THE EXTENT TO WHICH TEXTBOOKS FULFILL THE REQUIREMENTS OF DIGITAL TRANSFORMATION IN ACCOUNTING AND AUDITING

Raad Oleiwi

ARTICLE INFO

Purpose: The study aimed to determine how well textbooks meet the demands of accounting industries' transition to the digital age. To determine how well texts, meet the needs of auditing industries' growth to the digital age and to investigate the extent to which the books fulfill the requirements for digital transformation in accounting and auditing.

Theoretical framework: The study's theoretical framework depended on an analysis of the past reviews done by researchers in their literature reviews. It was to show if the textbooks met the demands of a smooth transition of workers from the traditional to the digital age in the accounting and auditing fields. Many past reviews by researchers concluded that textbooks are among the top three resources used in both departments depending a lot on books.

Methodology: The methodology used was content analysis, where 21 sources were reviewed. Literature research dates back to the 1960s, but critical articles were chosen from 2018 to the present, considering the advancement in technology and computers, which have impacted the world in numerous ways. Computers are fast, easy, and reliable, but textbooks are still the traditional source of information used in many curriculums across continents. The American Educational Research Association's journals (ERIC) database was used. References found online through Google Scholar and JSTOR searches and reference lists from the digitalization of accounting and auditing periodicals were also used.

Findings: The findings from the 21 sources included all of the textbooks that had IT-related topics on accounting. The research suggested a slight emphasis on IT developments in management accounting, auditing fields, and financial accounting, which is consistent with our assumptions. Only 5 of the chosen textbooks in financial accounting addressed IT-related topics. The general coverage of IT advancements in the selected auditing textbook examples differs significantly from that of financial accounting and management accounting textbooks. In the past, it has been expected that most auditing textbooks will at least address computer-assisted audit techniques (CAAT).

Research, practical and social implications: Considering the social implications and the practicality of the research, stakeholders and government agencies should push for policies that would ensure a proper transition to digitization for all its citizens to understand their work better.

Originality/value: The novelty and worth were evaluated. Twenty-one books on financial accounting, managerial accounting, and auditing make up the sample. According to actual research, technology improvements and related topics are rarely covered in accounting degrees. Evidence from this study's analysis of the relevant literature indicates that accounting and auditing schools' textbooks ought to devote more time to IT-related issues.

Doi: https://doi.org/10.26668/businessreview/2023.v8i5.1509

ABSTRACT

Keywords:
Digitalization; Accounting; Auditing; Textbooks.

A PhD candidate at the Accounting Doctoral School, Faculty of Accounting and Management Information Systems, Bucharest University of Economic Studies, Romania., E-mail: raadalameer5@gmail.com
Orcid: https://orcid.org/0000-0002-0027-5552
EM QUE MEDIDA OS LIVROS DIDÁTICOS CUMPREM OS REQUISITOS DA TRANSFORMAÇÃO DIGITAL EM CONTABILIDADE E AUDITORIA

RESUMO
Objetivo: O estudo teve como objetivo determinar o quão bem os livros didáticos atendem às demandas da transição das indústrias contábeis para a era digital. Determinar o quão bem os textos atendem às necessidades de crescimento das indústrias de auditoria para a era digital e investigar até que ponto os livros atendem aos requisitos para a transformação digital em contabilidade e auditoria.

Referencial teórico: O referencial teórico do estudo depender de uma análise das revisões anteriores feitas pelos pesquisadores em suas revisões de literatura. Era para mostrar se os livros didáticos atendiam às demandas de uma transição suave dos trabalhadores da era tradicional para a digital nas áreas de contabilidade e auditoria. Muitas revisões anteriores feitas por pesquisadores concluíram que os livros didáticos estão entre os três principais recursos usados em ambos os departamentos, dependendo muito dos livros.

Metodologia: A metodologia utilizada foi a análise de conteúdo, onde foram revisadas 21 fontes. A pesquisa bibliográfica remonta à década de 1960, mas foram escolhidos artigos críticos de 2018 até o presente, considerando o avanço da tecnologia e da informática, que impactaram o mundo de inúmeras formas. Os computadores são rápidos, fáceis e confiáveis, mas os livros didáticos ainda são a fonte tradicional de informação usada em muitos currículos em todos os continentes. Foi utilizada a base de dados de periódicos da American Educational Research Association (ERIC). Também foram utilizadas referências encontradas online por meio de buscas no Google Scholar e JSTOR e listas de referências da digitalização de periódicos de contabilidade e auditoria.

Descobertas: As descobertas das 21 fontes incluíram todos os livros didáticos que continham tópicos de contabilidade relacionados a TI. A pesquisa sugeriu uma leve ênfase nos desenvolvimentos de TI em contabilidade gerencial, áreas de auditoria e contabilidade financeira, o que é consistente com nossas suposições. Apesar de alguns livros didáticos de contabilidade financeira abordados, não houve tópicos relacionados a TI. A cobertura geral dos tópicos de TI nos exemplos de livros didáticos de auditoria selecionados difere significativamente dos livros didáticos de contabilidade financeira e contabilidade gerencial. No entanto, espera-se que a maioria dos livros didáticos de auditoria tratasse pelo menos de técnicas e tecnologias de auditoria assistida por computador (CAAT). Pesquisa, implicações práticas e sociais: Considerando as implicações sociais e a praticidade da pesquisa, as partes interessadas e as agências governamentais devem pressionar por políticas que garantam uma transição adequada para a digitalização para que todos os seus cidadãos entendam melhor seu trabalho.

Originalidade/valor: A novidade e o valor foram avaliados. Vinte e um livros sobre contabilidade financeira, contabilidade gerencial e auditoria compõem a amostra. De acordo com pesquisas atuais, melhorias tecnológicas e tópicos relacionados raramente são abordados em cursos de contabilidade. As evidências da análise deste estudo da literatura relevante indicam que os livros didáticos das escolas de contabilidade e auditoria deveriam dedicar mais tempo a questões relacionadas a TI.

Palavras-chave: Digitalização, Contabilidade, Auditoria; Livros Didáticos.

LA MEDIDA EN QUE LOS LIBROS DE TEXTO CUMPLEN CON LOS REQUISITOS DE LA TRANSFORMACIÓN DIGITAL EN CONTABILIDAD Y AUDITORÍA

RESUMEN
Propósito: El estudio tuvo como objetivo determinar qué tan bien los libros de texto cumplen con las demandas de la transición de las industrias contables a la era digital. Determinar qué tan bien los libros satisface las necesidades del crecimiento de las industrias de auditoría hacia la era digital e investigar en qué medida los libros cumplan con los requisitos para la transformación digital en contabilidad y auditoría.

Marco teórico: El marco teórico del estudio dependió de un análisis de las revisiones pasadas realizadas por los investigadores en sus revisiones de literatura. Era para mostrar si los libros de texto cumplían con las demandas de una transición fluida de los trabajadores de la era tradicional a la digital en los campos de contabilidad y auditoría. Muchas revisiones anteriores realizadas por investigadores concluyeron que los libros de texto se encuentran entre los tres principales recursos utilizados en ambos departamentos, dependiendo mucho de los libros.

Metodología: La metodología utilizada fue el análisis de contenido, donde se revisaron 21 fuentes. La investigación bibliográfica se remonta a la década de 1960, pero se eligieron artículos críticos desde 2018 hasta el presente, considerando el avance de la tecnología y las computadoras, que han impactado al mundo de muchas maneras. Las computadoras son rápidas, fáciles y confiables, pero los libros de texto siguen siendo la fuente tradicional de información utilizada en muchos planes de estudios en todos los continentes. Se utilizó la base de datos de revistas de la American Educational Research Association (ERIC). También se utilizaron referencias
encontradas en línea a través de búsquedas en Google Scholar y JSTOR y listas de referencias de la digitalización de publicaciones periódicas de contabilidad y auditoría.

**Hallazgos:** Los hallazgos de las 21 fuentes incluyeron todos los libros de texto que tenían temas relacionados con TI sobre contabilidad. La investigación sugirió un ligero énfasis en los desarrollos de TI en la contabilidad de gestión, los campos de auditoría y la contabilidad financiera, lo que es coherente con nuestras suposiciones. Solo 5 de los libros de texto seleccionados en contabilidad financiera abordaban temas relacionados con TI. La cobertura general de los avances de TI en los ejemplos de libros de texto de auditoría seleccionados difiere significativamente de la de los libros de texto de contabilidad financiera y contabilidad administrativa. En el pasado, se esperaba que la mayoría de los libros de texto de auditoría abordaran al menos las técnicas y tecnologías de auditoría asistidas por computadora (CAAT).

**Implicaciones sociales, prácticas y de investigación:** Teniendo en cuenta las implicaciones sociales y la practicidad de la investigación, las partes interesadas y las agencias gubernamentales deben impulsar políticas que aseguren una transición adecuada a la digitalización para que todos sus ciudadanos comprendan mejor su trabajo.

**Originalidad/valor:** Se evaluó la novedad y el valor. Veintiún libros sobre contabilidad financiera, contabilidad gerencial y auditoría conforman la muestra. Según la investigación actual, las mejoras tecnológicas y los temas relacionados rara vez se tratan en los títulos de contabilidad. La evidencia del análisis de este estudio de la literatura relevante indica que los libros de texto de las escuelas de contabilidad y auditoría deberían dedicar más tiempo a los temas relacionados con TI.

**Palabras clave:** Digitalización, Contabilidad, Auditoría; Libros de Texto.

**INTRODUCTION**

Digital transformation, according to Kovac and Kepic (2022), refers to the process of integrating technological advancements into business patterns, processes, competencies, and models in a way that will expedite and provide efficiency. However, it is impossible to define digital transformation in a way that applies to all business processes and operations; Fischer et al. (2020) described it as integrating digital technologies into all business processes, which results in transformation and changes that result in a complete change. This shifting process also impacted accounting, and the digital transformation of accounting and auditing is continuing quickly (Cavallin & Sjölander, 2022). Everyday accounting operations have been made simpler by the digital revolution. We have begun using web-based accounting tools to cooperate with cloud technology in accounting. The transfer of accounting transactions gets secured by integrating business and accounting computers (Haje et al., 2019).

The level of digital transformation has enabled automatic data transfer to all recognized accounting software, enabling the mechanical movement of current and stock and the creation of receipts. Since accounting records get integrated with digital transformation, it is simple to transfer business activities to the accountant's computer via the web system (Fischer et al., 2020). As a result, it is possible to track cash flow, income, expenses, current accounts, check-bill transactions, and financing credits and perform e-document, e-statement, e-invoice, and e-archive operations. Transactions can now get done anywhere thanks to accounting and mobile
application advances. The ecological balance is maintained by cloud-based software since it eliminates the need for physical archiving.

Over the past few years, numerous technologies, including computer-assisted auditing methods, accounting software, extensible business reporting languages, continuous auditing, tax preparation software, financial databases, integrated information systems, and cloud accounting, have been heavily utilized in the accounting industry (Fischer et al., 2020). Because of how much businesses rely on technology, information technology (IT) is nowadays a key component and not just an additional component as it used to be. As a result, acquiring appropriate IT knowledge and abilities has become a crucial component of the employability skills required of today's university graduates. However, according to Ali, the IT and IS component frequently struggles for their survival and credibility. In support of this, Manita et al. (2020) have criticized the outdated accounting and auditing curricula in some countries for failing to prepare accounting graduates with the IT knowledge and skills necessary for the various roles held by accounting professionals in the multiple industries in which they secure jobs. Limiting students' tendency to learn in this manner without providing them with a different viewpoint from which they can improve their understanding of more significant issues in the field in which they are employed (Opudu & Tonye, 2022). It can also facilitate the reproducing and sustaining of an ideology (Schmitz & Leoni, 2019).

The rapidly advancing technology demands the high proficiency of the accounting and auditing professionals in utilizing software and accounting tools. The advent of digital technology has made auditing and accounting efficient as opposed to traditional textbooks, which fail to equip the students for digital transformation in the digital age. As such, students remain unprepared. As the digital technology becomes essential in the modern age, there is a need to evaluate how textbooks are coping with the rapidly changing landscape. Through this evaluation, it is easy to comprehend the key areas where books have been limited in addressing the accounting and auditing digital requirements; thus, offering insights on the need to update the textbook and reflect the needs of the profession. This study assists educators to make informed decisions concerning the textbooks and integration of content into the courses.

There needs to be more research on the IT material in the recommended accounting and auditing textbooks. This research examines how well textbooks meet the demands of the accounting and auditing industries' transition to the digital age.

To investigate the extent to which textbooks fulfill the requirements of digital transformation in accounting and auditing.
How well do textbooks adhere to the demands of the accounting and auditing industry's
digital transition?

LITERATURE REVIEW

The need for digital transformation is now an absolute necessity (Zhou, 2022). Aside
from those involved in digital transformation, only some organizations and businesses will be
able to survive in a very competitive market. Companies will need to reassess and even rethink
their procedures and modes of operation to adapt to the change. As per Mosteanu and Faccia
(2020), organizations that are unable to adjust to digital developments will not be able to survive
and risk going extinct in the market. The plans and strategies to be used in attaining all aims
and managing all resources should be decided upon and contained within the road so that the
digital transformation can be realized most effectively and reach the determined target as soon
as possible (Guerra et al., 2022). The relentless digital transition is reinventing traditional
business models. Changes in the labor force, marketing, human resources, and production
sectors are brought on by quickly shifting market conditions. Integrating digital technologies
into all business operations results in transformations and changes affecting business
operations. Guerra et al. (2022) describe this as digital transformation.

The ever-changing business environment, therefore regarding accounting and auditing
thus, demands the need for accounting and auditing students to have access to content relevant
to technology advancements (Bergeron, 2022). As per Mosteanu and Faccia (2020), several
scholarly sources facilitate this. Class textbooks, among these varied educational sources, play
a significant role in teaching accounting and auditing students' up-to-date content.

In English university business schools, Lombardi and Secundo (2020) reported that
textbooks were among the top three teaching resources used in both accounting and non-
accounting departments, with accounting faculties depending on them significantly more than
non-accounting faculties. Since the primary focus of accounting is on widely-accepted
methods, much of the content taught becomes successful through the use of textbooks, said
(Haje et al., 2019); textbooks get utilized as a "crutch," and less experienced professors are
"merely becoming textbook facilitators." Furthermore, 530 accounting professors in the USA
were involved in a study that showed that approximately 90% of them acknowledged updated
textbooks as their primary source of assistance when teaching the technical requirements of
IFRS in the classroom. Studies indicate the necessity of applying accounting standards in the
public sector. The Federal Bureau of Financial Supervision should gradually apply accounting
standards in the public sector in government institutions (El-Toby et al., 2022), stressing the introduction of these standards in school curricula and relying on standards that emphasize digitalization.

Despite textbooks being a reliable source of factual knowledge in a specific field (Opudu & Tonye, 2022), one would expect them to be unbiased sources of information. It is "naive," according to ALAM and HOSSAIN (2021), to view textbooks as a source of objective information. Instead, presenting content as accurate or genuine knowledge in textbooks may result from intricate political, economic, and cultural power dynamics and the purposeful creation of a specific reality (Zhou, 2022). Thus, by emphasizing some worldviews and marginalizing others, textbooks can shape the cognitive and affective perspectives of students (tomorrow's leaders) (Haje et al., 2019). According to Manita et al. (2020), accounting is an intrinsically ideological discipline due to this. Accounting and auditing textbooks get created, planned, and written as a widespread instructional tool that distributes and legitimizes the ideologies of specific social groupings. To reflect the values deemed necessary by the ruling class, designing and authoring a textbook involves what Roberts et al. (2021) called a "selection of traditional." In the vast store of available knowledge, "some concepts and activities are chosen for emphasis, while others become excluded."

Evidence from earlier pertinent literature shows that accounting textbooks get prepared with a purpose in mind and, as a result, depict and perpetuate some viewpoints while marginalizing others. For instance, Ali expressed concerns about the predominance of the quasi-economic structure in managerial accounting textbooks, which assumes that "either the owner or the decision-maker shares the owner's objectives" and that the goal of management accounting is to "assist management in increasing profit abilities." Kovac and Kepic (2022) note that textbooks that focus on management accounting have a greater focus on managerial viewpoint while pointing out that shareholders' interests predominate in textbooks that focus on financial Management and financial accounting.

According to Yigitbasioglu et al. (2022), the general finding is that since textbooks get generated with a purpose, some worldviews get included while others are limited (Cavallin & Sjölander, 2022). According to Bergeron (2022), professional groups frequently impose textbook information that is "thought to be the most legitimate." To secure as many adoptions/sales of the textbook as possible, a greater emphasis is being placed on the hard core of mainstream materials in an introductory financial accounting textbook to satisfy professional bodies' accreditation requirements. It is done by marginalizing broader societal issues (i.e., the
selective tradition, Haje et al., 2019). This backs up the assertions made in earlier studies that "powerful organizations" create textbook content because they "view it as being vital" to establishing and sustaining an ideological hegemony and achieving [specific] cultural, economic, and social goals" (Stark, 2020). Despite the scarcity of study on the subject, it is clear from the discussion above that accounting textbooks can serve as a backdrop for developing, promoting, and maintaining dominant groups’ ideological beliefs. Another example is the under-coverage of IT and related subjects.

MATERIAL AND METHODOLOGY

I used content analysis in this study to examine how much IT is covered in accounting and auditing textbooks. To better understand "a society's larger political, attitudinal, and value trends," which get conveyed through these materials, it is appropriate and valuable to apply content analysis to educational materials (such as textbooks). Ali’s findings following his study supported this after finding out that "educational materials have long become a rich source of data." To detect trends in the cognitive demand inherent at the end of chapter material in intermediate financial accounting textbooks, as well as to ascertain whether such textbooks contribute to the digital transition in accounting and auditing, several studies have focused on the content of accounting textbooks (Yigitbasioglu et al., 2022).

The literature search included works published from 2018 to the present that focused on how textbook contents facilitate transitioning to digital accounting and auditing. Although early materials from the 1960s were also examined, critical articles were chosen from 2018 to the present due to the significant advancements in computers and the widespread usage of computers in businesses during this time. Technology's impact on teaching and learning will be mainly addressed through a review of the existing literature.

A total of 21 sources were reviewed, abstracted, and analyzed to facilitate this review. The studies that were reviewed were chosen using the following criteria:

1. Those addressing the resources that can help the students understand better and acknowledge the digitization of the accounting and auditing processes in today's business settings
2. Accounting and auditing literature published predominantly from 2018 and the present.
3. Research focusing on the importance of accounting and auditing textbooks in the digital era in the USA.
4. General research on digital accounting and auditing.
5. Empirical research utilizes several approaches, such as descriptive, quantitative, and qualitative research.
6. Research-based reports, Ph.D. dissertations, and literature reviews addressing the importance of digitizing the accounting and auditing processes.

The phrases "digital accounting*", "Compute*", "digital auditing," "how school textbooks facilitate digitization of accounting and auditing *", and "technology in business operation*" were used in the initial search. "Moreover, the phrases "textbooks and IT integration in auditing and accounting," "Digitalization of business operations," and "facilitators of learning digital accounting and auditing" were all used in search of the reference materials on the ERIC database, the ProQuest dissertation database, and the Education Full-Text database. The American Educational Research Association's journals, as well as publications specifically related to the field of the use of textbooks as primary materials for teaching accounting and auditing students, such as the Journal of Educational Computing Research, Teacher Education Journal, and the Contemporary Issues in Technology concerning accounting and auditing were also reviewed. More research was done along with reviews of other academic publications and books, technical and government report, references found online through Google Scholar and JSTOR searches, and reference lists from digitalization of accounting and auditing periodicals.

The research concentrated on the chapters' actual content since here is where readers would be most interested and where it was anticipated that IT-related subjects would be directly handled. The form-oriented approach was interested in how much IT was covered in detailed accounting and auditing textbooks. Accordingly, factual chapters in each textbook were physically examined for IT information, measured in the number of pages to the nearest half-page, totaled, and then converted into a percentage of the overall number of pages per textbook. The meaning-oriented method was then used, focusing primarily on how the IT material is portrayed in the chosen sample textbooks. It was achieved by examining the IT content pages in light of three essential criteria: (i) the coverage's approach; (ii) its level; and (iii) its topical coverage.

RESULTS AND DISCUSSION

According to the study, only five of the 21 financial accounting textbooks featured IT-related topics in their content to varying degrees, ranging from a half page (0.09%) to nearly
29 pages (5.90%) of the textbook. In more detail, two of the selected textbooks under analysis (Roberts et al., 2021 and Wu, 2022) are unique. They have more significant percentages of pages or pages devoted to IT-related subjects in accounting and auditing. The remaining three textbooks covered relatively little information technology (IT)-related material concerning digital accounting and auditing.

The findings also showed that the recommended financial accounting textbooks cover IT topics in significantly less variety. Computerized accounting systems and XBRL, specifically related to financial accounting, were the two IT issues that received the most coverage (9.80 and 8.70 pages, respectively).

According to the research, management accounting textbooks have given less attention to IT-related content. It is between 1.68 (0.62%) and 1325 (3.02%) pages devoted to IT content. Regarding the number of pages devoted to discussing various IT-related advances, Cavallin and Sjölander (2022) and Stark (2020) represent 10.9 (3.07%), 12.0 (3.29) and 6.90 (1.34%) pages, respectively, which is very unusual compared to the other textbooks in the sample. These three books, however, are not among those that academic staff who participated in our poll most frequently recommended for management accounting courses. Contrarily, it is noteworthy—and perhaps surprising—to note that the two most commonly cited textbooks on management accounting, ALAM and HOSSAIN (2021), and Schmitz and Leoni (2019), have very few pages (less than 2.5 pages in total) devoted to IT-related subjects. It means that most accounting undergraduates studying management accounting are not adequately exposed to the implications of technological advancements in management accounting practice.

When compared to financial accounting and management accounting textbooks, the general scope of coverage of IT advances in the chosen auditing textbook samples is noticeably different. Historically, it has been anticipated that most auditing textbooks will cover at least computerized-assisted audit methods and technologies (CAAT). The most popular and best-selling auditing textbook in the UK, Roberts et al. (2021), devotes a disproportionately large portion of its pages—about 24.01 (2.57%) pages spread across five chapters—to IT material. However, this cover is quick and done from a conceptual (auditing) standpoint. The results show that the technical aspect of IT coverage appears to be overlooked and is not extensively covered in the auditing textbook example. The challenge with Electronic Data Interchange is that it necessitates a substantial investment in infrastructure and technology (Maçada et al., 2021, np). Therefore, universities need to develop their infrastructure and provide the necessary capabilities to obtain digital technologies through the exchange of electronic data with each
other for the purpose of achieving tangible cooperation in the development of educational curricula.

The content analysis findings suggest a slight emphasis on IT developments in management accounting, auditing fields, and financial accounting, which is consistent with our assumptions. Only 5 of the chosen textbooks in financial accounting addressed IT-related topics. Although management accounting and auditing textbooks cover IT-related topics more frequently, there is little overlap between the three professions. Only one of the 21 chosen textbooks assessed across the three disciplines thoroughly examined an IT-related subject. While management accounting and auditing textbooks provide "limited" treatment of IT-related issues, most finance textbooks use a "mentioning approach."

The conclusions of this research have a variety of ramifications for academics, authors, professional organizations, and universities. IT subjects should be thoughtfully included in the curricula of professional organizations. Aiming to provide the student with the knowledge and skills necessary to survive in the market and prevent a potential occupational invasion, as forewarned by Fischer et al. (2020), such integration should go beyond the fundamental definitions that are intended to increase general awareness of recent IT developments.

CONCLUSION

It has been established that textbooks vary in their adherence to the demands of the digital transformation in accounting and auditing industry. Some books have comprehensive digital aspects that meet the needs of the industry as compared to others. For these differences, the IT subjects should be thoughtfully included in the curricula of professional organizations. Aiming to provide the student with the knowledge and skills necessary to survive in the market and prevent potential occupational challenges. These developments have significant impact on the educational and training of the auditing and accounting professionals. This study was confronted by several limitations, namely limited generalizability of limited sample based on content analysis of only 21 studies. However, this limitation was overcome by selecting samples that are representative of the population of interest. Also, multiple case studies were used to compare and contrast the findings. Another limitation was that this research was time-consuming and demanded time to collect and compile the information. Lastly, while cases of bias were reported, they were overcome through using reflexivity to reflect on the researcher’s bias and assumptions. The future studies can focus on conducting a comparative analysis of
textbooks, which are used in accounting and auditing to identify the differences and similarities in the coverage of digital transition topic.

REFERENCES


Ali, M.M., The Effect of Activating Artificial Intelligence techniques on Enhancing Internal Auditing Activities" Field Study.


Oleiwi, R. (2023) The Extent to Which Textbooks Fulfill the Requirements of Digital Transformation in Accounting and Auditing


