ACCOUNTING AND FINANCE

Beyond Automation: The Changing Role of Accountants in the Digital Age

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Abstract

The rapid development of digital technologies has significantly transformed accounting practices and the responsibilities of accounting professionals. Traditional accounting activities, including transaction recording, ledger maintenance, invoice processing, account reconciliation, and financial reporting, are increasingly supported by computerised accounting systems, cloud computing, artificial intelligence (AI), and data analytics. These technologies have improved the efficiency of accounting processes and reduced the time required to complete repetitive activities. However, the impact of digital transformation extends beyond the automation of routine tasks. It is also changing the expectations, responsibilities, and competencies required of accountants. Modern accounting professionals are increasingly expected to contribute to financial analysis, strategic planning, risk management, performance evaluation, and business decision-making. This study examines the changing role of accountants in the digital age, focusing on the impact of automation, the opportunities and challenges associated with technological advancement, and the professional skills required to remain relevant. The study adopts a descriptive and conceptual research approach based entirely on secondary data obtained from academic literature and professional publications. The findings indicate that automation is transforming the nature of accounting work rather than eliminating the need for accountants. Digital competence, analytical thinking, professional judgment, ethical responsibility, and continuous learning remain essential for accounting professionals in an increasingly technology-driven business environment (Moll and Yigitbasioglu, 2019; International Federation of Accountants [IFAC], 2019a, 2019b, 2023).

1 Introduction

Accounting is an essential function of every business organisation because it provides information about financial transactions, profitability, assets, liabilities, cash flows, and overall financial performance. Traditionally, accountants have been responsible for recording transactions, maintaining books of accounts, preparing financial statements, supporting tax compliance, and ensuring that financial records are accurate and properly documented. These activities require knowledge of accounting principles, attention to detail, consistency, and professional judgment. However, traditional accounting procedures can involve considerable manual effort, particularly when organisations handle large volumes of financial transactions.

The introduction of computerised accounting systems brought a major change in the way accounting activities are performed. Accounting software enabled organisations to record transactions electronically, maintain digital ledgers, generate financial statements, and retrieve information more efficiently. More recently, technologies such as cloud computing, artificial intelligence, data analytics, and intelligent automation have expanded the possibilities for processing and interpreting financial information. These technologies can improve the accessibility of data, streamline accounting

workflows, and support the integration of financial information with other business functions (Moll and Yigitbasioglu, 2019).

Digital transformation has consequently become an important issue for the accounting profession. It influences not only the tools accountants use but also the nature of the work they perform. In a traditional environment, considerable time may be devoted to recording transactions, checking calculations, organising invoices, and preparing reports. When suitable digital systems automate some of these activities, accountants may have more time to review financial performance, investigate unusual transactions, analyse business trends, and support management decisions.

The changing contribution of accounting professionals is also discussed in the literature published by the International Federation of Accountants. IFAC (2019a) explains the changing expectations of finance functions and their contribution to business performance and value creation. Similarly, IFAC (2019b) identifies the evolving roles that accountants can fulfil to remain relevant within organisations. These perspectives suggest that accounting professionals increasingly need to combine technical accounting knowledge with business understanding, analytical capabilities, and effective communication.

The adoption of digital technologies also creates challenges. Accountants must understand the limitations of automated systems, maintain the reliability of financial information, protect confidential data, and ensure that technology is used responsibly. Digitalisation may also create skill gaps when professionals are unfamiliar with emerging technologies or lack opportunities for training. Awang et al. (2022) identify digitalisation as both an opportunity and a risk for future accountants, highlighting the importance of adapting to changes in the professional environment.

The changing role of accountants therefore raises an important question: if technology can perform many routine accounting activities, what makes human accounting professionals valuable? The answer lies in their ability to interpret information, apply professional judgment, understand business circumstances, identify risks, and communicate meaningful insights. Although digital systems can support calculations and data processing, accounting decisions often require contextual understanding and human accountability.

This study examines how the accounting profession is evolving beyond automation. It explores the transformation of accounting activities, the changing responsibilities of accountants, the benefits and challenges of digital technologies, and the competencies required for future professional success. By reviewing academic and professional literature, the study aims to understand how accountants can adapt to technological change while continuing to contribute to organisational performance.

2 Objectives of the study

The primary objective of this study is to examine how digital technologies and automation are changing the role of accounting professionals.

The specific objectives are:

1. To examine the transformation of traditional accounting activities through digital technologies.
2. To analyse the impact of automation on routine accounting processes.
3. To understand the changing responsibilities of accountants in modern organisations.
4. To identify the major benefits and challenges associated with technology-driven accounting.

5. To examine the digital, analytical, and interpersonal skills required by accountants in the digital age.
6. To understand the continuing importance of professional judgment, ethical responsibility, and human oversight in automated accounting systems.
7. To explore the future opportunities and responsibilities of accounting professionals in a technology-driven business environment.

3 Literature review

The digital transformation of accounting has received increasing attention from academic researchers and professional accounting organisations. Existing literature examines the impact of emerging technologies on accounting processes, the changing responsibilities of accountants, and the skills required to remain relevant in the profession.

Moll and Yigitbasioglu (2019) reviewed literature concerning internet-related technologies and their implications for accounting work. Their study examined cloud computing, big data, blockchain, and artificial intelligence, highlighting the potential of these technologies to transform how accountants access, process, and interpret information. The authors also identified the need for further research into the changing nature of accounting work and the competencies professionals require to remain relevant. Their work provides an important academic foundation for understanding the relationship between technological advancement and the future of accounting.

Awang et al. (2022) examined digitalisation as both an opportunity and a risk for future accountants. Their study, based on responses from accounting interns in Malaysian public universities, found that respondents perceived both opportunities and risks associated with the digitalisation of the accounting profession. The authors emphasised the importance of preparing future accountants for changes in the workplace. Although their research focuses on the perceptions of accounting interns rather than the entire profession, it supports the argument that digitalisation requires professionals to develop new knowledge and adapt to evolving working methods.

The Association of Chartered Certified Accountants (ACCA, 2020), in *The Digital Accountant: Digital Skills in a Transformed World*, discusses the importance of digital capabilities in the accounting and finance profession. The report draws on responses from accounting and finance professionals and highlights the growing importance of understanding digital technologies. It also stresses that technical and ethical skills remain central to the profession, supported by additional capabilities that enable professionals to use technology and data effectively. This is relevant to the present study because digital competence is increasingly necessary alongside traditional accounting knowledge.

IFAC (2019b), in *Future-Fit Accountants: Roles for the Next Decade*, examines how accounting professionals can continue contributing to organisations as business expectations change. The publication highlights the importance of evolving professional roles and the need for accountants to remain integral to organisational activities. It supports the view that the profession's future depends on its ability to contribute to business performance rather than focusing exclusively on conventional accounting tasks.

IFAC (2019a), in *A Vision for the CFO & Finance Function*, discusses the changing role of finance functions and the importance of supporting business decisions and value creation. The report presents a broader view of finance, in which accounting information is used to understand business perform-

ance and influence organisational decisions. This suggests that accountants can create additional value by interpreting financial results and communicating their implications to management.

IFAC and CPA Canada (2021), in *The Professional Accountant's Role in Data*, examine how accountants can contribute to the management and effective use of data. The report introduces a data management value chain and identifies potential roles for accounting professionals, including data engineering, data control, data science, and strategic advisory activities. This demonstrates that the use of digital information may create opportunities for accountants to contribute to activities beyond traditional financial reporting.

ACCA (2023), in *Digital Horizons: Technology, Innovation and the Future of Accounting*, explores the adoption of emerging technologies and their implications for accounting and finance professionals. The report discusses artificial intelligence, digital transformation, and the competencies needed to respond to technological change. Its findings indicate that technology adoption can vary between organisations and that skills, mindset, and effective implementation are important considerations when introducing digital solutions.

The International Auditing and Assurance Standards Board (IAASB, 2018) examined the growing use of technology in auditing, with particular attention to data analytics. Its feedback statement discusses opportunities and challenges associated with using technology in financial statement audits. Although the publication focuses on auditing rather than all accounting activities, it provides a useful perspective on the importance of evaluating technological tools and considering their appropriate application in professional work.

IFAC (n.d.) also discusses how artificial intelligence and intelligent automation can create opportunities for accounting and finance professionals. Its discussion emphasises the potential for technology to improve efficiency, support human decision-making, and change professional responsibilities. This reinforces the idea that technology can augment professional work when used appropriately.

Overall, the literature indicates that digital transformation is changing both the methods and expectations associated with accounting. Automation can support repetitive tasks, while digital systems and data analytics can provide opportunities for improved analysis and decision-making. At the same time, accountants must develop digital competence, maintain professional judgment, and understand the risks associated with technology. The present study brings these themes together to examine how the accounting profession is evolving beyond automation.

4 Research gap

Existing academic and professional literature discusses the adoption of digital technologies, the automation of accounting activities, and the changing responsibilities of accounting professionals. Moll and Yigitbasioglu (2019) examine how internet-related technologies may affect the everyday work of accountants, while Awang et al. (2022) explore the opportunities and risks associated with digitalisation from the perspective of future accountants.

Professional publications by IFAC and ACCA also highlight the importance of developing digital competencies, supporting business decisions, and preparing accounting professionals for evolving workplace requirements (ACCA, 2020, 2023; IFAC, 2019a, 2019b).

However, the relationship between the automation of routine accounting activities and the broader transformation of professional responsibilities requires further examination. Discussions about automation often focus on efficiency, speed, and reduced manual effort. While these outcomes are important, they do not fully explain how the responsibilities of accountants are changing or why professional judgment continues to matter in a technology-driven environment.

Another area requiring attention is the combination of technical and non-technical skills. Accountants may need to understand digital systems and analyse data, but they must also communicate findings, recognise unusual results, apply ethical principles, and understand the business circumstances behind financial information. The increasing importance of data management also suggests that accountants may have opportunities to contribute to broader organisational decisions (IFAC and CPA Canada, 2021).

This study addresses these issues by examining automation alongside the changing responsibilities, competencies, and professional expectations of accountants. It focuses on the idea that technology can reduce the need for certain repetitive activities while increasing the importance of analysis, business understanding, communication, and human oversight. The study therefore considers the future role of accountants as a combination of technological adaptation and professional expertise.

5 Research methodology

5.1 Research design

The study adopts a descriptive and conceptual research design. The descriptive approach is used to explain the transformation of accounting activities, the impact of automation, and the changing responsibilities of accounting professionals. The conceptual approach organises the themes identified in the literature and examines their implications for the future of the accounting profession.

5.2 Sources of data

The study is based entirely on secondary data. Information has been obtained from academic journal articles, professional reports, and publications relating to digital transformation, automation, data analytics, and the evolving role of accounting professionals. The main sources include research by Moll and Yigitbasioglu (2019), Awang et al. (2022), and publications by ACCA, IFAC, IFAC and CPA Canada, and IAASB.

5.3 Method of analysis

The information has been examined thematically. The discussion is organised around the following themes:

- Digital transformation of accounting activities.
- Impact of automation on routine accounting work.
- Changing responsibilities of accounting professionals.
- Benefits and challenges of digital technologies.
- Skills required in the digital age.
- Future opportunities for accounting professionals.

The themes are compared and synthesised to identify common findings and implications for accounting professionals and organisations.

5.4 Scope of the study

The study focuses on the general transformation of accounting through digital technologies. It considers traditional accounting activities, automated processes, digital skills, financial analysis, decision support, and professional judgment. It does not investigate a particular organisation or measure the financial impact of automation through primary data collection.

5.5 Limitations of the study

The study relies on secondary sources and is therefore limited by the scope, methods, and perspectives of the literature reviewed. It does not include questionnaires, surveys, interviews, or direct observation conducted by the researcher. Some cited publications focus on specific areas, such as auditing or accounting interns, and their findings should not automatically be generalised to all accounting professionals. The impact of digital transformation may also vary depending on organisational size, available resources, industry, and the technologies adopted.

6 Digital transformation of accounting

Digital transformation refers to the integration of digital technologies into business processes to improve how information is processed, managed, and used. In accounting, it includes the adoption of computerised accounting software, cloud-based systems, automated workflows, data analytics, and artificial intelligence. These technologies have changed how accounting information is recorded, stored, retrieved, and analysed. Digital transformation is therefore not limited to replacing paper records with electronic records; it can also change the way accounting functions contribute to organisational decisions (Moll and Yigitbasioglu, 2019).

6.1 From manual accounting to computerised systems

Traditional accounting involved considerable manual work, including recording transactions in journals and ledgers, calculating balances, preparing trial balances, and reconciling accounts. These activities required time and careful checking. Manual procedures could also make it difficult to retrieve information quickly or identify inconsistencies across large volumes of transactions.

Computerised accounting systems changed this process by allowing transactions to be recorded electronically and reports to be generated through software. Once data are entered correctly, the system can perform calculations, organise information into relevant accounts, and generate reports. This reduces repetitive work and enables accountants to access financial information more efficiently.

However, computerised systems do not eliminate the importance of accurate data entry and appropriate review. Errors in the original information may affect subsequent calculations and reports. Accountants must therefore understand the systems they use and maintain suitable procedures for checking financial information.

6.2 Cloud computing and integrated accounting systems

Cloud-based accounting systems can allow authorised users to access financial records through internet-connected devices. Depending on the system and its configuration, these tools can support collaboration between accounting teams, managers, and external advisers. Integrated systems may

also connect accounting information with other business activities, improving the flow of information across departments.

Moll and Yigitbasioglu (2019) identify cloud technologies and other internet-related developments as important areas influencing accounting work. These technologies can create opportunities for better information access and more efficient workflows. However, organisations must consider access permissions, confidentiality, cybersecurity, system reliability, and data protection when adopting digital solutions.

6.3 Accounting as a source of business information

The growing availability of digital financial information creates opportunities for accountants to contribute more actively to business planning and performance evaluation. Rather than simply reporting historical transactions, accountants can help managers understand changes in revenue, expenses, profitability, and cash flows.

IFAC (2019a) highlights the changing contribution of finance functions to business decisions and value creation. This supports the view that accounting information becomes more useful when professionals interpret it and explain its implications for the organisation. Digital transformation therefore creates an opportunity to strengthen the relationship between accounting, management, and strategic planning.

7 Impact of automation on accounting activities

Automation involves using technology to perform tasks that would otherwise require manual effort. In accounting, it can support repetitive activities that follow established rules and procedures. Artificial intelligence and intelligent automation may also support more advanced information-processing tasks, depending on the system and the nature of the work (ACCA, 2023; IFAC, n.d.).

7.1 Automation of routine tasks

Several accounting activities may be supported by automation, including data entry, invoice processing, transaction classification, account reconciliation, and the preparation of recurring reports. These activities often involve handling similar information repeatedly, making them suitable for software-assisted processing.

For example, accounting software may import transaction data and organise entries according to predefined rules. An automated reconciliation process may compare records and identify differences requiring investigation. These functions can reduce repetitive work and allow accountants to focus on reviewing exceptions and investigating discrepancies.

Automation can therefore change the distribution of work within accounting departments. Instead of spending most of their time processing similar transactions, accountants may have more opportunities to examine unusual entries, investigate errors, and interpret financial results.

7.2 Improved speed and efficiency

Automation can reduce the time required to perform repetitive calculations and process large volumes of information. Activities that previously required several manual steps may be completed more quickly when suitable digital systems are used. This can help accounting departments manage workloads and provide financial information more promptly.

ACCA (2023) discusses the opportunities associated with digital technologies and the importance of skills and mindset in successful adoption. Similarly, IFAC (n.d.) highlights the potential of AI and intelligent automation to improve efficiency and support human decision-making.

However, the actual benefits depend on the suitability of the technology, the quality of the data, and the effectiveness of the processes supporting it. Automation should not be assumed to improve every accounting activity automatically.

7.3 The importance of human review

Automation does not remove the need for professional review. A system may process transactions according to predefined rules, but it may not fully understand the commercial circumstances behind an unusual transaction. Similarly, an automatically generated report may be misleading if the source data are incomplete or incorrectly classified.

Accountants remain important for investigating unusual entries, reviewing the reasonableness of outputs, checking compliance requirements, and ensuring that financial information is reliable. In auditing, the IAASB (2018) highlights the opportunities and considerations associated with the growing use of technology and data analytics. This illustrates why technological tools must be applied appropriately within professional processes.

Effective automation should therefore combine technological capability with suitable human oversight. Accountants must understand the strengths and limitations of automated processes so that technology supports, rather than weakens, the reliability of financial information.

8 Changing role of accounting professionals

Digital transformation is changing the responsibilities expected of accountants. As technology supports a growing range of routine activities, accounting professionals have opportunities to contribute to more analytical, advisory, and decision-oriented work. This development is consistent with IFAC's discussion of future-fit accountants and the evolving role of finance functions (IFAC, 2019a, 2019b).

8.1 From record-keeper to financial analyst

Traditionally, accountants have devoted substantial effort to recording transactions, maintaining ledgers, and preparing financial statements. These responsibilities remain important, but digital systems can assist with many repetitive processing activities. As a result, accountants can increasingly focus on interpreting the information generated by these systems.

Financial analysis involves examining revenue, expenses, profitability, cash flows, and other financial indicators to understand business performance. Accountants can help explain why costs have increased, whether financial targets have been achieved, and which areas require management attention. Their contribution extends beyond presenting numbers to explaining what those numbers mean for the organisation.

8.2 From reporting to decision support

Financial reports provide information about an organisation's performance and financial position. However, managers often require more than historical figures when making decisions. They may

need to understand the financial implications of pricing changes, investment plans, cost-control measures, or changes in business activity.

Accountants can support these decisions by interpreting financial information, comparing alternatives, and communicating potential risks. IFAC (2019a) emphasises the importance of a finance function that supports business decisions and value creation. This indicates that accountants can contribute to organisational performance by translating financial information into useful insights.

8.3 Participation in data management and analytics

The increasing availability of digital data creates opportunities for accountants to contribute to data management and analysis. Financial information can be combined with operational and other business data to help organisations understand performance more comprehensively.

IFAC and CPA Canada (2021) describe a data management value chain and identify potential roles for professional accountants in data-related activities. These include responsibilities connected with data control, analysis, and strategic advice. The report suggests that accountants can use their understanding of financial information and business processes to help organisations make better use of data.

These opportunities also require appropriate knowledge and judgment. Accountants must understand the source and limitations of the data they use, assess whether the analysis is relevant, and communicate findings responsibly.

8.4 Risk management and internal controls

Technology-driven accounting creates opportunities to process information and identify unusual transactions, but it also introduces risks relating to data quality, unauthorised access, system errors, and inappropriate use of automated processes.

Accountants can contribute to risk management by reviewing financial information, supporting internal controls, investigating inconsistencies, and helping ensure that accounting procedures are followed. They may also assist management in understanding the financial implications of operational risks.

The IAASB (2018) discusses opportunities and challenges associated with the use of technology in auditing. Its work supports the importance of considering the appropriate use of digital tools and maintaining professional oversight when evaluating financial information.

8.5 Communication and business partnering

The value of financial analysis depends partly on how clearly the results are communicated. Accountants often need to explain financial information to people who do not have specialised accounting knowledge. This requires the ability to present complex information in a clear and meaningful manner.

For example, an accountant may identify a significant increase in operating expenses. Instead of merely reporting the increase, the accountant may need to explain possible reasons, assess its effect on profitability, and communicate the issue to management.

IFAC (2019a, 2019b) highlights the evolving contribution of accountants to organisational performance and decision-making. These responsibilities suggest that communication, collaboration, and business understanding are important complements to technical accounting knowledge.

9 Benefits and challenges of automation in accounting

9.1 Benefits of automation

- **Improved efficiency:** Automation can reduce the time spent on repetitive accounting activities, allowing financial information to be processed more quickly.
- **Reduced repetitive manual work:** Software can support routine calculations, transaction processing, and report preparation, reducing the manual effort required for these activities.
- **More timely information:** Digital systems can make it easier to retrieve financial records and prepare reports, helping organisations access information when it is needed.
- **Greater scope for analysis:** When less time is required for routine processing, accountants may be able to focus more on financial interpretation, performance evaluation, and decision support.
- **Support for data-driven decisions:** Digital tools can make financial information easier to organise and analyse. Accountants can use these capabilities to help management understand business performance (IFAC and CPA Canada, 2021).
- **Opportunities for professional development:** Digitalisation can encourage accountants to develop new competencies and participate in broader business activities (ACCA, 2020, 2023).

These benefits depend on selecting appropriate technologies and implementing them effectively. Automation should not be assumed to improve every process automatically; results depend on data quality, system design, employee capabilities, and internal controls.

9.2 Challenges of automation

- **Data accuracy and reliability:** Automated systems rely on the information entered into them. Incorrect, incomplete, or inconsistent data can affect the accuracy of results.
- **Cybersecurity and confidentiality:** Digital accounting systems may contain sensitive financial and business information. Organisations must manage access permissions and protect records from unauthorised access.
- **Dependence on technology:** System failures, technical problems, or interruptions to access can affect accounting operations. Appropriate backup arrangements and recovery procedures are important.
- **Skill gaps:** Accountants may need to learn new software, understand automated processes, and develop stronger digital and analytical capabilities. Professionals who do not update their skills may find it more difficult to adapt to changing responsibilities.
- **Professional judgment:** Automated systems can produce outputs based on predefined rules, but the results may still require contextual interpretation. Accountants must be able to recognise when information appears unusual or when further investigation is needed.
- **Implementation and oversight:** Technology adoption requires planning, training, suitable processes, and ongoing review. Organisations must ensure that automated procedures remain appropriate and that responsibilities for checking results are clearly defined (ACCA, 2023; IAASB, 2018).

Awang et al. (2022) identify digitalisation as both an opportunity and a risk for future accountants. This reinforces the importance of preparing professionals for technological change rather than focusing only on the efficiency benefits of automation.

The central challenge is therefore not simply whether accounting tasks can be automated. It is how organisations can use automation while maintaining reliable information, effective controls, professional standards, and the necessary skills within their accounting teams.

10 Emerging trends and the future of accounting

10.1 Artificial intelligence and intelligent automation

Artificial intelligence and intelligent automation are increasingly important in discussions about the future of accounting. Depending on the application, these technologies can support information processing, identify patterns, assist with document handling, and help professionals focus on tasks that require further analysis.

Moll and Yigitbasioglu (2019) identify AI as one of the technologies that may influence accounting work. ACCA (2023) also examines AI and its potential implications for the accounting profession. IFAC (n.d.) discusses the opportunities created by intelligent automation and the potential for technology to augment human decision-making.

However, the use of these technologies also makes it important to understand how outputs are generated, recognise their limitations, and ensure that decisions are supported by appropriate evidence. Accountants may increasingly need to evaluate technology-generated information and determine when human review is required.

10.2 Data analytics and financial insights

Data analytics can help accountants examine financial information, identify trends, and understand changes in business performance. By analysing revenue, expenses, cash flows, and other indicators, accountants can help management identify areas requiring attention.

IFAC and CPA Canada (2021) highlight the opportunities for accountants to contribute to data-related activities and data-driven decisions. This supports the view that digital transformation can expand accountants' responsibilities beyond the preparation of conventional financial reports.

However, meaningful analysis requires an understanding of the data being examined, the assumptions used, and the business context in which the results will be applied. Technology can support analysis, but professional interpretation remains essential.

10.3 Cloud-based accounting and integrated systems

Cloud-based systems can support access to financial records, collaboration, and the integration of accounting activities. They may help organisations manage information across different locations and allow authorised professionals to work with current records.

Moll and Yigitbasioglu (2019) discuss cloud technologies as part of the broader digital developments influencing accountants' work. At the same time, organisations must consider data security, access controls, service reliability, and the suitability of the system for their requirements.

10.4 Continuous professional development

The development of digital technologies means that accounting professionals cannot rely exclusively on the knowledge and methods acquired at the beginning of their careers. They may need to update

their understanding of accounting software, data analytics, automation, cybersecurity risks, and changing business requirements.

ACCA (2020) emphasises the importance of digital skills and continuous development in the accounting and finance profession. Awang et al. (2022) similarly highlight the need for future accountants to prepare for a changing professional environment.

Continuous learning can help accountants remain adaptable and make effective use of emerging tools. It also allows professionals to strengthen the analytical, communication, and problem-solving abilities required to interpret information and support decisions.

10.5 The future value of human expertise

As digital systems become more capable, the distinctive contribution of accountants will increasingly involve combining technical information with professional judgment and business understanding. Accountants must be able to assess whether financial information is reasonable, explain the significance of results, identify potential risks, and communicate findings responsibly.

IFAC (2019a, 2019b) highlights the evolving contribution of accounting and finance professionals to business performance and value creation. These perspectives suggest that accountants can remain valuable by developing capabilities that complement technology.

The impact of technology will not be identical across every organisation or accounting role. It will depend on the nature of the work, organisational resources, the complexity of transactions, and the technologies adopted. Nevertheless, professionals who combine accounting expertise with digital competence, analytical ability, and sound judgment will be better prepared to respond to changing expectations (ACCA, 2023; Moll and Yigitbasioglu, 2019).

11 Findings and discussion

The review of academic and professional literature leads to several important observations about the changing role of accountants in the digital age.

First, digital technologies are changing how accounting activities are performed. Computerised systems, cloud technologies, and automation can support repetitive processing tasks and improve access to financial information. Moll and Yigitbasioglu (2019) highlight the potential of internet-related technologies to influence the everyday work of accountants. These developments can reduce manual effort and create opportunities to improve the efficiency of accounting operations.

Second, the professional contribution of accountants is extending beyond traditional record-keeping and reporting. As digital systems support routine processing, accountants can focus more on interpreting financial information, analysing business performance, and communicating insights to management. This is consistent with IFAC's discussion of the evolving role of finance functions and future-fit accountants (IFAC, 2019a, 2019b).

Third, data-related capabilities are becoming increasingly relevant to the profession. IFAC and CPA Canada (2021) identify opportunities for accountants to contribute to data management, analysis, and strategic advice. This indicates that accountants can use their understanding of financial information and business processes to help organisations make better use of data.

Fourth, technology does not eliminate the need for professional judgment. Accounting information must still be reviewed for accuracy, completeness, and relevance. Automated systems may process

information according to rules, but accountants remain important for understanding unusual results, assessing the business context, and determining whether further investigation is necessary. The considerations identified by IAASB (2018) in relation to technology and data analytics further demonstrate the importance of appropriate professional oversight.

Fifth, the transition to digital accounting creates new skill requirements. Accountants need sufficient digital knowledge to use relevant systems effectively, but they also require analytical thinking, communication, problem-solving, and the ability to adapt to changing work processes. ACCA (2020, 2023) and Awang et al. (2022) highlight the importance of preparing accounting professionals for a changing technological environment.

Sixth, automation creates both opportunities and challenges. It can improve efficiency and support the analysis of financial information, but organisations must also address data quality, system reliability, cybersecurity, employee training, and internal controls. The benefits of automation depend on how responsibly and effectively the technology is implemented.

Overall, the literature supports the view that the future of accounting will involve a closer relationship between technology and human expertise. Accountants will need to understand digital systems while continuing to apply accounting principles, professional judgment, and ethical standards. Their significance will depend not only on their ability to process information but also on their ability to interpret it and use it responsibly.

12 Implications

12.1 Implications for accounting professionals

Accounting professionals should treat digital transformation as an opportunity to strengthen their capabilities. Developing familiarity with accounting software, automated workflows, and data analysis can help them work effectively in technology-driven environments. However, digital competence should be supported by strong accounting fundamentals and the ability to evaluate information critically.

Accountants should also develop communication, problem-solving, and decision-support skills. Their contribution becomes more valuable when they can explain financial findings clearly, identify areas of concern, and help management understand the financial consequences of different decisions. These capabilities align with the evolving professional roles discussed by IFAC (2019a, 2019b).

12.2 Implications for educational institutions

Educational institutions should recognise the importance of combining accounting theory with practical understanding of digital accounting systems. Students can benefit from learning how transactions are processed, how accounting reports are generated, and how financial information can be used for analysis and decision-making.

Education should also emphasise critical thinking, professional ethics, communication, and continuous learning. Awang et al. (2022) highlight the importance of preparing future accountants for digitalisation. Integrating digital capabilities into accounting education may therefore help students develop the knowledge and confidence needed to adapt to professional changes.

12.3 Implications for organisations

Organisations adopting digital accounting systems should ensure that employees receive suitable training and understand the procedures governing automated activities. Clear responsibilities should be established for reviewing outputs, investigating exceptions, maintaining records, and protecting financial information.

Management should also evaluate whether a technology is appropriate for the organisation's requirements and whether its use improves the quality and usefulness of financial information. IFAC (2019a) highlights the importance of developing a finance function that supports organisational objectives and value creation. Digital transformation should therefore be approached as a process involving people, systems, controls, and business objectives rather than as the installation of software alone.

12.4 Implications for the accounting profession

The accounting profession must continue to respond to changes in technology and business expectations. Professional development and education should help accountants build the capabilities needed to work effectively with digital systems while maintaining professional independence, ethical conduct, and accountability.

The growing importance of data and technology also creates opportunities for accountants to contribute to wider business activities. IFAC and CPA Canada (2021) highlight the potential for accountants to participate in data-related roles and support data-driven decisions. By combining accounting expertise with digital understanding, analytical ability, and business insight, professionals can continue to contribute to organisational performance.

13 Conclusion

Digital transformation has brought significant changes to the accounting profession. Computerised systems, cloud computing, artificial intelligence, data analytics, and intelligent automation have created new ways to record, process, store, and interpret financial information. These technologies can improve the efficiency of routine accounting activities and provide opportunities for accounting professionals to focus on more analytical and decision-oriented responsibilities.

The literature reviewed in this study indicates that digital transformation is not limited to the adoption of new tools. It also influences the expectations placed on accountants, who are increasingly required to understand business performance, interpret financial information, contribute to data-driven decisions, and communicate useful insights. This changing contribution is reflected in the work of Moll and Yigitbasioglu (2019), IFAC (2019a, 2019b), and IFAC and CPA Canada (2021).

However, the development of technology does not make accounting expertise unnecessary. Financial information must still be reviewed, interpreted, and applied in the appropriate business context. Accountants continue to play an important role in identifying inconsistencies, evaluating financial results, supporting internal controls, communicating findings, and applying professional judgment. The responsible use of technology therefore requires a combination of digital capability and human oversight (IAASB, 2018; IFAC, n.d.).

The study also highlights that accountants in the digital age require a combination of traditional accounting knowledge and modern professional capabilities. Digital literacy, data interpretation, analytical thinking, communication, ethical awareness, and continuous learning are increasingly important alongside technical competence. These capabilities allow accountants to use technology

effectively while recognising its limitations and ensuring that financial information remains reliable and useful (ACCA, 2020, 2023; Awang et al., 2022).

Organisations must also approach automation responsibly. Technology adoption should be supported by suitable training, data protection, internal controls, and human oversight. Without these measures, the potential benefits of digital accounting may be reduced by errors, security concerns, or inappropriate reliance on automated outputs.

In conclusion, the future of accounting should be understood as a transformation of professional work rather than the complete replacement of accountants by technology. Automation can perform or support many repetitive activities, but the interpretation of financial information, application of professional judgment, and communication of business insights remain important human contributions. Accountants who adapt to technological developments while strengthening their analytical, ethical, and interpersonal capabilities will be better prepared to remain relevant and contribute meaningfully to organisations in the digital age.

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