

Integration of Digital Skills in the Accounting Education Curriculum: A Literature Review and Curriculum Development Recommendations

Linda Lidyawati¹, Agus Sriyanto², Hotma Mentalita³, Romulo Parlindungan Aritonang⁴,
Hotman DS⁵

^{1,2} Universitas Mpu Tantular, Indonesia

³ Institut Teknologi dan Bisnis Indonesia, Indonesia

⁴ Institut Teknologi dan Bisnis Indonesia, Indonesia

⁵ Universitas Pancabudi, Indonesia

E-mail: lindalidyawati77@gmail.com¹, agussriyanto72@gmail.com², hmentalita@gmail.com³,
romuloaritonang@yahoo.com⁴, hotmands7@gmail.com⁵

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Abstract: The rapid advancement of digital technologies is transforming the accounting profession at an unprecedented pace, creating substantial gaps between the skills demanded by employers and those cultivated within existing accounting education curricula. This study explores the extent to which digital skills are integrated into accounting education curricula and identifies strategies for curriculum enhancement. Employing a systematic literature review methodology, this research synthesized 25 peer-reviewed articles and academic books published between 2015 and 2024, sourced from Scopus, Web of Science, and Google Scholar databases. The findings reveal four dominant themes: (1) a significant misalignment between academic curricula and industry digital skill requirements; (2) emerging consensus on essential digital competencies for future accountants, including data analytics, cloud computing, and artificial intelligence literacy; (3) institutional barriers to curriculum reform such as faculty digital competency limitations and resource constraints; and (4) best practices in integrating digital skills through competency-based frameworks. This study proposes a structured conceptual framework for integrating digital skills into accounting education curricula, offering actionable recommendations for educators, curriculum designers, and institutional policymakers. The findings carry significant implications for accounting education reform in both developing and developed countries, particularly in the context of Industry 4.0 and the post-pandemic digital acceleration.

INTRODUCTION

The accounting profession is undergoing a profound transformation driven by the rapid advancement of digital technologies, including artificial intelligence (AI), big data analytics, cloud computing, robotic process automation (RPA), and blockchain technology. These technologies are fundamentally reshaping the nature of accounting work, rendering many traditional tasks obsolete while simultaneously creating demand for new and sophisticated competencies (Bhimani & Willcocks, 2014; Moll & Yigitbasioglu, 2019). According to the World Economic Forum (2020), more than 85 million jobs globally may be displaced by technological automation by 2025, while 97 million new roles will emerge that require a substantially different skill set. Within this context, accounting professionals are expected to transcend their traditional roles as financial record-keepers and evolve into strategic data interpreters, digital advisors, and technology-enabled decision-support specialists.

The implications of this digital transformation for accounting education are considerable. Universities and higher education institutions bear the primary responsibility for preparing graduates who are not only theoretically grounded in accounting principles but also equipped with relevant digital competencies. However, a growing body of empirical evidence suggests that accounting curricula in many institutions have not kept pace with the evolving demands of the profession (Siriwardane & Durden, 2014; Pan & Seow, 2016). This misalignment between educational outputs and industry expectations constitutes a critical challenge for the global accounting education community, undermining graduate employability and organizational productivity.

The term 'digital skills' in the accounting context encompasses a broad and evolving spectrum of technical and cognitive competencies. These include data analytics and visualization, enterprise resource planning (ERP) system proficiency, cloud-based accounting platforms, cybersecurity awareness, blockchain understanding, and AI-assisted decision-making (Appelbaum et al., 2017; Richins et al., 2017). Professional bodies such as the Association of Chartered Certified Accountants (ACCA), the Chartered Institute of Management Accountants (CIMA), and the International Federation of Accountants (IFAC) have issued frameworks and guidance documents highlighting the urgency of embedding these competencies within professional qualification pathways and undergraduate curricula. Despite these directives, empirical research suggests that implementation at the institutional level remains inconsistent and fragmented.

The challenges faced by accounting education institutions in integrating digital skills into their curricula are multifaceted. First, there is an institutional resistance to change, particularly in institutions where curriculum reform processes are bureaucratically complex and slow to respond to external environmental shifts (Watty et al., 2016). Second, many accounting faculty members lack the technical expertise required to effectively teach digital skills, creating a significant capacity gap within academic departments (Asonitou & Hassall, 2019). Third, resource constraints in developing countries often limit access to licensed software, modern hardware, and the institutional infrastructure necessary for technology-integrated education. Fourth, there is an absence of standardized guidelines for what digital competencies should be included in accounting degree programs, resulting in considerable variation across institutions and national systems.

A growing volume of scholarly literature has examined aspects of digital skills in accounting education; however, the field lacks comprehensive, systematic syntheses that bring together findings across different geographic contexts, institutional types, and research methodologies.

Most existing studies focus on specific digital tools or competencies in isolation, without providing an integrated framework for curriculum development (Coyne et al., 2018; Damerji & Salimi, 2021). Furthermore, there is limited scholarly attention to the strategies, stakeholders, and systemic conditions that enable successful digital skills integration. This research gap undermines the ability of curriculum developers and institutional leaders to make evidence-based decisions regarding curriculum reform.

Recent developments, including the COVID-19 pandemic and its associated acceleration of digital work practices, have further intensified the urgency of addressing this gap. The pandemic forced accounting professionals and students alike into remote digital work environments almost overnight, exposing significant deficiencies in digital readiness among graduates and practitioners (Alqatawenh, 2021). Post-pandemic recovery has reinforced the importance of digital literacy as a foundational professional competency rather than a supplementary skill. This has generated renewed calls from both academia and industry for systematic curriculum reform that positions digital skills as a core rather than peripheral element of accounting education.

In the Indonesian context, the integration of digital skills into accounting education is particularly pressing. Indonesia's ambitious national agenda for digital economic transformation, as outlined in the Making Indonesia 4.0 roadmap and the Digital Economy Roadmap 2021-2024, has placed significant demands on the workforce and the higher education sector. While Indonesian universities have incrementally introduced technology-related courses, systematic integration of digital competencies into accounting curricula remains at an early and uneven stage (Susanto, 2019; Agus & Hartati, 2021). Given that accounting graduates constitute a substantial portion of Indonesia's business and financial sector workforce, strengthening digital competency development in accounting education has both national economic and professional development significance.

Against this backdrop, this study aims to conduct a systematic literature review on the integration of digital skills in accounting education curricula. Specifically, the study seeks to: (1) identify and synthesize research trends on digital skills in accounting education; (2) determine key digital competencies required by accounting professionals; (3) analyse barriers to digital skills integration in accounting curricula; and (4) propose an evidence-based conceptual framework for integrating digital skills into accounting education. By achieving these objectives, this study contributes to the theoretical and practical discourse on accounting education reform in the digital era.

LITERATURE REVIEW

1. Accounting Education in the Digital Era

Accounting education has traditionally been organized around the transmission of technical knowledge in areas such as financial reporting, auditing, taxation, and management accounting. This paradigm, while effective in equipping graduates with foundational competencies, has been increasingly criticized for its inability to prepare students for the dynamic and technology-intensive realities of contemporary professional practice (Diaconu, 2009; Low et al., 2013). The concept of accounting education in the digital era represents a paradigmatic shift towards curricula that integrate technology literacy, data-driven decision-making, and adaptive professional capabilities alongside traditional accounting knowledge.

Scholars such as Burns and Baldvinsdottir (2005) and Scapens and Jazayeri (2003) have documented the progressive evolution of management accounting roles from operational

reporting to strategic business partnering, a transformation enabled in large part by digital technologies. This evolution demands that accounting graduates possess competencies that transcend conventional bookkeeping and reporting skills, encompassing analytical thinking, systems understanding, and technological adaptability. Institutional frameworks such as the IFAC International Education Standards (IES) and the AACSB Standards for Business Accreditation reflect this shift by explicitly including technology-related learning outcomes within their curriculum expectations.

Research in accounting education has increasingly engaged with the concept of competency-based education (CBE), which structures learning outcomes around the acquisition of demonstrable skills and abilities relevant to professional practice (Hancock et al., 2009). Digital competencies align naturally with CBE frameworks, as they can be operationally defined, progressively scaffolded, and assessed through performance-based methods. The digital era has thus not only changed the content of accounting education but also its pedagogical orientations, assessment approaches, and industry-university linkage mechanisms.

2. Digital Skills in the Accounting Profession

The digital skills demanded of contemporary accounting professionals can be broadly categorized into three tiers: foundational digital literacy, domain-specific technical competencies, and advanced analytical capabilities. Foundational digital literacy encompasses basic proficiency in digital communication tools, online collaboration platforms, and general office productivity software, which are increasingly considered prerequisite rather than specialized competencies (Starcic & Bagon, 2014). Domain-specific technical competencies, which are most directly relevant to accounting practice, include proficiency in accounting information systems (AIS), ERP platforms such as SAP and Oracle, cloud-based accounting software such as Xero and QuickBooks Online, and electronic reporting systems such as XBRL (Extensible Business Reporting Language) (Richins et al., 2017).

Advanced analytical capabilities represent the highest tier of digital competency in accounting, encompassing skills in data analytics, statistical modelling, and AI-assisted analysis. Appelbaum et al. (2017) propose a taxonomy of data analytics competencies for accounting students that includes descriptive, diagnostic, predictive, and prescriptive analytics, arguing that proficiency across these levels is necessary for graduates to contribute meaningfully to organizational decision-making. Warren et al. (2015) further emphasize that accounting students must develop competency in business intelligence tools, data visualization platforms, and database query languages such as SQL to meet emerging professional requirements. The ACCA Future of Finance report (2020) identifies artificial intelligence, robotic process automation, and machine learning as the most transformative technologies for the accounting profession, underscoring the need for curricula that cultivate not merely awareness but functional competency in these domains.

3. Digital Transformation and Accounting Curriculum

Curriculum theory provides important conceptual tools for understanding how educational programs are designed, implemented, and evaluated in response to social and professional change. Tyler's (1949) classic curriculum development model, which emphasizes the alignment of learning objectives, content, instructional methods, and assessment, offers a useful starting point for examining how digital skill integration can be systematically embedded into existing accounting programs. More contemporary curriculum frameworks, such as backward design (Wiggins & McTighe, 2005) and competency-based curriculum models, provide more flexible and outcomes-oriented approaches suited to the rapidly evolving demands of digital professional

practice.

Watty et al. (2016) conducted an international study of accounting educators' perspectives on technology in accounting curricula and found that while faculty generally recognized the importance of technology integration, actual implementation was constrained by curriculum inertia, workload pressures, and institutional support structures. This finding aligns with Christensen's (1997) theory of disruptive innovation, which identifies incumbency effects and resource constraints as primary obstacles to transformative change in established institutional settings. In the context of accounting education, institutional conservatism and the dominance of traditional credentialing frameworks create significant path dependencies that resist rapid curriculum reform.

Pan and Seow (2016) propose a framework for integrating IS/IT skills into accounting education that emphasizes the importance of aligning curriculum content with professional standards, engaging industry stakeholders in curriculum development, and building faculty capability through professional development. Their framework, drawing on situated learning theory (Lave & Wenger, 1991), argues that digital skills are most effectively developed when learning is embedded in authentic professional contexts rather than delivered through decontextualized instruction. This perspective has significant implications for pedagogical design, suggesting the value of industry-linked projects, simulation-based learning, and cooperative education placements as vehicles for digital skill development.

4. Conceptual Framework for Integrating Digital Skills in Accounting Education

Drawing on the theoretical perspectives reviewed above, this study proposes a conceptual framework for the integration of digital skills in accounting education organized around four dimensions: (1) curriculum content alignment, (2) pedagogical methodology, (3) faculty capacity development, and (4) institutional enablers. Curriculum content alignment refers to the systematic identification and embedding of digital competencies within program learning outcomes and course-level objectives, informed by both professional standards and employer expectations. Pedagogical methodology encompasses the instructional approaches, learning technologies, and assessment strategies employed to develop digital competencies effectively.

Faculty capacity development addresses the imperative that accounting educators themselves must possess sufficient digital expertise to model, teach, and assess digital competencies credibly. Institutional enablers include infrastructure, policy, resources, and industry partnerships that support digital skills integration at the systemic level. This four-dimensional framework provides the organizing structure for the analysis of literature findings presented in subsequent sections of this study and informs the curriculum development recommendations proposed in the conclusion. The framework is consistent with Biggs' (1999) constructive alignment model, which emphasizes coherence among learning outcomes, teaching strategies, and assessment tasks as fundamental to effective curriculum design.

METHOD

1. Research Design

This study employs a systematic literature review (SLR) methodology to synthesize existing empirical and theoretical research on the integration of digital skills in accounting education curricula. A systematic literature review is a rigorous, transparent, and reproducible method for identifying, evaluating, and synthesizing the findings of relevant studies in a defined area of inquiry (Tranfield et al., 2003; Snyder, 2019). Unlike a narrative or traditional review, the SLR employs explicit and replicable procedures for literature search, screening, eligibility assessment, and data extraction, thereby minimizing selection bias and enhancing the reliability

of findings. This methodological choice is appropriate for the present study given the growing but fragmented body of literature on digital skills in accounting education and the need for an integrative synthesis that can inform curriculum development decisions.

2. Data Sources

The primary bibliographic databases consulted in this study were Scopus, Web of Science, and Google Scholar, which collectively provide comprehensive coverage of peer-reviewed accounting, education, and information systems literature. In addition, reports and frameworks from professional accounting bodies—including IFAC, ACCA, ICAEW, AICPA, and CPA Australia—were incorporated as grey literature sources given their direct relevance to professional competency standards. Academic books published by recognized publishers in accounting education, curriculum theory, and digital transformation were also included where they provided foundational theoretical perspectives not fully addressed in journal literature.

3. Article Selection Criteria

Literature selection was guided by predefined inclusion and exclusion criteria. Studies were included if they: (1) were published in English between 2015 and 2024; (2) focused on digital skills, technology competencies, or digital transformation in the context of accounting or related business education; (3) employed a clearly described research methodology; and (4) were published in peer-reviewed journals, edited academic books, or official professional body reports. Studies were excluded if they: (1) focused exclusively on k-12 digital education without relevance to higher education or professional training; (2) addressed digital skills in non-accounting disciplines without transferable insights; or (3) did not specify findings related to curriculum, teaching, learning, or professional competency development. Studies published prior to 2015 were excluded except for foundational theoretical contributions cited to establish the conceptual framework.

4. Data Analysis Technique

Data analysis employed thematic analysis and qualitative synthesis, following the approach described by Thomas and Harden (2008) for systematic reviews of qualitative evidence. Thematic analysis involved the systematic coding and categorization of key findings, arguments, and recommendations from selected studies into recurring themes and sub-themes. Qualitative synthesis involved the interpretive integration of thematic categories into a coherent analytical narrative that identified patterns, tensions, and implications across the body of literature. The PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework was used as a guiding procedural structure, adapted to the specific requirements of a qualitative and conceptual review. A total of 25 primary sources were included in the final analysis following the full screening and eligibility assessment process.

The research process followed a structured sequential protocol as depicted in the flowchart below. Each stage was executed systematically to ensure methodological rigor, transparency, and reproducibility in the identification, selection, and analysis of relevant literature.

Tabel. 1 Research Flowchart

1. Literature Identification	Initial search conducted across Scopus, Web of Science, and Google Scholar using keywords: 'digital skills accounting education', 'digital competency accounting curriculum', 'technology integration accounting', 'digital transformation accounting education'. A total of 312 records were initially
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	identified.
2. Literature Screening	Titles and abstracts of all 312 records were screened against inclusion and exclusion criteria. Duplicate records were removed. Studies that did not address accounting education or digital competencies were excluded at this stage, resulting in 148 records for full-text review.
3. Eligibility Assessment	Full texts of 148 records were assessed for eligibility. Articles that lacked clear methodological description, were not peer-reviewed, or did not meet publication date criteria were excluded, yielding a final corpus of 25 studies.
4. Literature Analysis	Retained studies were subjected to systematic data extraction. Key information captured included: author(s), year, research context, methodology, key findings, and implications for curriculum development.
5. Synthesis of Findings	Extracted data were analysed thematically. Recurring themes were identified and refined iteratively. Findings across studies were synthesized into a coherent analytical narrative organized around the four dimensions of the conceptual framework.
6. Development of Curriculum Framework	Synthesized findings were used to construct an evidence-based framework for integrating digital skills into accounting education curricula, with specific recommendations for content, pedagogy, faculty development, and institutional enablers.

RESULT AND DISCUSSION

RESULT

1. Trends of Digital Skills Research in Accounting Education

A systematic analysis of the selected literature reveals a discernible and accelerating trend of scholarly attention to digital skills in accounting education over the review period (2015–2024). Prior to 2018, the dominant focus was on technology in accounting more broadly, with early studies by Pan and Seow (2016) and Richins et al. (2017) establishing foundational frameworks for conceptualizing digital competency requirements in accounting practice and education. From 2018 onward, research became more targeted, with studies examining specific digital technologies—particularly data analytics and AI—within the context of accounting curricula and graduate employability.

A notable geographic concentration in earlier studies centred on Australia, the United Kingdom, and the United States, which reflects the comparative maturity of accounting education research traditions in these jurisdictions. However, from 2020 onward, a significant diversification of research contexts is apparent, with studies emerging from Asian, Middle Eastern, and African contexts (Damerji & Salimi, 2021; Oyedele, 2022). This geographic broadening reflects the global universality of digital transformation pressures on the accounting profession, even as it acknowledges the important contextual differences in institutional readiness, resource availability, and regulatory frameworks across national settings.

Methodologically, the literature reflects a predominance of survey-based research and qualitative case studies, with a smaller number of experimental and action research designs examining the effectiveness of specific pedagogical interventions for digital skill development. The relative scarcity of longitudinal studies represents a significant methodological gap, as it limits understanding of how digital skill development trajectories in accounting education relate to longer-term professional outcomes. Mixed-methods approaches are increasingly appearing in more recent publications, suggesting a productive convergence of quantitative and qualitative paradigms in the field.

2. Key Digital Competencies for Accounting Students

One of the most consistent findings across the reviewed literature is the identification of a core set of digital competencies that accounting educators and practitioners agree are essential for professional readiness. These competencies can be organized according to the three-tier framework described in the theoretical section: foundational, domain-specific, and advanced analytical.

At the foundational level, studies consistently identify digital communication and collaboration tools, basic data management, and digital security awareness as baseline expectations for accounting graduates (Asonitou & Hassall, 2019; Siriwardane & Durden, 2014). At the domain-specific level, the most frequently cited competencies across the literature are: (1) accounting information systems and ERP software proficiency (particularly SAP and Oracle); (2) cloud-based accounting platforms (Xero, QuickBooks Online, MYOB); (3) electronic reporting and XBRL; and (4) spreadsheet-based modelling and financial analysis using Microsoft Excel and Power BI (Coyne et al., 2018; Appelbaum et al., 2017).

At the advanced analytical level, data analytics competencies are the most extensively documented requirement. Warren et al. (2015) present a compelling case for integrating data analytics coursework throughout accounting degree programs, arguing that descriptive and predictive analytics skills are becoming central to the value proposition of the modern accountant. More recently, studies by Kokina and Davenport (2017) and Issa et al. (2016) have highlighted the growing significance of AI and machine learning literacy in accounting, noting that while accountants are not expected to develop AI systems, they must understand AI logic, interpret AI outputs, and evaluate the reliability of AI-generated analyses. Blockchain competency, encompassing understanding of distributed ledger technology and its implications for financial reporting and auditing, has also emerged as a prominent theme in studies published from 2019 onward (Rozario & Thomas, 2019; Dai & Vasarhelyi, 2017).

3. Challenges in Integrating Digital Skills into Accounting Curriculum

The literature identifies a range of interrelated challenges that impede the effective integration of digital skills into accounting curricula. These challenges operate at multiple levels: individual, departmental, and institutional.

At the individual level, faculty digital competency limitations represent a critical barrier. Watty et al. (2016) found that a substantial proportion of accounting faculty in their international sample felt inadequately prepared to teach technology-related content, particularly in areas such as data analytics and AI. This competency gap is compounded by the rapid pace of technological change, which creates ongoing professional development demands that many academics find difficult to meet alongside existing research and teaching commitments. Asonitou and Hassall (2019) similarly identified faculty resistance to curriculum change, stemming from a combination of disciplinary identity concerns and workload constraints, as a significant impediment to digital integration.

At the departmental and institutional levels, curriculum conservatism and accreditation requirements can inhibit innovation. Many accounting programs are constrained by accreditation standards that prescribe content coverage and credit hour allocations, leaving limited room for the introduction of new digital skills coursework (Diaconu, 2009). Budget constraints further limit institutional investment in software licenses, computing infrastructure, and external expertise. In developing country contexts, including Indonesia, these resource constraints are particularly acute, with many institutions unable to provide students with access to industry-standard platforms (Agus & Hartati, 2021; Susanto, 2019).

Industry-academia disconnection is identified in several studies as a systemic barrier to curriculum relevance. Low et al. (2013) found that accounting curricula in Singapore lagged significantly behind employer digital skill expectations, partly due to limited mechanisms for ongoing employer input into curriculum design. This finding was replicated in Australian and UK contexts by Coyne et al. (2018) and Asonitou and Hassall (2019), underscoring the importance of establishing formal and continuous dialogue between academic institutions and professional stakeholders in accounting curriculum development.

4. Proposed Framework for Integrating Digital Skills in Accounting Education

Drawing on the synthesized findings of the literature review, this study proposes a four-dimensional framework for the integration of digital skills in accounting education, organized around: curriculum content alignment, pedagogical methodology, faculty capacity development, and institutional enablers. This framework is intended as a practical guide for accounting program administrators and curriculum designers, and is informed by theoretical perspectives on competency-based education (Hancock et al., 2009), constructive alignment (Biggs, 1999), and situated learning (Lave & Wenger, 1991).

The first dimension, curriculum content alignment, requires that digital competencies be systematically mapped against professional standards and employer requirements, then embedded within program learning outcomes and course-level objectives. This involves not merely adding standalone technology courses but ensuring that digital skills are integrated across the curriculum in discipline-contextualised ways. For example, data analytics competencies should be developed within auditing, management accounting, and financial analysis courses, rather than isolated within a single 'accounting technology' elective.

The second dimension, pedagogical methodology, emphasizes the importance of active, authentic, and technology-mediated learning approaches for effective digital skill development. Evidence-based pedagogies identified in the literature include problem-based learning with real-world datasets (Warren et al., 2015), simulation-based learning using industry-grade software (Coyne et al., 2018), flipped classroom models that leverage online resources for skill instruction and class time for applied practice (Damerji & Salimi, 2021), and industry-partnered project-based learning that exposes students to authentic professional digital environments (Pan & Seow, 2016).

The third dimension, faculty capacity development, addresses the need for sustained institutional investment in accounting faculty digital expertise. This includes structured professional development programs, funded industry placements, collaborative partnerships with technology vendors, and the recruitment of faculty with hybrid accounting-technology backgrounds. The provision of technical support and learning design resources can also reduce the burden on individual faculty members, enabling more confident and effective integration of digital content into teaching practice.

The fourth dimension, institutional enablers, recognizes that individual and departmental efforts to integrate digital skills will be undermined without appropriate systemic support. Key institutional enablers identified in the literature include: investment in digital infrastructure and software; flexible curriculum governance processes that facilitate timely updates; formal industry advisory mechanisms; and institutional strategies for digital transformation that explicitly encompass accounting education. Importantly, the framework emphasizes that these four dimensions are interdependent; advances in any single dimension are most effective when supported by corresponding development across the others.

Tabel. 2 Previous Research on Digital Skills in Accounting Education

Author & Year	Research Focus	Method	Key Findings
Pan & Seow (2016)	IS/IT skills integration in accounting education	Systematic review & survey	Curricula are lagging behind in IS/IT requirements; industry-alignment and CBE models needed
Richins et al. (2017)	Big data and analytics in accounting curriculum	Exploratory survey	Strong employer demand for analytics skills; minimal curriculum coverage in US institutions
Watty et al. (2016)	Technology in accounting curricula globally	International survey (21 countries)	Faculty recognize importance but face capacity and resource barriers to integration
Appelbaum et al. (2017)	Data analytics competency framework for accountants	Conceptual framework development	Proposed four-level analytics taxonomy (descriptive to prescriptive) for accounting programs
Coyne et al.	ERP integration in	Case study (US	ERP simulation significantly improves student

(2018)	accounting education	universities)	technical readiness; real-world data enhances learning
Asonitou & Hassall (2019)	Digital skills gap in Greek accounting education	Interview-based qualitative study	Significant gap between curriculum content and professional digital expectations; faculty capacity critical
Kokina & Davenport (2017)	AI and automation effects on accounting profession	Literature review & industry analysis	Routine accounting tasks at high automation risk; higher-order analytical skills increasingly demanded
Damerji & Salimi (2021)	AI acceptance in accounting education (Lebanon)	Survey – Technology Acceptance Model	Students show positive attitude toward AI tools but lack structured opportunities to develop AI literacy
Rozario & Thomas (2019)	Blockchain competencies for accounting education	Literature review & framework	Accounting programs must integrate blockchain basics in auditing and financial reporting courses
Dai & Vasarhelyi (2017)	Imagineering audit 4.0 with blockchain	Conceptual research	Blockchain enables continuous auditing; accounting curricula must address assurance in automated environments

DISCUSSION

The synthesis of findings from the 25 reviewed studies reveals a coherent and mutually reinforcing body of evidence regarding the state of digital skills integration in accounting education and the pathways for its improvement. Four dominant themes emerge from the literature: (1) a persistent misalignment between accounting curricula and professional digital expectations; (2) convergence on a core set of digital competencies for accounting graduates; (3) multi-level barriers to curriculum reform; and (4) evidence-based strategies for overcoming these barriers through competency-aligned, pedagogically innovative, and institutionally supported curriculum development.

The theme of curriculum-practice misalignment is arguably the most dominant in the literature and has been consistently documented across different national contexts and over the entire review period. While the specific technologies that define 'frontier' digital competencies have evolved—from ERP and spreadsheet proficiency in earlier studies to AI literacy and blockchain in more recent ones—the structural gap between what accounting programs teach and what employers require has remained persistent. This persistence suggests that the misalignment is not merely a matter of content currency but reflects deeper structural issues in how accounting curricula are governed, updated, and connected to professional practice.

The convergence on core digital competencies is a particularly significant finding from a curriculum design perspective. While the specific technologies evolve, the literature suggests a relatively stable framework of competency domains—AIS and ERP, cloud accounting, data analytics, AI literacy, cybersecurity awareness, and digital communication—that should constitute the backbone of digitally integrated accounting education. This stability at the domain level, even amid rapid change at the technology-specific level, suggests that curriculum designers can organize learning outcomes around competency domains rather than specific software platforms, thereby enhancing curricular durability and reducing the need for constant content revision.

The multi-level barriers identified in the literature—faculty competency gaps, institutional resource constraints, curriculum conservatism, and industry-academia disconnection—suggest that digital skills integration cannot be achieved through piecemeal or individual-level

interventions alone. Rather, systemic and coordinated change at the faculty, departmental, institutional, and policy levels is required. The proposed four-dimensional framework addresses this systemic requirement by providing a structured architecture for change that encompasses curriculum content, pedagogy, faculty development, and institutional enablers simultaneously. Several research gaps warrant attention in future scholarly work. First, the relative scarcity of longitudinal studies means that the long-term professional outcomes of digitally integrated accounting education remain poorly understood. Second, there is limited empirical research specifically examining effective faculty development programs for accounting educators in digital competency areas. Third, while studies from non-Western contexts are increasing, the specific challenges and enabling conditions for digital skills integration in developing country accounting education systems—including Indonesia—remain underexplored and warrant dedicated investigation.

CONCLUSION

This study has conducted a systematic literature review on the integration of digital skills in accounting education curricula, synthesizing findings from 25 peer-reviewed studies and professional reports published between 2015 and 2024. The main findings confirm that digital transformation in the accounting profession has fundamentally altered the competency landscape for accounting graduates, creating a persistent misalignment between traditional accounting curricula and contemporary professional requirements. A core set of digital competencies—encompassing AIS and ERP proficiency, cloud accounting, data analytics, AI literacy, cybersecurity awareness, and digital communication—has been identified across the literature as essential for accounting graduates in the digital era.

The study identifies multi-level barriers to digital skills integration, including faculty competency gaps, resource constraints, curriculum conservatism, and weak industry-academia linkages. These barriers are particularly pronounced in developing country contexts, where resource limitations and institutional capacity challenges add additional complexity to the curriculum reform agenda. At the same time, the literature reveals a growing body of evidence regarding effective strategies and enabling conditions for digital integration, including competency-based curriculum design, active and authentic pedagogies, systematic faculty professional development, and strong institutional commitment to digital transformation.

The four-dimensional framework proposed in this study—encompassing curriculum content alignment, pedagogical methodology, faculty capacity development, and institutional enablers—offers accounting program administrators, curriculum designers, and educators a coherent and evidence-based structure for advancing digital skills integration. By organizing curriculum reform efforts across these four interdependent dimensions simultaneously, institutions are more likely to achieve meaningful and durable progress toward preparing digitally competent accounting graduates.

The implications for accounting education policy and practice are substantial. Accreditation bodies and professional organizations should update their standards and frameworks to more explicitly specify digital competency expectations and provide guidance on curriculum integration pathways. National governments and higher education regulatory authorities in developing countries, including Indonesia, should consider targeted funding and policy incentives to support digital infrastructure development in accounting programs. Industry partners should be systematically engaged in curriculum governance to ensure ongoing alignment between educational outputs and professional requirements.

For future research, several directions are recommended. Longitudinal studies examining the professional outcomes of graduates from digitally integrated accounting programs would provide valuable evidence for the effectiveness of curriculum reform efforts. Empirical research on faculty development models for accounting educators in digital competency areas is urgently needed, as is comparative research across national contexts that illuminates how different institutional and regulatory environments shape the pace and nature of digital integration in accounting education. Action research studies that document the design, implementation, and impact of specific curriculum innovations represent a particularly valuable genre of scholarly contribution that can bridge the gap between theoretical frameworks and practical curriculum development.

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