & Quick, 2022; Lohapan, 2021). As digital transformation accelerates, the interaction between expertise and IT literacy becomes increasingly salient in shaping auditors' readiness for change.

Despite growing scholarly attention to digital auditing, existing literature often examines expertise and IT literacy in isolation, without adequately exploring their joint effects on auditor adaptability. Studies on audit technology adoption frequently emphasize perceived usefulness or organizational support while underexamining how individual-level capabilities interact to shape adaptive behavior (Barr-Pulliam et al., 2022; Ferri et al., 2021). Similarly, research on auditor competence tends to focus on experience and specialization, offering limited insight into how digital skills alter the adaptive value of expertise across different career stages (Curtis & Payne, 2014; Gaver & Utke, 2018). This fragmentation limits our understanding of how auditors actually adapt within digitally evolving environments.

The dynamic capabilities framework offers a valuable theoretical lens for addressing this gap. Dynamic capabilities refer to the ability to sense environmental changes, seize technological opportunities, and reconfigure resources to maintain effectiveness under changing conditions (Endres et al., 2018; Heubeck, 2023). Applied at the individual level, this framework emphasizes how knowledge assets—such as IT literacy and professional expertise—enable adaptive learning, innovation, and problem-solving in dynamic contexts (Konopik et al., 2022; Ongena, 2023). In auditing, dynamic capabilities suggest that adaptability is not merely a function of experience but depends on the continuous integration of technological knowledge into professional practice.

Recent empirical and conceptual studies support this perspective. Matta and Chamoun (2025) demonstrate that auditors with both high expertise and strong IT literacy exhibit significantly greater adaptability across multiple dimensions, including openness to change, technology adoption, and continuous learning. Their findings align with cognitive skill acquisition theory, which suggests that novices benefit substantially from IT literacy during early learning stages, while experts leverage advanced digital skills to enhance autonomous decision-making (Goeke et al., 2018). Similarly, Susanto et al. (2023) and Ismail et al. (2024) highlight the role of psychological readiness and perceived usefulness of technology in shaping auditors' digital transformation outcomes.

Building on this emerging evidence, this qualitative literature review synthesizes prior research to examine how auditor expertise and IT literacy jointly influence adaptability in the digital age. By integrating insights from auditing, information systems, and organizational capability literatures, this study conceptualizes adaptability as a

multidimensional construct encompassing cognitive, behavioral, and psychological dimensions (Andrade, 2021; Farcane et al., 2023). Unlike prior reviews that focus narrowly on technology adoption or skill development, this study emphasizes the interaction effects between expertise and IT literacy, highlighting how their alignment enhances auditors' capacity to navigate digitally complex audit environments.

The contribution of this study is threefold. First, it advances the auditing literature by framing auditor adaptability through a dynamic capabilities perspective, emphasizing the role of IT literacy as a strategic knowledge asset rather than a peripheral technical skill. Second, it provides an integrated synthesis of empirical findings that demonstrate how different combinations of expertise and IT literacy shape adaptive outcomes across career stages. Third, it offers practical insights for audit firms, professional bodies, and regulators by highlighting the need for tiered training programs that simultaneously develop digital competencies, professional judgment, and psychological readiness (Alles & Gray, 2020; Appelbaum & Nehmer, 2020; Eulerich et al., 2022).

As the audit profession continues to evolve amid rapid technological change, understanding the mechanisms that enable auditor adaptability becomes increasingly critical. By examining the interplay between expertise and IT literacy, this study seeks to inform both theory and practice, contributing to the development of a resilient, digitally capable audit workforce prepared to meet the demands of the modern assurance landscape.

LITERATURE REVIEW

Digital Transformation and the Changing Nature of Auditing. Digital transformation has fundamentally reshaped the auditing profession by introducing advanced technologies such as artificial intelligence (AI), big data analytics, blockchain, and cloud-based systems into audit processes, thereby challenging traditional audit methodologies and professional routines (Abdullah & Almaqtari, 2024; Manita et al., 2020). Prior studies emphasize that digitalization alters not only audit tools but also the cognitive demands placed on auditors, requiring enhanced analytical reasoning, continuous learning, and technological fluency (Bierstaker et al., 2014; Cristea, 2020). Empirical evidence suggests that audit firms adopting digital technologies experience changes in audit planning, evidence collection, and risk assessment, which in turn affect

audit quality and efficiency (Fedyk et al., 2022; Rahman & Ziru, 2022). However, the benefits of digital transformation are unevenly distributed across auditors due to heterogeneity in expertise and IT literacy, highlighting the importance of individual adaptability in technology-intensive audit environments (Barr-Pulliam et al., 2022; Tarek et al., 2017).

Auditor Expertise as a Foundation for Adaptability. Auditor expertise, commonly defined as accumulated domain knowledge, task-specific experience, and professional judgment capability, has long been recognized as a key determinant of audit quality and decision-making effectiveness (Francis, 2004; Nelson & Tan, 2005). Research demonstrates that experienced auditors exhibit superior problem-solving abilities and are better equipped to handle complex audit tasks, including those involving advanced information systems (Gissel & Johnstone, 2017; Sirois et al., 2018). The "learning-by-doing" perspective further suggests that expertise develops through repeated exposure to complex audit environments, enabling auditors to internalize routines and improve performance over time (Beck & Wu, 2006; Gaver & Utke, 2018). Nonetheless, recent literature cautions that traditional expertise alone may be insufficient in digital audit contexts, as deep accounting knowledge must now be complemented by technological competencies to sustain adaptability (Feliciano & Quick, 2022; Ham et al., 2023).

IT Literacy and Digital Competence in Auditing. IT literacy refers to an auditor's ability to understand, evaluate, and effectively use digital tools and information systems in audit engagements, including data analytics platforms, AI applications, and cybersecurity controls (Appelbaum et al., 2021a; Tinmaz et al., 2022). A growing body of research indicates that IT-literate auditors are more willing to adopt audit technologies and demonstrate higher confidence in digital environments, leading to improved audit performance (Curtis et al., 2009; Lindawati & Handoko, 2022). Studies focusing on AI and analytics adoption reveal that insufficient IT literacy constitutes a major barrier to effective technology use, particularly among senior auditors whose expertise was developed in pre-digital contexts (Betti & Sarens, 2021; Gu et al., 2024). Moreover, digital literacy has been shown to enhance auditors' perceived usefulness of technology, which in turn strengthens their readiness for digital transformation (Ben Ghrbeia & Alzubi, 2024; Ismail et al., 2024).

The Interplay Between Expertise and IT Literacy. Recent empirical work underscores that auditor adaptability is not driven by expertise or IT literacy in isolation, but rather by their interaction (Matta & Chamoun, 2025; Rahman & Ziru, 2022). Matta and Chamoun (2025) provide robust evidence that auditors with both high professional expertise and high IT literacy exhibit significantly greater adaptability across multiple dimensions, including openness to change, continuous learning, and technology adoption. Conversely, auditors with high expertise but low IT literacy often experience reduced adaptability, as technological complexity constrains their ability to leverage prior knowledge effectively (Goeke et al., 2018; Feliciano & Quick, 2022). These findings align with cognitive skill acquisition theory, which posits that advanced expertise enhances performance only when individuals possess the necessary tools to operationalize their knowledge in evolving task environments (Nelson & Tan, 2005; Hamdam et al., 2022).

Dynamic Capabilities and Auditor Adaptability. The dynamic capabilities framework provides a useful theoretical lens for understanding auditor adaptability in digitally evolving environments, as it emphasizes the ability to sense technological changes, seize digital opportunities, and reconfigure skills and routines accordingly (Endres et al., 2018; Heubeck, 2023). Within this framework, IT literacy can be conceptualized as a micro-foundation that enables auditors to integrate new technologies into audit processes, thereby enhancing individual and organizational adaptability (Konopik et al., 2022; Ongena, 2023). Empirical studies indicate that auditors who develop dynamic capabilities through continuous professional development and technology-focused training are better positioned to respond to digital disruption (Eulerich et al., 2022; Rumasukun, 2024). Importantly, adaptability has been shown to encompass psychological readiness, openness to change, and proactive learning behaviors, which extend beyond technical competence alone (Andrade, 2021; Farcane et al., 2023).

Psychological Readiness, Adaptability Dimensions, and Audit Outcomes. Adaptability in auditing has increasingly been conceptualized as a multidimensional construct encompassing cognitive, behavioral, and emotional components (Pulakos et al., 2000; Andrade, 2021). Studies examining digital audit contexts reveal that psychological readiness—defined as willingness to embrace change and tolerate uncertainty—

significantly moderates the relationship between technology adoption and audit performance (Susanto et al., 2023; Ismail et al., 2024). Furthermore, research suggests that IT literacy enhances adaptability by reducing technology-related anxiety and increasing auditors' perceived control over digital tools, thereby fostering more effective judgment and decision-making (Appelbaum et al., 2021b; Holovach & Holovach, 2022). These findings reinforce the argument that adaptability is a critical capability for sustaining audit quality in technology-driven environments (Manita et al., 2020; Rabbani, 2024).

Although prior literature extensively documents the impact of digital transformation on auditing, many studies examine expertise, IT skills, or technology adoption in isolation, without systematically analyzing their interaction in shaping auditor adaptability (Tran & Ha, 2021; Lamboglia et al., 2021). Recent contributions, particularly Matta and Chamoun (2025), address this gap by empirically demonstrating interaction effects between expertise and IT literacy; however, further qualitative synthesis is needed to integrate these findings within broader theoretical frameworks such as dynamic capabilities. Moreover, existing research often overlooks contextual factors such as organizational culture, leadership support, and resource availability, which may condition the development of adaptability (Barr-Pulliam et al., 2022; Seppanen et al., 2025). Consequently, a qualitative literature review that synthesizes insights across disciplines is essential to advance understanding of auditor adaptability in the digital age.

METHODS

This study adopts a qualitative literature review methodology to systematically synthesize existing scholarly knowledge on the interplay between auditor expertise, IT literacy, and dynamic capabilities in the context of digital transformation. A qualitative literature review is an interpretive approach that enables researchers to integrate theoretical perspectives, empirical findings, and conceptual frameworks across diverse studies to develop holistic insights (Bryman, 2016; Tran & Ha, 2021). Unlike quantitative meta-analysis, which statistically aggregates findings, qualitative literature review emphasizes thematic integration, conceptual linkages, and narrative synthesis (Randolph, 2009; Torraco, 2016).

The choice of a literature review design is justified because the topic intersects multiple disciplines — auditing, information systems, organizational behavior, and

dynamic capabilities — and requires an integrative understanding of how auditor characteristics (e.g., expertise and digital competencies) interact within evolving technological environments (Barr-Pulliam et al., 2022; Matta & Chamoun, 2025). Additionally, a qualitative synthesis enables the identification of emerging patterns, research gaps, and theoretical tensions that are prevalent across diverse empirical settings (Kitchenham & Charters, 2007; Snyder, 2019).

To ensure a comprehensive review, literature was systematically sourced from multiple academic databases. These databases were selected for their extensive coverage of peer-reviewed journals across accounting, auditing, management, and information systems. Search queries were constructed using a combination of keywords and Boolean operators, such as: "auditor adaptability" and "digital transformation", "expertise" and "IT literacy" and "audit", "dynamic capabilities" and "auditing", "digital audit competency" and "audit quality". These keywords were drawn from existing literature on digital audit, auditing competencies, and dynamic capabilities (Appelbaum et al., 2021; Betti & Sarens, 2021; Ben Ghrbeia & Alzubi, 2024). The search covered publications from 2018 to 2025 to capture the most recent developments, particularly given the accelerated pace of digital transformation in auditing due to technologies such as AI, analytics, and blockchain (Abdullah & Almaqtari, 2024; Gu et al., 2024; Matta & Chamoun, 2025).

Inclusion criteria included: Peer-reviewed journal articles, book chapters, and highly cited conference proceedings; Publications explicitly addressing auditor skills, digital competencies, adaptation to technology, and dynamic capabilities; Studies available in English; Both theoretical/conceptual studies and empirical research. Exclusion criteria comprised non-peer-reviewed sources, unpublished manuscripts, and studies outside the domain of auditing and digital transformation (Snyder, 2019; Torraco, 2016).

After conducting the initial database search, records were screened through a two-stage process. First, titles and abstracts were reviewed to determine relevance to the core constructs: auditor adaptability, expertise, IT literacy, and dynamic capabilities. Second, full texts were examined to ensure conceptual alignment with the research objectives.

The screening process followed best practices recommended for literature reviews, ensuring transparency and replicability (Okoli & Schabram, 2010). A PRISMA-inspired

flow diagram was used to document the number of studies identified, screened, excluded, and included in the final synthesis. This methodical approach minimized selection bias and enhanced the rigor of the review (Moher et al., 2009; Tran & Ha, 2021).

For each study selected, key information was systematically extracted into a review matrix to facilitate thematic analysis. Extracted data included: Author(s), year, and journal. Research context and setting. Methodology and sample characteristics. Key findings related to auditor adaptability, expertise, IT literacy, or dynamic capabilities. Theoretical frameworks employed. This structured extraction process aligns with the guidelines for rigorous literature reviews in social sciences (Webster & Watson, 2002; Snyder, 2019).

To assess the quality of individual studies, criteria such as conceptual clarity, methodological transparency, validity of findings, and theoretical contribution were considered. Studies with robust empirical design, clear operationalization of constructs (e.g., IT literacy scales), and significant implications for auditing practice were prioritized during synthesis (Barr-Pulliam et al., 2022; Matta & Chamoun, 2025).

The core analytical approach in this review is thematic synthesis, which integrates insights across studies to identify common patterns, conceptual linkages, and theoretical mechanisms (Thomas & Harden, 2008; Torraco, 2016). Themes were iteratively developed through coding, categorization, and narrative integration. Three main thematic clusters emerged: Digital Drivers and Technological Demand in Auditing — focusing on how AI, analytics, and digital tools reshape audit tasks and expectations (Abdullah & Almaqtari, 2024; Almufadda & Almezeini, 2022). Interplay of Expertise and IT Literacy — examining how professional experience and digital competencies jointly facilitate adaptability in audit environments (Appelbaum et al., 2021; Matta & Chamoun, 2025). Dynamic Capabilities as a Theoretical Lens — exploring how individual and organizational capabilities enable sensing, seizing, and reconfiguring in response to technological change (Endres et al., 2018; Heubeck, 2023).

The thematic synthesis was further informed by established theory, including dynamic capabilities theory (Teece et al., 1997; Endres et al., 2018), skill acquisition and adaptation frameworks (Nelson & Tan, 2005; Goeke et al., 2018), and digital competence models (Appelbaum et al., 2021; Ben Ghrbeia & Alzubi, 2024). These theoretical lenses provided both structure and depth to the narrative synthesis.

Reflexivity is integral to qualitative inquiry, requiring researchers to reflect on how their perspectives shape interpretation (Finlay, 2002). Throughout the review, multiple researchers collaborated during screening and coding to reduce individual bias and enhance interpretive validity (Torraco, 2016). Additionally, limitations inherent in literature reviews — including dependence on published studies and potential publication bias — were acknowledged and mitigated through broad database selection and transparent reporting of screening decisions (Snyder, 2019; Okoli & Schabram, 2010).

Research ethics in literature reviews involve responsible reporting, accurate citation, and intellectual integrity (Resnik, 2020). All sources were duly cited, and interpretations were grounded in original findings rather than researcher inferral. Ethical stewardship also influenced the selection of high-quality and peer-reviewed sources to ensure scholarly credibility.

RESULTS

Emergent Themes on Auditor Adaptability in the Digital Age. The literature reveals three major, recurrent themes regarding auditor adaptability in the context of digital transformation: The foundational role of expertise, IT literacy as a determinant of digital readiness, and Dynamic capabilities as an integrative framework enabling adaptive behavior among auditors.

Auditor Expertise as a Core Competency. A consistent finding across the audited literature is that auditor expertise serves as a foundational competency for adaptability in technologically driven audit environments. Expertise — encompassing domain knowledge, professional judgment, and contextual experience — is repeatedly identified as essential for interpreting complex digital audit evidence and making sound evaluative decisions (Gissel & Johnstone, 2017; Nelson & Tan, 2005).

For example, Sirois et al. (2018) demonstrate that auditors with advanced industry specialization and task expertise are better positioned to interpret data outputs from analytics tools, which enhances their ability to navigate unfamiliar digital audit tasks. Similarly, Gaver and Utke (2018) show that experience with complex technologies correlates with auditors' comfort in unpredictable digital audit contexts, which positively influences adaptability.

However, several studies caution that traditional expertise alone cannot guarantee adaptability in digital audits. Expertise developed prior to the digital age may not fully

equip auditors to handle rapidly evolving technologies without complementary skills (Betti & Sarens, 2021; Feliciano & Quick, 2022). In other words, domain knowledge becomes insufficient to sustain adaptive behavior when auditors lack the ability to leverage new digital tools effectively.

IT Literacy as a Key Enabler of Adaptability. The literature identifies IT literacy as a critical enabler of adaptive performance among auditors in digital contexts. IT literacy — defined as the ability to understand, interpret, and leverage digital technologies — consistently emerges as a mediator between expertise and adaptability.

Appelbaum et al. (2021) argue that digital proficiency extends beyond basic software competencies, encompassing data literacy and analytical skills essential for audit tasks increasingly supported by AI, analytics, and automation. This claim is corroborated by Lindawati and Handoko (2022), who find that auditors with higher IT literacy are more adept at integrating computer-assisted audit tools into their workflows, thus fostering adaptability in technology-intensive tasks.

Recent empirical evidence also shows that auditors with high IT literacy report greater perceived usefulness of digital tools, which bolsters their psychological readiness to adopt new systems (Ismail et al., 2024). Similarly, Matta and Chamoun's (2025) study reveals that auditors with both high expertise and high IT literacy display significantly superior adaptability across multiple dimensions, including openness to change and technology adoption.

Conversely, low levels of IT literacy are frequently linked to resistance to digital adoption and reduced adaptive performance, particularly among senior auditors accustomed to legacy audit methods (Betti & Sarens, 2021; Barr-Pulliam et al., 2022). These auditors often experience cognitive overload when confronted with unfamiliar technologies, which inhibits adaptability and diminishes audit effectiveness.

Dynamic Capabilities as an Integrative Framework. The literature underscores the dynamic capabilities framework as a unifying theoretical lens for understanding auditor adaptability. Dynamic capabilities — the capacity to sense changes, seize opportunities, and reconfigure resources — illuminate how auditors integrate expertise and digital competencies to sustain performance in uncertain environments (Endres et al., 2018; Heubeck, 2023).

Numerous studies leverage this framework to describe adaptability not merely as a function of individual skills but as an interactive process involving cognition, technology use, and organizational context. For instance, Heubeck (2023) highlights that auditors who cultivate dynamic capabilities through ongoing learning and reflective practice are better able to adjust their routines when confronted with evolving audit technologies.

Matta and Chamoun's (2025) findings align with this theoretical perspective by showing that auditors who dynamically combine knowledge assets (expertise and IT literacy) are more agile in sensing digital opportunities, seizing them through intentional technology adoption, and reconfiguring audit strategies to accommodate digital workflows. This interaction supports the view that adaptability is not static but evolves through iterative capability development.

Key Dimensions of Auditor Adaptability. Across the reviewed studies, several dimensions of adaptability recur consistently: Openness to Change: Auditors who exhibit a positive disposition toward new technologies and processes adapt more successfully (Andrade, 2021; Farcane et al., 2023). Continuous Learning Orientation: Ongoing professional development initiatives — especially those focused on analytics and AI tools — significantly enhance adaptability (Eulerich et al., 2022). Psychological Readiness: Willingness to tolerate uncertainty and adjust cognitive frameworks is critical, particularly in the face of emerging digital risks (Susanto et al., 2023). Technology Adoption: Practical engagement with digital tools — including data analytics, cloud platforms, and AI — is a tangible manifestation of adaptability in audit practice (Appelbaum et al., 2021; Gu et al., 2024). Collectively, these dimensions reflect a multifaceted construct wherein cognitive, behavioral, and technological aspects converge to determine how auditors adjust to digital transformation.

Interaction Effects Between Expertise and IT Literacy. A core insight emerging from the literature is the interaction effect between expertise and IT literacy on adaptability outcomes. Studies increasingly recognize that neither expertise nor IT literacy alone sufficiently predicts adaptive performance unless they operate in tandem.

Matta and Chamoun (2025) provide robust evidence that auditors with both high expertise and high IT literacy demonstrate superior adaptability relative to any other combination. This interaction effect suggests that expertise amplifies the value of IT

literacy and vice versa, enabling auditors to interpret complex audit evidence with both domain insight and technological competence.

This interaction also aligns with cognitive skill acquisition theories, where expertise developed through mastery is most effective when complemented by technological fluency — particularly as auditors progress from novice to autonomous stages of performance (Goeke et al., 2018; Nelson & Tan, 2005).

The literature indicates that: Expertise remains a necessary but not sufficient condition for auditor adaptability in digital contexts. IT literacy functions as a catalyst for adaptive performance, enhancing auditors' ability to work with digital tools and interpret system-generated information. Dynamic capabilities provide an overarching lens for understanding how auditors integrate knowledge assets and skills to respond to technological change. Adaptability is multidimensional, involving cognitive openness, continuous learning, psychological readiness, and active technology adoption. Interaction effects between expertise and IT literacy are central to understanding who adapts successfully in digital audit environments.

DISCUSSION

The findings of this qualitative literature review illuminate the complex and dynamic relationship among auditor expertise, IT literacy, and dynamic capabilities in shaping auditor adaptability within digitally transforming environments. In synthesizing multiple strands of research, the review confirms that adaptability is not a unidimensional construct but rather a multifaceted capacity influenced by cognitive, technical, and behavioral factors. Our discussion situates these findings against established research, drawing explicit comparisons with at least eight prior studies to underscore the theoretical coherence and practical relevance of the present synthesis.

Expertise as a Foundation for Adaptability. Consistent with prior theorizing, auditor expertise remains a central determinant of adaptability, particularly in contexts where auditors must interpret complex audit evidence and exercise professional judgment under uncertainty (Nelson & Tan, 2005). Expertise encompasses accumulated task experience, contextual understanding of audit environments, and mastery of accounting standards—all of which facilitate auditors' ability to respond to evolving audit tasks. Gissel and Johnstone (2017) similarly emphasize that experienced auditors demonstrate superior

diagnostic skills and nuanced problem-solving abilities compared to novices, enabling them to adapt more effectively when encountering novel challenges in audit engagements.

However, the current review reveals that expertise alone is insufficient to ensure adaptability in the digital age. Betti and Sarens (2021) found that auditors who lacked digital fluency—despite possessing strong domain expertise—often struggled to integrate advanced analytics outputs into their professional judgments. This aligns with the observation that traditional audit expertise, developed largely in analog environments, does not automatically translate into competence with digital tools. In contrast, Feliciano and Quick (2022) report that auditors who combined deep audit expertise with openness to digital innovation exhibited more effective adaptability, reinforcing the notion that expertise must be supplemented by complementary digital competencies.

Our findings extend these insights by demonstrating that the value of expertise is conditional on the presence of IT literacy. When auditors possess high levels of both, they are significantly more adept at navigating digital audit tasks, interpreting system-generated evidence, and adjusting their professional routines to reflect technological advancement (Matta & Chamoun, 2025). This interaction effect echoes Sirois et al. (2018), who highlighted that expertise facilitates adaptability only when auditors are also equipped to handle emerging technology demands. The juxtaposition of these studies suggests a synergistic relationship wherein expertise and digital competencies co-produce adaptive outcomes, rather than operate independently.

IT Literacy as a Critical Enabler of Digital Adaptability. The present review foregrounds IT literacy as a vital enabler of adaptability in digital audit contexts. Appelbaum et al. (2021) conceptualize IT literacy not merely as technical proficiency with software tools, but as broader data literacy encompassing the ability to interpret, evaluate, and strategically use digital information. This conceptualization is reinforced by Lindawati and Handoko's (2022) finding that auditors with higher IT literacy demonstrated greater competence in applying computer-assisted audit techniques (CAATs), which enhanced their capacity to adapt audit procedures in response to data complexity.

Comparative evidence from Ismail, Mokhtar, and Ahmad (2024) indicates that internal auditors who reported higher IT literacy also exhibited greater psychological readiness to adopt digital audit processes. This is consistent with Susanto et al. (2023),

who reported that auditors' readiness to adopt digital technologies—shaped by IT literacy—was a significant predictor of adaptation success in practice. Together, these studies suggest that IT literacy contributes not only to technical performance but also to motivational and cognitive dimensions of adaptability.

Importantly, the review highlights that IT literacy functions as a threshold capability: auditors below a certain literacy level struggle to engage meaningfully with digital tools, regardless of their domain expertise. Barr-Pulliam, Brown-Liburd, and Munoko (2022) observed that auditors with limited digital competencies exhibited resistance to adopting new audit technologies, often reverting to manual procedures even when such approaches were inefficient. These findings align with Ben Ghrbeia and Alzubi (2024), who argue that digital literacy functions as a mediator between technological demand and adaptive behavior, influencing auditors' willingness and capacity to integrate innovation into their work.

Dynamic Capabilities as Theoretical Framework. Dynamic capabilities theory offers a robust lens through which to interpret auditor adaptability. As conceptualized by Endres, Endres, and Berg (2018), dynamic capabilities comprise the ability to sense, seize, and reconfigure resources in response to environmental change. Applied to the audit profession, dynamic capabilities encapsulate auditors' ability to detect emerging technological trends (e.g., AI, data analytics), to seize opportunities by updating skills and routines, and to reconfigure audit practices to integrate new tools into standard workflows.

Heubeck (2023) demonstrated that auditors who actively engage in continuous professional development (CPD) focused on digital competencies exhibited higher levels of adaptive performance, consistent with the dynamic capabilities perspective. Similarly, Eulerich, Theis, and Stewart (2022) found that CPD efforts that incorporate scenario-based learning and technology simulation strengthen auditors' ability to respond to real-world digital disruptions. These studies complement the present review's finding that adaptability is a processual capability rather than a fixed trait—a conclusion supported by Farcane et al. (2023), who reported that auditors' adaptability levels increased over time as they accumulated experience with remote audit technologies during COVID-19.

Dynamic capabilities also provide theoretical grounding for understanding the interaction between expertise and IT literacy. Expertise represents a stock of domain

knowledge, while IT literacy represents a stock of technological knowledge; dynamic capabilities describe the mechanisms that integrate and mobilize these knowledge stocks to generate adaptive behaviors. Matta and Chamoun's (2025) findings that auditors with high levels of both expertise and IT literacy exhibit superior adaptability align with this integrative framing, suggesting that dynamic capabilities operationalize the interplay between knowledge domains.

Multidimensionality of Adaptability. The review consistently identifies adaptability as a multidimensional construct encompassing cognitive, behavioral, and psychological components. Cognitive adaptability refers to auditors' ability to reinterpret problems and adjust mental models in light of new information; behavioral adaptability involves modifying audit procedures and techniques; and psychological adaptability encompasses openness to change and tolerance for ambiguity.

Andrade's (2021) work on creative adaptability underscores the importance of cognitive flexibility in navigating turbulent environments, while Susanto et al. (2023) highlight the role of psychological readiness in facilitating technology adoption. These perspectives converge with the present review's finding that adaptability cannot be fully understood by examining technical skills alone. Instead, adaptability reflects the integration of mindset, skills, and behaviors, a conclusion that aligns with the broader organizational literature on adaptability (Pulakos et al., 2000).

This multidimensionality has practical implications: audit firms that focus solely on technical training (e.g., CAAT proficiency) without addressing mindset and cognitive flexibility may fail to cultivate true adaptability among auditors. The evidence suggests that adaptability training should include elements such as change management workshops, scenario-based learning, and reflective practice, which bolster psychological readiness and cognitive agility alongside technical proficiency.

To further illustrate how the present review aligns with and extends existing research, we compare findings from eight key prior studies: Nelson & Tan (2005) established that judgment and decision-making research must consider task, person, and interaction factors. Our review confirms that person factors (expertise and IT literacy) interact to shape adaptability. Gissel & Johnstone (2017) demonstrated that specialization enhances audit outcomes. We extend this by showing that specialization's effect on adaptability depends on concurrent IT literacy. Betti & Sarens (2021) found that AI

presents both opportunities and challenges; our review corroborates these dual effects and clarifies that IT literacy mediates how auditors engage with AI.

Feliciano & Quick (2022) reported that auditors' perceptions of IT importance vary with expertise; we validate this and further demonstrate how perception influences adaptability. Appelbaum et al. (2021) conceptualized data literacy as essential; we build on this by integrating data literacy within a broader adaptability framework. Lindawati & Handoko (2022) showed that IT literacy moderates audit quality determinants; our review situates this moderation within adaptive processes. Susanto et al. (2023) emphasized readiness; our synthesis highlights readiness as a psychological component of adaptability. Eulerich et al. (2022) underscored the role of CPD; we incorporate this as a dynamic capability mechanism for strengthening adaptability. Collectively, these studies support the review's central thesis that adaptability arises from the synergistic interplay of expertise, IT literacy, and dynamic capabilities, rather than from isolated factors.

The integration of findings across studies carries significant implications. Audit firms should prioritize holistic development programs that simultaneously cultivate expertise, digital competencies, and adaptive mindsets. Professional bodies (e.g., IFAC, AICPA) may consider updating CPD requirements to emphasize adaptability training as a core competency. Regulators should also recognize the evolving demands of digital audit environments and support frameworks that incentivize ongoing skill development.

CONCLUSION

This qualitative literature review provides a comprehensive synthesis of how auditor adaptability is shaped by the interplay of professional expertise, IT literacy, and dynamic capabilities in the context of ongoing digital transformation. The reviewed evidence consistently demonstrates that adaptability has become a core professional competence for auditors, rather than a peripheral skill, as audit environments increasingly rely on data analytics, artificial intelligence, blockchain, and digitally mediated audit processes.

The findings confirm that professional expertise remains a necessary foundation for auditor adaptability, enabling auditors to exercise sound judgment, interpret complex audit evidence, and maintain audit quality under conditions of uncertainty. However, the review also shows that expertise developed in traditional audit settings is no longer sufficient on its own. Without adequate IT literacy, auditors struggle to meaningfully

engage with advanced digital tools and system-generated outputs, which limits their capacity to adapt effectively to digitally transformed audit tasks.

IT literacy emerges as a critical enabling capability that strengthens auditors' readiness, confidence, and willingness to adopt digital technologies. The literature indicates that IT-literate auditors are better positioned to integrate data analytics, AI-assisted procedures, and automated audit tools into their professional routines. Importantly, IT literacy does not merely enhance technical execution but also supports cognitive and psychological adaptability by reducing uncertainty and resistance toward technological change.

By applying the dynamic capabilities perspective, this review advances the understanding of auditor adaptability as a process-oriented and developmental construct. Dynamic capabilities explain how auditors sense technological changes, seize learning and innovation opportunities, and reconfigure audit practices over time. The synthesis highlights that adaptability is generated through the continuous integration of expertise and IT literacy, facilitated by ongoing learning, professional development, and reflective practice.

Overall, this review contributes theoretically by positioning auditor adaptability as a multidimensional capability that combines cognitive flexibility, behavioral adjustment, psychological readiness, and technological competence. Practically, the findings suggest that audit firms, professional bodies, and regulators should adopt holistic competency development strategies that simultaneously cultivate domain expertise, digital literacy, and adaptive mindsets. Such an integrated approach is essential for sustaining audit quality and professional relevance in the digital age.

LIMITATION

Despite its contributions, this qualitative literature review is subject to several limitations that should be acknowledged. First, the study relies exclusively on secondary data from prior academic literature, which constrains the ability to capture real-time behavioral adaptations and lived experiences of auditors undergoing digital transformation. As a result, the findings reflect synthesized interpretations of existing studies rather than direct empirical observation.

Second, although the review draws on a broad and multidisciplinary body of literature, publication bias may influence the conclusions, as studies reporting successful digital adaptation and positive outcomes are more likely to be published than those documenting failure or resistance. This may lead to an overrepresentation of optimistic perspectives on auditor adaptability.

Third, the reviewed studies vary considerably in terms of context, methodology, and geographic focus, ranging from developed to emerging economies and from internal to external audit settings. While this diversity enhances the generalizability of conceptual insights, it also limits the ability to draw context-specific conclusions regarding regulatory environments, firm size, or cultural influences on adaptability.

Fourth, the review emphasizes expertise, IT literacy, and dynamic capabilities as key explanatory factors, potentially overlooking other relevant determinants such as organizational culture, leadership support, incentive systems, and ethical considerations. These factors may interact with individual-level capabilities in shaping adaptive behavior but were beyond the primary scope of this synthesis.

Finally, as digital audit technologies continue to evolve rapidly, some findings may become time-sensitive, particularly those related to specific tools or systems. Future research should therefore complement qualitative literature reviews with longitudinal and empirical studies to capture how auditor adaptability evolves in response to emerging technologies and regulatory changes.

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