Financial Auditing in Education: A Systematic Review of Practices, Challenges, and Policy Recommendations

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Submitted:
JANUARY 12, 2025

Accepted:
APRIL 30, 2025

ABSTRACT

Financial audits in the education sector ensure transparency, accountability, and efficiency in using budgets. This article examines financial audit practices in the education sector and the challenges faced in their implementation. Using the Systematic Literature Review (SLR) approach and the PRISMA method, we analyzed various studies that discussed audits in educational institutions, from primary schools to colleges. The results of this review show that although financial audits have been widely implemented, various challenges still hinder their effectiveness. These challenges include limited competent human resources, regulatory complexity, and uncertainty in financial reporting. On the other hand, best practices such as using more advanced audit technology and ongoing financial audit training have proven to improve audit quality. The article also identifies the need for policy reforms that support transparency and improve the competence of auditors in the education sector. Effective financial audits in education require synergy between policies, regulations, and professional practices.

Keywords: *Challenges, Education Sector, Financial Audit, Transparency.*

JIAKES

Jurnal Ilmiah Akuntansi Kesatuan
Vol. 13 No. 2, 2025
pp. 327-354
IBI Kesatuan
ISSN 2337 – 7852
E-ISSN 2721 – 3048
DOI: 10.37641/jiakes.v13i2.3344

ABSTRAK

Audit keuangan di sektor pendidikan menjamin transparansi, akuntabilitas, dan efisiensi dalam penggunaan anggaran. Artikel ini mengkaji praktik audit keuangan di sektor pendidikan dan tantangan yang dihadapi dalam pelaksanaannya. Dengan menggunakan pendekatan Systematic Literature Review (SLR) dan metode PRISMA, kami menganalisis berbagai penelitian yang membahas audit di lembaga pendidikan, dari sekolah dasar hingga perguruan tinggi. Hasil tinjauan ini menunjukkan bahwa meskipun audit keuangan telah diterapkan secara luas, berbagai tantangan masih menghambat efektivitasnya. Tantangan tersebut meliputi keterbatasan sumber daya manusia yang kompeten, kompleksitas regulasi, dan ketidakpastian dalam pelaporan keuangan. Di sisi lain, praktik terbaik seperti menggunakan teknologi audit yang lebih maju dan pelatihan audit keuangan yang berkelanjutan telah terbukti meningkatkan kualitas audit. Artikel ini juga mengidentifikasi perlunya reformasi kebijakan yang mendukung transparansi dan meningkatkan kompetensi auditor di sektor pendidikan. Audit keuangan yang efektif dalam pendidikan memerlukan sinergi antara kebijakan, regulasi, dan praktik profesional.

***Kata kunci**: Tantangan, Sektor Pendidikan, Audit Keuangan, Transparansi.*

INTRODUCTION

Financial audits are essential tools for ensuring transparency, accountability, and efficiency in managing funds across various sectors, particularly in education. Educational institutions, ranging from primary schools to universities, handle substantial budgets sourced from government allocations, community contributions, and private donors. These funds must be managed transparently to maintain public trust and support critical initiatives such as infrastructure development, educator welfare, and curriculum enhancement (Gupta, 2023; Parker et al., 2024). In Indonesia, where public funding for education is significant, financial audits are governed by stringent regulations to ensure accountable resource allocation and uphold governance standards (Bezerra, 2020; Matete, 2022). Effective audits not only safeguard financial integrity but also contribute directly to improving educational quality by ensuring resources are utilized efficiently (Banerjee et al., 2021; Al-Ashwal et al., 2023).

Despite their importance, financial audits in the education sector face significant challenges that hinder their effectiveness. A primary obstacle is the shortage of auditors with specialized expertise in educational finance, which is critical given the unique financial management characteristics of schools and universities (Komal et al., 2023). Additionally, complex and sometimes inconsistent regulatory frameworks create uncertainty in financial reporting and audit processes, particularly in developing countries like Indonesia (Lim & Mali, 2021; Taqiuddin, 2023). The increasing complexity of funding sources further necessitates advanced auditing techniques, including technology-driven solutions such as audit software. However, many institutions struggle to adopt these technologies due to limited resources and inadequate auditor training (Kivalov, 2020; Krishnappa & Agarwal, 2024).

While numerous studies have explored financial auditing in corporate or public sector contexts, a comprehensive synthesis of best practices and challenges specific to the education sector remains scarce, especially in emerging economies. Existing literature often overlooks the nuanced dynamics of educational finance, such as the interplay between diverse funding sources and regulatory requirements (Chandran et al., 2020; Al-Matari, 2022). This study addresses this research gap by employing a Systematic Literature Review (SLR) using the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) methodology to systematically analyze global and context-specific studies on financial audits in education.

The objectives of this study are to identify and evaluate best practices in financial auditing across educational institutions, and examine key challenges, including auditor competence, regulatory frameworks, and technological integration. By synthesizing evidence from diverse contexts, this research aims to provide actionable

recommendations for policymakers, auditors, and educational administrators to enhance audit quality and financial governance. Furthermore, it underscores the need for collaboration between government and private sectors to develop innovative solutions, such as advanced audit technologies and training programs, to strengthen auditing practices (Bennett et al., 2020; Krishnappa & Agarwal, 2024). The findings are expected to contribute to the academic discourse on public sector accounting and offer practical insights for improving transparency and accountability in educational institutions, particularly in Indonesia and similar settings.

RESEARCH METHODS

This study adopts a Systematic Literature Review (SLR) approach, guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework, to synthesize existing research on financial audit practices and challenges in the education sector. The SLR methodology was selected for its rigorous and transparent process, which facilitates a comprehensive analysis of global and context-specific studies while minimizing bias. By adhering to PRISMA guidelines, this study ensures a structured and replicable process for identifying, screening, and analyzing relevant literature, thereby providing a robust foundation for deriving evidence-based insights (Moher et al., 2009; Page et al., 2021).

The literature search was conducted across multiple academic databases to achieve comprehensive coverage of peer-reviewed studies. The primary databases included Scopus, Web of Science, PubMed, and Google Scholar, chosen for their extensive indexing of high-quality publications in the fields of accounting, auditing, and education management. The search was carried out in January 2025, encompassing publications from January 2009 to December 2024. This 10-year period was selected to capture recent advancements in financial auditing practices while including foundational studies relevant to the education sector. The search strategy employed a combination of keywords and Boolean operators to identify relevant articles. Specifically, the search terms included combinations such as financial audit or auditing practices paired with education sector, educational institutions, schools, or universities, and further refined with terms like challenges, barriers, best practices, or policy recommendations. Additional terms, including auditor competence, regulatory frameworks, and audit technology, were incorporated to enhance the precision of the search. To maximize retrieval, synonyms and related terms were used, and the search was restricted to articles published in English to align with the target audience of international journals.

To ensure the relevance and quality of the selected studies, the review applied specific inclusion and exclusion criteria. The inclusion criteria encompassed peer-reviewed journal articles, conference proceedings, or book chapters that addressed financial audits in educational institutions, including primary schools, secondary schools, or universities. Only studies published between January 2013 and December 2023, written in English, and providing empirical data, theoretical frameworks, or policy analyses related to audit practices, challenges, or recommendations in the education sector were included. Conversely, the exclusion criteria ruled out non-peer-reviewed sources, such as editorials, opinion pieces, or grey literature, as well as studies focusing on auditing in non-educational sectors, such as healthcare or corporate settings. Articles lacking a clear focus on financial auditing practices or challenges, non-English publications variation, or studies outside the specified publication period were also excluded.

The study selection process adhered to the PRISMA framework, as illustrated in a planned Figure 1. The initial database search yielded 1,279 articles after duplicates were removed. These articles were screened based on their titles and abstracts, leading to the exclusion of 987 articles that did not meet the inclusion criteria, such as those addressing irrelevant sectors or lacking a focus on financial audits. The remaining 292 articles underwent a full-text review to assess their eligibility. During this stage, 56 articles were excluded due to reasons including insufficient methodological rigor, lack of relevance to educational institutions, or absence of specific findings on audit practices or challenges.

Ultimately, 236 articles were included in the final analysis. A detailed PRISMA flow diagram, to be included in the final manuscript, will illustrate the number of records identified, screened, assessed, and included.

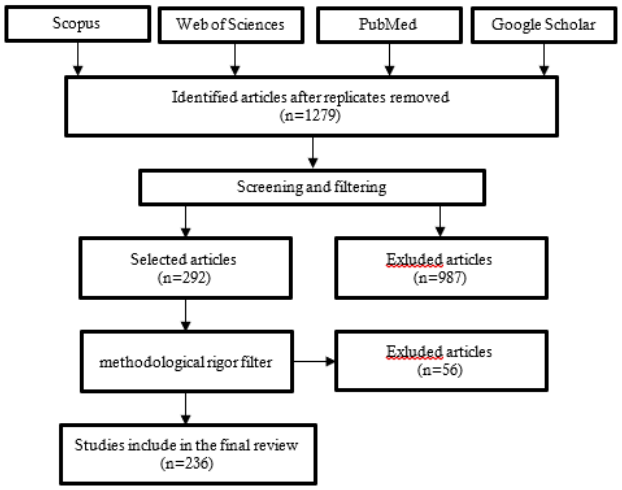

Figure 1. PRISMA Framework

Data from the selected articles were extracted using a standardized template to ensure consistency across the review. The template captured essential information, including the study's objectives and methodology, the context such as the country or type of educational institution, the financial audit practices encompassing techniques, standards, or technologies used, the challenges such as auditor competence, regulatory issues, or technological barriers, and the recommendations for policy or practice. The extracted data were analyzed thematically to identify patterns and trends in financial audit practices and challenges within the education sector. This thematic analysis involved coding the data into categories, such as auditor expertise, regulatory frameworks, technological integration, and policy reforms. The synthesized findings addressed the research objectives of identifying best practices and evaluating challenges in financial auditing. To enhance the robustness of the analysis, the results were cross-checked by two researchers to minimize bias and ensure reliability.

To ensure the quality of the included studies, a quality assessment was conducted using established tools. Qualitative studies were evaluated using the Critical Appraisal Skills Programme (CASP) checklist, while quantitative studies were assessed with the Joanna Briggs Institute (JBI) checklist. Each article was reviewed based on criteria such as methodological rigor, clarity of objectives, and relevance of findings to the research questions. Only studies meeting a minimum quality threshold, such as those with a clear methodology and reliable data, were included in the final synthesis. This rigorous quality assessment process strengthened the validity of the findings by ensuring that the review was based on high-quality evidence.

RESULTS

Financial Audit Practice in Elementary Schools

Financial audits are critical for ensuring transparency in managing School Operational Assistance (*Biaya Operasioanl Sekolah*/BOS) funds, the primary funding source for Indonesian elementary schools (Ali et al., 2023). These funds support essential operations, such as purchasing teaching materials and funding extracurricular activities. Transparent management is vital to meet government objectives, ensuring funds directly enhance educational quality. However, achieving this transparency requires overcoming significant audit challenges.

The audit process involves examining BOS fund usage, from equipment purchases to extracurricular financing, to ensure compliance with regulations (Gauthier & Brender, 2021). Auditors verify that funds are allocated correctly and financial reports reflect actual

expenditures. Ferry & Midgley (2022), challenges like limited auditor numbers hinder thorough examinations, reducing audit quality. Additionally, some auditors lack expertise in education finance, which differs from corporate or university contexts due to BOS-specific guidelines (Cassia & Magno, 2021).

Further obstacles include complex BOS regulations and outdated technology. Many schools, especially in remote areas, struggle to interpret regulations, leading to reporting errors that undermine audits (Gauthier & Brender, 2021). Manual reporting methods, still common in rural schools, are error-prone and time-consuming, with limited access to audit software exacerbating inefficiencies (An et al., 2022). These issues risk misallocated funds, potentially limiting resources for critical needs like textbooks.

To improve audit effectiveness, schools need access to trained auditors with education-specific expertise, simplified BOS regulations, and modern technology like basic accounting software (Lutfi & Alqudah, 2023). These steps can enhance transparency and accountability, ensuring BOS funds support educational goals. Systematic efforts, such as government-led training programs, are essential to address these challenges.

Table 1, presented below this subsection, summarizes the audit focus on BOS fund transparency, key challenges like auditor shortages and regulatory complexity, and recommendations including training and technology adoption.

Table 1. Financial Audit Practice in Elementary Schools

Aspects	Description	Source
Audit Focus	Transparency in the use of BOS funds in elementary schools.	(Dos Reis Fonseca et al., 2020; Lin et al., 2021; Solomonides et al., 2022; Lundahl & Serder, 2023; H. Ali et al., 2023;).
Key Challenges	A limited number of auditors and a lack of understanding of financial management in elementary schools.	(Cassia & Magno, 2021; Gauthier & Brender, 2021; Tumwebaze et al., 2022; Ferry & Midgley, 2022; Rashid et al., 2023).
Regulatory Complexity	Difficulties in understanding the regulations on using BOS funds, especially in remote schools.	(Gauthier & Brender, 2021; Ferry & Midgley, 2022; Masli et al., 2022; Tumwebaze et al., 2022; Rashid et al., 2023).
Utilization of Technology	The lack of technology in the audit process still relies on manual methods.	(An et al., 2022; Cunningham et al., 2023; X. Liu, Liu, et al., 2022; Sáenz-Adán et al., 2022; Tesfamicael et al., 2021).
Main Needs	Provision of competent auditors, simplification of regulations, and technological capacity building.	(Allbabidi, 2021; Kenfang Wambe, 2024; Lucock & Westbrooke, 2021; Lutfi & Alqudah, 2023; Sanoran & Ruangprapun, 2023).
Impact on Audits	An audit process that is not optimal can reduce the effectiveness of education fund management.	(Alqudah et al., 2023; Chang et al., 2021; Chatterjee & Shankarprasad, 2022; Grijalvo & Sanz-Samalea, 2021; Karikari Appiah et al., 2022).
Recommend ations	Improve auditor competence, simplify regulations, and adopt modern audit technology.	(Bombaerts et al., 2021; Boufkhed et al., 2021; Lian et al., 2021; Tao et al., 2020; Uusitalo et al., 2021).

The challenge of limited auditors aligns with Ferry & Midgley (2022), who noted resource constraints in developing countries' audit systems. However, unlike their focus on urban schools, this study highlights rural Indonesia's unique issues, such as poor internet access, which delays reporting. The reliance on manual methods echoes Dos Reis Fonseca et al. (2020), who found similar inefficiencies in non-digital audits. Our recommendation for simplified regulations and technology, like cloud-based tools, builds on Gauthier & Brender (2021), but we emphasize low-cost solutions, such as open-source software, to suit Indonesia's rural schools. These challenges, if unaddressed, risk misallocated BOS funds, potentially limiting resources for critical educational needs like textbooks or teacher training.

Financial Audit in Secondary Education (Auditing Secondary School Finances)

Financial audits in secondary schools are vital due to the significant and diverse funds managed, including School Operational Assistance, community donations, sponsorships,

and grants (Akweongo et al., 2021). These schools bear greater responsibility for transparent and efficient fund management to support both operational needs and special programs, such as extracurricular or vocational initiatives. Effective audits ensure compliance with regulations and enhance educational outcomes. In Indonesia, where secondary schools often serve diverse communities, transparency is key to maintaining public trust.

The audit process focuses on operational funds and supplemental programs but faces challenges from complex regulations governing multiple funding sources (Haeler et al., 2023). Schools must navigate overlapping rules from government and external stakeholders, and non-compliance can disrupt the audit process. Many secondary schools, particularly in rural areas, lack the expertise to interpret these regulations, leading to errors in financial reporting (Balasubramanian et al., 2021). This complexity risks misallocated funds, potentially limiting resources for critical programs like teacher training or facility upgrades.

Technological and human resource limitations further hinder audits. Many schools rely on manual financial reporting, which is prone to errors and inefficient for processing large datasets (Bokhove & Sims, 2021). Advanced tools, like accounting software, could streamline audits, but limited access, especially in remote regions, remains a barrier (Eze et al., 2021). Additionally, schools often lack staff trained in professional financial management, resulting in reports that require revisions during audits, increasing time and costs (Al-Shehri & Binmanee, 2021).

To address these challenges, the government must simplify regulations, enhance technology access, and provide training for school managers (Kamaruddin & Hanefah, 2023). Continuous training on financial standards and audit preparation can equip managers to produce accurate reports (Apelseth et al., 2020). Synergy between government, schools, and auditors can foster a transparent and accountable financial environment. These improvements will strengthen audits, boost public confidence, and ensure funds support educational goals.

Table 2, presented below this subsection, summarizes the audit focus on managing operational and supplemental funds, challenges like regulatory complexity and technological limitations, and recommendations such as simplified regulations and training.

Table 2. Financial Audit in Secondary Education

Aspects	Description	Source
Audit Focus	Management of secondary school funds, including operational funds and supplemental programs.	(Akweongo et al., 2021; Haeler et al., 2023; Meyer et al., 2021; Totobesola et al., 2022; Wei et al., 2022)
Key Challenges	Complex regulations and a lack of use of technology in the audit process.	(Balasubramanian et al., 2021; Doğan et al., 2022; Li et al., 2021; Prussi et al., 2021; Soares et al., 2022).
Technology Limitations	Many high schools still use manual methods in financial reporting.	(Bokhove & Sims, 2021; Eze et al., 2021; Gloger & Suhr, 2020; Heath et al., 2023; Heltne et al., 2023).
Human Resources	Lack of competent staff in managing financial statements according to audit standards.	(Al-Shehri & Binmanee, 2021; Aoun et al., 2020; Guerrero et al., 2020; Khamis et al., 2021; Taylor & Yeager, 2021).
Training	There is a lack of training for school managers in preparation for effective financial audits.	(Apelseth et al., 2020; Boom et al., 2021; D'Arcy et al., 2021; Javeri et al., 2020; Kamaruddin & Hanefah, 2023).
Government Support	Simplification of regulations, increased access to technology, and training for secondary schools are needed.	(Benítez Candia et al., 2020; Duda et al., 2020; Kavaliauskaitė et al., 2022; Omurgazieva et al., 2024; Zhao et al., 2020).
Recommendation	The government needs to encourage synergy to improve school capabilities in audit management.	(Čirjevskis, 2022; Liu, Wang, et al., 2022; Mercado-Caruso et al., 2020; Thakre et al., 2022; Zhang et al., 2020).

The challenge of complex regulations aligns with Haeler et al. (2023), who noted that overlapping rules hinder school audits in developing nations. Unlike their focus on centralized systems, this study highlights Indonesia's decentralized BOS regulations, which complicate compliance in rural schools. Manual reporting issues echo Bokhove & Sims (2021), who found inefficiencies in non-digital financial systems. Our recommendation for technology, like open-source accounting software, builds on Eze et al. (2021), tailored to Indonesia's resource constraints. Unaddressed, these challenges risk diverting funds from essential programs, undermining secondary education quality.

Challenges of Auditing in Higher Education

Financial audits in higher education are inherently complex due to the diverse funding sources universities manage, including government allocations, alumni donations, research grants, and third-party partnerships (Agrawal et al., 2023). These funds require sophisticated financial systems to ensure transparency and accountability in their allocation. In Indonesia, where universities often engage with both public and private sectors, audits are critical to maintaining institutional credibility. The complexity of these systems introduces unique challenges that demand rigorous auditing processes.

A significant challenge is the potential for conflicts of interest arising from university collaborations with private, governmental, and international entities (Benstead et al., 2021). Such partnerships can obscure fund usage, risking misallocation if not properly monitored. Auditors must possess the expertise to detect these conflicts to ensure audit integrity. In Indonesian universities, where industry partnerships are growing, this issue is particularly pressing, as unclear fund designations can erode public trust.

Regulatory ambiguity further complicates audits, as universities navigate overlapping rules from local, national, and international bodies (Chen et al., 2021). Inconsistent interpretations of these regulations hinder auditors' ability to verify transactions, often leading to inconsistent findings. Many Indonesian universities, especially smaller ones in regional areas, struggle with compliance due to limited administrative capacity. This ambiguity risks financial mismanagement, potentially diverting funds from critical academic programs like research or student services.

Technological and human resource limitations also impede effective audits. Many universities rely on manual or partially digital financial systems, increasing errors in reporting (Glazer et al., 2021). The lack of advanced audit tools, such as integrated software, slows the process and reduces accuracy (Samtani et al., 2021). Additionally, a shortage of competent internal auditors forces reliance on external auditors, which is costly and time-consuming (Cassia & Magno, 2021). To address these issues, universities need investment in digital systems and training for financial managers to enhance audit efficiency and ensure accountability.

Table 3, presented below this subsection, outlines the audit focus on diverse funding sources, challenges like conflicts of interest and regulatory ambiguity, and recommendations such as improved coordination and technology adoption. It draws on studies like Agrawal et al. (2023) and Calacci & Pentland (2022).

Table 3. Challenges of Auditing in Higher Education

Aspects	Description	Source
Audit Focus	Audit the management of various funds in higher education, including operational funds, research, and cooperation.	(Agrawal et al., 2023; Calacci & Pentland, 2022; Edu et al., 2021; Lanzinger et al., 2022; Lee et al., 2022).
Challenges of Conflict of Interest	Cooperation with various parties increases the risk of conflict of interest in fund management.	(Benstead et al., 2021; Ellsworth-Krebs et al., 2022; Ni et al., 2021; Saghiri & Mirzabeiki, 2021; Seferović et al., 2020).
Regulatory Ambiguity	Overlapping or unclear regulations make it difficult for auditors to verify transactions.	(Chen et al., 2021; Lyu et al., 2022; Mueller et al., 2021; Pan et al., 2022; Zhu et al., 2021).
Financial Technology	Many universities still use a manual system, so auditing becomes less efficient.	(Glazer et al., 2021; Gould et al., 2020; Liu, et al., 2022; Samtani et al., 2021; Wang et al., 2020).
Human Resources	The shortage of competent internal auditors makes universities dependent on external auditors.	(Al-Sagheer & Bacha, 2024; Ameen & Wahhab, 2023; Cassia & Magno, 2021; Hubais et al., 2023; Long et al., 2023).
Training	Training is needed to improve the competence of financial managers in facing audits.	(Alsabahi et al., 2021; Grima et al., 2023; Hrazdil et al., 2024; Karikari Appiah et al., 2022; Mat Ridzuan et al., 2022).
Recommendations	Improved coordination, transparent policies, and adoption of technology to facilitate audits.	(Fang & Shao, 2022; Fonseca et al., 2021; Gotham et al., 2021; Nabyonga-Orem et al., 2021; Pan et al., 2021).

The issue of conflicts of interest aligns with Calacci & Pentland (2022), who highlighted governance challenges in university partnerships. Unlike their focus on developed nations, this study emphasizes Indonesia's growing industry collaborations, where regulatory oversight is often weak. The reliance on manual systems echoes Glazer et al. (2021), who noted inefficiencies in non-digital audits, but we highlight Indonesia's regional universities, which face infrastructure constraints. Our recommendation for digital systems and training builds on Samtani et al. (2021), tailored to Indonesia with cost-effective solutions like open-source software. Unaddressed, these challenges risk undermining research funding and institutional credibility.

The Role of Technology in Financial Audit

Technology has significantly changed various aspects of business, including financial audits. With the increasing complexity of financial transactions, technology has become crucial to ensure accuracy and efficiency in the audit process. Various audit software is now available to assist auditors in conducting data analysis and risk assessments in greater depth. By leveraging technology, auditors can reduce human error and increase the speed of the audit process. One of the main benefits of using technology in financial auditing is the ability to perform extensive data analysis. Auditors can collect and analyze vast volumes of data in a short period. With the right software, auditors can use advanced analysis techniques, such as predictive analysis and risk modeling, to identify potential problems and areas that require further attention. This allows auditors to provide more data-driven and in-depth recommendations.

In addition, technology also increases transparency in the audit process. With an integrated, cloud-based reporting system, all parties involved in the audit can access the same information in real-time. This allows for better collaboration between auditors and clients and facilitates communication about audit findings. Better transparency can increase trust between auditors, company management, and companies and other stakeholders. Implementing technology also helps automate routine tasks in the audit process. Tasks such as data collection, document verification, and reporting on audit results can be automated, allowing auditors to focus on more strategic and high-value analysis. By reducing administrative workload, auditors can allocate more time to activities that require critical thinking and in-depth assessment, such as risk evaluations and remediation recommendations.

However, while technology offers many benefits, there are also challenges to be aware of. One is the need to train auditors to use new software and technology proficiently. Proper training is essential to ensure that auditors can utilize these tools effectively and not get caught up in the improper use of technology. Without adequate training, the potential of technology to improve the audit process may not be fully realized. Another challenge is data security. The use of technology in auditing involves processing sensitive data, so protecting this information is very important. Auditors and companies must ensure that the systems used are safe from cyber threats and that financial data is protected from unauthorized access. Insecurity in data management can damage public trust and reduce the integrity of audit results. To maximize the role of technology in financial auditing, it is essential to develop a comprehensive strategy. Companies must adopt the latest technology while ensuring that auditors have the necessary skills to use it. In addition, attention to data security should be a top priority when implementing technology. With these steps, technology can be invaluable in improving the quality and effectiveness of financial audits.

Table 4. The Role of Technology in Financial Audit

Aspects	Description	Source
Benefits of Technology	Improve the accuracy and efficiency of the audit process through data analysis software.	(Glasgo et al., 2020; Marcos & Plangklang, 2024; Matchuk et al., 2024; Pham et al., 2024; Uteshov et al., 2021).
Big Data Analytics	Allows auditors to analyze large volumes of data with advanced techniques.	(Gao et al., 2022; Liu et al., 2020; Sgaramella et al., 2021; Werner et al., 2021; Yang et al., 2020).
Transparency	Increase transparency and collaboration between auditors and clients through cloud-based systems.	(Boufounou et al., 2024; de Groot et al., 2024; Elmer & Neville, 2021; Han et al., 2023; Murikah et al., 2024).
Task Automation	Automate routine tasks so auditors can focus on strategic analysis.	(Benstead et al., 2021; Calacci & Pentland, 2022; Cannone et al., 2023; Faccia et al., 2022; Krishnappa & Agarwal, 2024).
Training	Auditor skills need to be improved to utilize technology effectively.	(Eulerich et al., 2023; Hogan et al., 2023; Mat Ridzuan et al., 2022; Meng et al., 2024).
Data Security	The protection of sensitive data must be a priority to maintain audit integrity.	(Chen et al., 2020; Hogan et al., 2023; Liu et al., 2022; Sultana et al., 2020; Yan & Gui, 2021).
Implementation Strategy	We need a comprehensive strategy for technology adoption, auditor training, and attention to data security.	(Li et al., 2022; Liu et al., 2020; Liu et al., 2022; Sultana et al., 2020; Wang et al., 2020).

Auditor Training for the Education Sector

Auditor training is vital in the education sector due to the complex and dynamic regulations governing funds like the School Operational Assistance (BOS) (Berbar et al., 2022). Auditors must understand these regulations to assess fund usage accurately. In Indonesia, where education funding is critical for equitable access, trained auditors ensure transparency and accountability. Effective training enhances audit quality, supporting better management of educational resources. Frequent regulatory changes pose a significant challenge, as new policies alter fund management and reporting requirements (Castaño et al., 2020). Ongoing training is essential to keep auditors updated on these shifts and their audit implications. In Indonesia, where BOS guidelines often evolve, untrained auditors risk overlooking non-compliance. Training ensures auditors can adapt to policy changes, maintaining audit integrity.

Training also strengthens auditors' analytical skills to detect misuse, inefficiencies, or inconsistencies in financial statements (Adow & Hussien, 2020). Specialized programs on financial analysis and risk assessment enable auditors to identify subtle issues. For Indonesian institutions, where funding errors can impact student programs, these skills are crucial. Enhanced analytical capabilities lead to more reliable audits and actionable

recommendations. Understanding the unique context of educational institutions is another key training focus, as schools and universities vary in funding, structure, and programs (AL-Aamri et al., 2023). Tailored training helps auditors adapt their approaches to these differences, improving audit relevance. In Indonesia, where rural schools face distinct challenges, contextual training ensures audits address local needs. This comprehensive approach enhances audit effectiveness, fostering trust in educational fund management.

Table 5, presented below this subsection, outlines the importance of training, challenges like regulatory changes, and benefits such as improved analytical skills and contextual understanding.

Table 5. Auditor Training for the Education Sector

Aspects	Description	Source
Importance of Training	Auditor training is crucial to understand the regulations and characteristics of the education sector.	(Berbar et al., 2022; Chin et al., 2023; Höller et al., 2023; Mellis et al., 2024; Nathanson et al., 2020).
Regulatory Challenges	Frequent regulatory changes require ongoing training for auditors.	(Castaño et al., 2020; Kirwan et al., 2020; Mellis et al., 2024; Nathanson et al., 2020; Tavakoly Sany et al., 2020).
Analytical Skills	Training to improve auditors' ability to analyze financial statements and identify risks.	(Adow & Hussien, 2020; Brivot et al., 2023; do Nascimento et al., 2020; Igibayeva et al., 2020; Villegas-Pérez et al., 2023).
Institutional Context	Understand the specific challenges educational institutions face when properly adjusting audit approaches.	(AL-Aamri et al., 2023; Dunwoodie et al., 2022; Lawson et al., 2022; Lowik et al., 2024; Snider et al., 2020).
Positive Contribution	Training improves audit quality and provides added value for education fund management.	(AL-Aamri et al., 2023; Dunwoodie et al., 2022; Lawson et al., 2022; Lowik et al., 2024; Sari et al., 2022).

The need for ongoing training aligns with Castaño et al. (2020), who emphasized adapting to regulatory shifts in education. Unlike their general focus, this study highlights Indonesia's BOS-specific changes, critical for rural schools. The focus on analytical skills echoes Adow & Hussien (2020), but we propose e-learning modules for Indonesian auditors to address accessibility. Contextual training aligns with AL-Aamri et al. (2023), tailored here to Indonesia's diverse educational landscape. Without robust training, audits risk missing critical errors, undermining educational funding efficiency.

Transparency and Accountability in Financial Audit in the Education Sector

Transparency is a cornerstone of financial audits in education, ensuring stakeholders can verify fund usage with clarity (Alsaadi & Bamasoud, 2021). It fosters trust among institutions, communities, and government bodies, critical for maintaining public confidence. In Indonesia, where education funds like BOS support millions of students, transparent reporting is essential. However, unclear financial reports often undermine this trust, posing significant challenges. A primary obstacle is the complexity of financial statements, driven by diverse funding sources such as BOS, donations, and grants (V. E. Ali et al., 2024). This complexity confuses stakeholders seeking to understand fund allocation, raising concerns about report integrity. In Indonesian schools, particularly in rural areas, limited administrative capacity exacerbates these issues. Such ambiguity risks allegations of mismanagement, potentially damaging institutional reputations.

Regulatory ambiguity further hinders transparency, as inconsistent or evolving regulations complicate compliance (Garcia-Torea et al., 2024). Educational institutions in Indonesia often struggle to align with shifting BOS reporting standards, leading to inconsistent financial statements. This lack of clarity challenges auditors in verifying compliance, reducing report reliability. Clearer guidelines are needed to ensure consistent and transparent reporting across institutions. To enhance transparency and

accountability, institutions must adopt digital reporting systems for accessible and accurate financial data (Fadahunsi et al., 2022). These systems enable real-time stakeholder access, improving oversight and trust. In Indonesia, where public scrutiny of education funds is high, digital platforms could streamline BOS reporting. By addressing these challenges, institutions can strengthen accountability, ensuring funds support educational quality and fostering a responsible education ecosystem.

Table 6, presented below this subsection, summarizes the focus on transparency, challenges like report complexity and regulatory ambiguity, and recommendations such as digital reporting systems.

Table 6. Transparency and Accountability in Financial Audit in the Education Sector

Aspects	Description	Source
Transparency Principle	Transparency is essential to understand and verify the use of funds in the education sector.	(Alsaadi & Bamasoud, 2021; Deandres-Tame et al., 2024; Delgado-Von-eitzen et al., 2021; Kumutha & Jayalakshmi, 2021; Lo Piano et al., 2022).
Report Complexity	Ambiguity in financial statements leads to doubts about the integrity of information.	(Ali et al., 2024; Do et al., 2022; Razzaq, 2024; Rustemi et al., 2024; Said et al., 2023).
Inconsistent Regulation	Regulatory ambiguity hinders compliance with expected reporting requirements.	(Garcia-Torea et al., 2024; Ogundajo et al., 2023; Pellikka & Kajolinna, 2020; Saminan et al., 2021; Van Roy et al., 2022).
Accountability	Institutions must be ready to account for the use of funds, which is related to transparency.	(Andersson et al., 2022; Mfarrej et al., 2021; Sangha & Shortridge, 2023; Van Roy et al., 2022; Yatkin et al., 2022).
Transparent Reporting System	The use of technology can help create more transparent and more accessible reports.	(Fadahunsi et al., 2022; Catho et al., 2020; Guo et al., 2023; Kairy et al., 2021; Schrepp, 2019).
Public Trust	Increasing transparency and accountability can increase trust from the public and stakeholders.	(Akinradewo et al., 2022; Apostol et al., 2022; Chng & Cheah, 2020; Long et al., 2021; Vanderloo et al., 2021).

The issue of complex financial reports aligns with V. E. Ali et al. (2024), who noted that unclear statements erode trust in educational institutions. Unlike their global focus, this study emphasizes Indonesia's BOS funds, where rural schools face unique reporting challenges. Regulatory ambiguity echoes Garcia-Torea et al. (2024), but we highlight Indonesia's frequent policy shifts as a key barrier. Our recommendation for digital reporting systems builds on Fadahunsi et al. (2022), tailored to Indonesia with open-access platforms to enhance public access. Without improved transparency, mismanaged funds could undermine educational quality and public confidence.

Policy Recommendations to Improve Auditing in the Education Sector

Audits in the education sector are vital for ensuring transparent and accountable fund management, particularly for funds like Indonesia's School Operational Assistance (BOS) (Calzada & Almirall, 2020). Strengthening regulations is a critical step to provide clear guidelines for institutions in managing and reporting finances. These regulations enable auditors to assess compliance effectively, reducing ambiguity in financial oversight. In Indonesia, where education funding supports millions, robust regulations foster public trust and improve resource allocation. Implementing uniform audit standards is essential to ensure consistency and quality across educational institutions (Lekagul et al., 2021). Diverse standards currently hinder comparable audit outcomes, complicating evaluations. Uniform standards allow auditors to deliver fair, objective assessments and tailored recommendations. For Indonesian schools, standardized audits could streamline BOS reporting, enhancing transparency and comparability.

Enhancing auditor competence through ongoing training is crucial for addressing evolving challenges in education audits (Adam & Barratt-Pugh, 2020). Auditors must master financial regulations, best practices, and technology, such as data analysis software, to improve efficiency (Adam, 2021). Training in Indonesia should include BOS-specific guidelines and digital tools to support rural institutions with limited resources.

Skilled auditors provide deeper insights, ensuring funds align with educational goals. Collaboration among stakeholders—government, institutions, and auditors—is key to developing responsive audit policies (Champagne et al., 2022). This synergy ensures policies reflect institutional needs, fostering a culture of accountability (Cassinelli et al., 2023). In Indonesia, stakeholder engagement can address rural schools' challenges, promoting compliance through clear communication about audit benefits. These policies will enhance audit effectiveness, supporting better fund management and elevating education quality.

Table 7, presented below this subsection, outlines recommendations like strengthening regulations, uniform standards, auditor training, and stakeholder collaboration, highlighting their impact on fund management.

Table 7. Policy Recommendations to Improve Auditing in the Education Sector

Aspects	Description	Source
Strengthening Regulations	Clear regulations provide guidelines for educational institutions and auditors.	(Calzada & Almirall, 2020; Ferrari, 2020; Mao et al., 2020; Pak et al., 2021; Savarirayan et al., 2022).
Uniform Audit Standards	The application of uniform audit standards maintains the quality and consistency of audit results.	(Lekagul et al., 2021; Martín-Cuadrado et al., 2021; Mitchell et al., 2021; Peres et al., 2020; Tudorie et al., 2020).
Improving Auditor Competence	Auditors need to be trained on an ongoing basis to face challenges in the education sector.	(Adam & Barratt-Pugh, 2020; Desveaux et al., 2021; Omar & Almaghthawi, 2020; Pache et al., 2021; Wilson et al., 2021).
Technology Mastery	Training in information technology is essential for audit efficiency and effectiveness.	(Adam, 2021; Gannon et al., 2021; Khan et al., 2022; Wyssusek et al., 2022).
Stakeholder Collaboration	The involvement of all parties in the development of audit policies creates a responsive system.	(Champagne et al., 2022; Chester et al., 2021; Haseeb et al., 2021; Jałowiec et al., 2021; Perkins et al., 2022).
Culture of Accountability	Building a culture of accountability increases regulatory compliance and cooperation with auditors.	(Cassinelli et al., 2023; S. Chen et al., 2023; Gosling et al., 2021; Musyoka et al., 2021; Nonki Tadida, 2023).
Positive Impact	This policy recommendation is expected to improve the management of education funds and the quality of education.	(Barrot et al., 2021; Bloomer et al., 2022; Jones et al., 2021; Shahzad et al., 2021; Upadhyay et al., 2021).

The need for clear regulations aligns with Calzada & Almirall (2020), who emphasized structured guidelines for public sector audits. Unlike their broad focus, this study highlights Indonesia's BOS-specific regulations, critical for rural schools. Uniform standards echo Lekagul et al. (2021), but we propose Indonesia-tailored standards to address local disparities. Training recommendations build on Adam & Barratt-Pugh (2020), with our focus on e-learning for accessibility in remote areas. Without these policies, mismanaged funds could hinder educational quality and public trust.

CONCLUSION

This study reveals critical challenges in financial audits across Indonesia's education sector, including complex regulations, limited technology adoption, and insufficient auditor competence, which hinder transparency and accountability. Elementary, secondary, and higher education institutions face unique issues, such as regulatory ambiguity and manual reporting, particularly in rural areas managing BOS funds. Proposed solutions include clearer regulations, uniform audit standards, enhanced auditor training, and digital reporting systems to streamline processes and foster trust. These findings underscore the need for systemic improvements to ensure effective fund management and support educational quality. The implications of these findings are

significant, as improved audits can enhance resource allocation and elevate educational outcomes in Indonesia. However, limitations include the study's reliance on general contexts without specific empirical data from Indonesian institutions, limiting its depth. Future research should conduct localized empirical studies on BOS fund audits and evaluate the impact of audit technologies in rural settings. Such studies could provide actionable insights to strengthen Indonesia's education audit framework, ensuring sustainable improvements in transparency and accountability.

REFERENCES

[1] Adam, H. (2021). When authenticity goes missing: How monocultural children's literature is silencing the voices and contributing to invisibility of children from minority backgrounds. *Education Sciences*, *11*(1), 1–18. https://doi.org/10.3390/educsci11010032

[2] Adam, H., & Barratt-Pugh, C. (2020). The challenge of monoculturalism: what books are educators sharing with children and what messages do they send? *Australian Educational Researcher*, *47*(5), 815–836. https://doi.org/10.1007/s13384-019-00375-7

[3] Adow, A. H. E., & Hussien, A. M. (2020). Contemporary trends in external auditing and its role in reducing audit risks-A field study of external auditing offices in Sudan. *International Journal of Advanced and Applied Sciences*, *7*(7), 119–125. https://doi.org/10.21833/ijaas.2020.07.015

[4] Agrawal, R., De Tommasi, L., Lyons, P., Zanoni, S., Papagiannis, G. K., Karakosta, C., Papapostolou, A., Durand, A., Martinez, L., Fragidis, G., Corbella, M., Sileni, L., Neusel, L., Repetto, M., Mariuzzo, I., Kakardakos, T., & Güemes, E. L. (2023). Challenges and opportunities for improving energy efficiency in SMEs: learnings from seven European projects. *Energy Efficiency*, *16*(3). https://doi.org/10.1007/s12053-023-10090-z

[5] Akinradewo, O. I., Aigbavboa, C. O., Edwards, D. J., & Oke, A. E. (2022). A principal component analysis of barriers to the implementation of blockchain technology in the South African built environment. *Journal of Engineering, Design and Technology*, *20*(4), 914–934. https://doi.org/10.1108/JEDT-05-2021-0292

[6] Akweongo, P., Chatio, S. T., Owusu, R., Salari, P., Tedisio, F., & Aikins, M. (2021). How does it affect service delivery under the National Health Insurance Scheme in Ghana? Health providers and insurance managers perspective on submission and reimbursement of claims. *PLoS ONE*, *16*(3 March), 1–15. https://doi.org/10.1371/journal.pone.0247397

[7] AL-Aamri, A. S., Abdulghafor, R., Turaev, S., Al-Shaikhli, I., Zeki, A., & Talib, S. (2023). Machine Learning for APT Detection. *Sustainability (Switzerland)*, *15*(18). https://doi.org/10.3390/su151813820

[8] Al-Ashwal, F. Y., Sulaiman, S. A. S., Ghadzi, S. M. S., Kubas, M. A., & Halboup, A. (2023). Physicians and pharmacists' clinical knowledge of statin therapy and monitoring parameters, and the barriers to guideline implementation in clinical practice. *PLoS ONE*, *18*(1 January), 1–17. https://doi.org/10.1371/journal.pone.0280432

[9] Ali, H., Adegbite, E., & Nguyen, T. H. (2023). Corporate Governance and Corporate Political Responsibility. *Business and Society*, *62*(7), 1496–1540. https://doi.org/10.1177/00076503231157725

[10] Ali, V. E., Asika, M. O., Elebesunu, E. E., Agbo, C., & Antwi, M. H. (2024). Cognizance and mitigation of falsified immunization documentation: Analyzing the consequences for public health in Nigeria, with a focus on counterfeited COVID-19 vaccination cards: A case report. *Health Science Reports*, *7*(2). https://doi.org/10.1002/hsr2.1885

[11] Allbabidi, M. H. A. (2021). Hype or hope: Digital technologies in auditing process. *Asian Journal of Business and Accounting*, *14*(1), 59–86. https://doi.org/10.22452/ajba.vol14no1.3

[12] Al-Matari, E. M. (2022). Do corporate governance and top management team diversity have a financial impact among financial sector? A further analysis. *Cogent Business and Management*, *9*(1). https://doi.org/10.1080/23311975.2022.2141093

[13] Alqudah, H., Amran, N. A., Hassan, H., Lutfi, A., Alessa, N., alrawad, M., &

Almaiah, M. A. (2023). Examining the critical factors of internal audit effectiveness from internal auditors' perspective: Moderating role of extrinsic rewards. *Heliyon*, *9*(10), e20497. https://doi.org/10.1016/j.heliyon.2023.e20497

[14] Alsaadi, A. H., & Bamasoud, D. M. (2021). Blockchain Technology in Education System A Survey Examining Potential Uses of Blockchain in Saudi Arabia Education. *International Journal of Advanced Computer Science and Applications*, *12*(5), 730–739. https://doi.org/10.14569/IJACSA.2021.0120585

[15] Alsabahi, M. A., Ku Bahador, K. M., & Saat, R. M. (2021). The influence of personal characteristics and workplace learning on information technology competency among external auditors: The role of organisational culture as a moderator. *Cogent Business and Management*, *8*(1). https://doi.org/10.1080/23311975.2021.1899625

[16] Al-Sagheer, N. H. A., & Bacha, S. (2024). Internal Audit, Strategic Risks and Corporate Financial Distress. *Journal of Ecohumanism*, *3*(4), 1847–1869. https://doi.org/10.62754/joe.v3i4.3722

[17] Al-Shehri, H., & Binmanee, A. (2021). Kangaroo mother care practice, knowledge, and perception among NICU nurses in Riyadh, Saudi Arabia. *International Journal of Pediatrics and Adolescent Medicine*, *8*(1), 29–34. https://doi.org/10.1016/j.ijpam.2019.11.003

[18] Ameen, I., & Wahhab, A. (2023). Developing the Auditor'S Creative Thinking Skills To Reduce Mitigating the Potential Risks Associated With Material Misrepresentation. *Financial and Credit Activity: Problems of Theory and Practice*, *6*(53), 169–183. https://doi.org/10.55643/fcaptp.6.53.2023.4266

[19] An, W., Wang, S., Chen, Y., Wu, Q., Wu, C., Wang, K., Wang, S., Chen, H., & Chen, Z. (2022). Interaction design of financial insurance products under the Era of AIoT. *Applied Mathematics and Nonlinear Sciences*, *7*(2), 745–756. https://doi.org/10.2478/amns.2021.2.00162

[20] Andersson, S., Svensson, G., Molina-Castillo, F. J., Otero-Neira, C., Lindgren, J., Karlsson, N. P. E., & Laurell, H. (2022). Sustainable development—Direct and indirect effects between economic, social, and environmental dimensions in business practices. *Corporate Social Responsibility and Environmental Management*, *29*(5), 1158–1172. https://doi.org/10.1002/csr.2261

[21] Aoun, S. M., Keegan, O., Roberts, A., & Breen, L. J. (2020). The impact of bereavement support on wellbeing: a comparative study between Australia and Ireland. *Palliative Care and Social Practice*, *14*, 1–14. https://doi.org/10.1177/2632352420935132

[22] Apelseth, T. O., Strandenes, G., Kristoffersen, E. K., Hagen, K. G., Braathen, H., & Hervig, T. (2020). How do I implement a whole blood–based blood preparedness program in a small rural hospital? *Transfusion*, *60*(12), 2793–2800. https://doi.org/10.1111/trf.16057

[23] Apostol, G. L. C., Acolola, A. G. A., Edillon, M. A., & Valenzuela, S. (2022). How comprehensive and effective are waste management policies during the COVID-19 pandemic? Perspectives from the Philippines. *Frontiers in Public Health*, *10*. https://doi.org/10.3389/fpubh.2022.958241

[24] Balasubramanian, S., Shukla, V., Sethi, J. S., Islam, N., & Saloum, R. (2021). A readiness assessment framework for Blockchain adoption: A healthcare case study. *Technological Forecasting and Social Change*, *165*(December 2020), 120536. https://doi.org/10.1016/j.techfore.2020.120536

[25] Banerjee, M., Chiew, D., Patel, K. T., Johns, I., Chappell, D., Linton, N., Cole, G. D., Francis, D. P., Szram, J., Ross, J., & Zaman, S. (2021). The impact of artificial intelligence on clinical education: perceptions of postgraduate trainee doctors in London (UK) and recommendations for trainers. *BMC Medical Education*, *21*(1), 1–10. https://doi.org/10.1186/s12909-021-02870-x

[26] Barrot, J. S., Llenares, I. I., & del Rosario, L. S. (2021). Students' online learning challenges during the pandemic and how they cope with them: The case of the Philippines. *Education and Information Technologies*, *26*(6), 7321–7338. https://doi.org/10.1007/s10639-021-10589-x

[27] Benítez Candia, N., Fernández Ríos, D., & Vicién, C. (2020). Paraguay's Path Toward the Simplification of Procedures in the Approval of GE Crops. *Frontiers in Bioengineering and Biotechnology*, *8*(August), 1–6. https://doi.org/10.3389/fbioe.2020.01023

[28] Bennett, N. J., Finkbeiner, E. M., Ban, N. C., Belhabib, D., Jupiter, S. D., Kittinger, J. N., Mangubhai, S., Scholtens, J., Gill, D., & Christie, P. (2020). The COVID-19 Pandemic, Small-Scale Fisheries and Coastal Fishing Communities. *Coastal Management*, *48*(4), 336–347. https://doi.org/10.1080/08920753.2020.1766937

[29] Benstead, A. V., Hendry, L. C., & Stevenson, M. (2021). Detecting and remediating modern slavery in supply chains: a targeted audit approach. *Production Planning and Control*, *32*(13), 1136–1157. https://doi.org/10.1080/09537287.2020.1795290

[30] Berbar, H., Lotfi, S., Essaoudi, M., & Talbi, M. (2022). a Psychometric Study: the Validation of a School Quality Assessment Tool. *Obrazovanie i Nauka*, *24*(4), 112–139. https://doi.org/10.17853/1994-5639-2022-4-112-139

[31] Bezerra, I. M. P. (2020). State of the art of nursing education and the challenges to use remote technologies in the time of corona virus pandemic. *Journal of Human Growth and Development*, *30*(1), 141–147. https://doi.org/10.7322/JHGD.V30.10087

[32] Bloomer, M. J., Poon, P., Runacres, F., & Hutchinson, A. M. (2022). Facilitating family needs and support at the end of life in hospital: A descriptive study. *Palliative Medicine*, *36*(3), 549–554. https://doi.org/10.1177/02692163211066431

[33] Boakye, G., Gyedu, A., Stewart, M., Donkor, P., Mock, C., & Stewart, B. (2021). Assessment of local supply chains and stock management practices for trauma care resources in Ghana: a comparative small sample cross-sectional study. *BMC Health Services Research*, *21*(1), 1–13. https://doi.org/10.1186/s12913-021-06063-6

[34] Boaye Belle, A., & Zhao, Y. (2023). Evidence-based decision-making: On the use of systematicity cases to check the compliance of reviews with reporting guidelines such as PRISMA 2020. *Expert Systems with Applications*, *217*(June 2022), 119569. https://doi.org/10.1016/j.eswa.2023.119569

[35] Bokhove, C., & Sims, S. (2021). Demonstrating the potential of text mining for analyzing school inspection reports: a sentiment analysis of 17,000 Ofsted documents. *International Journal of Research & Method in Education*, *44*(4), 433–445. https://doi.org/10.1080/1743727X.2020.1819228

[36] Bombaerts, G., Doulougeri, K., Tsui, S., Laes, E., Spahn, A., & Martin, D. A. (2021). Engineering Students as Co-creators in an Ethics of Technology Course. *Science and Engineering Ethics*, *27*(4), 1–26. https://doi.org/10.1007/s11948-021-00326-5

[37] Boom, F. A., Ris, J. M., Veenbaas, T., Le Brun, P. P. H., & Touw, D. (2021). Reducing the risk of non-sterility of aseptic handling in hospital pharmacies, part B: Risk control. *European Journal of Hospital Pharmacy*, *28*(6), 325–330. https://doi.org/10.1136/ejhpharm-2019-002179

[38] Boufkhed, S., Harding, R., Kutluk, T., Husseini, A., Pourghazian, N., & Shamieh, O. (2021). What Is the Preparedness and Capacity of Palliative Care Services in Middle-Eastern and North African Countries to Respond to COVID-19? A Rapid Survey. *Journal of Pain and Symptom Management*, *61*(2), e13–e50. https://doi.org/10.1016/j.jpainsymman.2020.10.025

[39] Boufounou, P., Eriotis, N., Kounadeas, T., Argyropoulos, P., & Poulopoulos, J. (2024). Enhancing Internal Control Mechanisms in Local Government Organizations: A Crucial Step towards Mitigating Corruption and Ensuring Economic Development. *Economies*, *12*(4). https://doi.org/10.3390/economies12040078

[40] Brivot, M., Roussy, M., & Gendron, Y. (2023). The Riskification of Internal Auditors' Ethical Deliberation: An Emerging Third Logic Between Norms and Values? *Journal of Business Ethics*, *193*(3), 691–712. https://doi.org/10.1007/s10551-023-05575-x

[41] Calacci, D., & Pentland, A. (2022). Bargaining with the Black-Box: Designing and Deploying Worker-Centric Tools to Audit Algorithmic Management. *Proceedings of the ACM on Human-Computer Interaction*, *6*(2 CSCW). https://doi.org/10.1145/3570601

[42] Calzada, I., & Almirall, E. (2020). Data ecosystems for protecting European citizens' digital rights. *Transforming Government: People, Process and Policy*, *14*(2), 133–147. https://doi.org/10.1108/TG-03-2020-0047

[43] Cannone, C., Hoseinpoori, P., Martindale, L., Tennyson, E. M., Gardumi, F., Somavilla Croxatto, L., Pye, S., Mulugetta, Y., Vrochidis, I., Krishnamurthy, S., Niet, T., Harrison, J., Yeganyan, R., Mutembei, M., Hawkes, A., Petrarulo, L., Allen, L., Blyth, W., & Howells, M. (2023). Addressing Challenges in Long-Term

Strategic Energy Planning in LMICs: Learning Pathways in an Energy Planning Ecosystem. *Energies*, *16*(21). https://doi.org/10.3390/en16217267

[44] Cassia, F., & Magno, F. (2021). Antecedents of professionals' self-efficacy in professional service firms: effects of external source credibility and content quality. *Journal of Business and Industrial Marketing*, *36*(13), 187–198. https://doi.org/10.1108/JBIM-11-2019-0485

[45] Cassinelli, E. H., McKinley, M. C., Kent, L., Eastwood, K. A., Schoenaker, D. A. J. M., Trew, D., Stoikidou, T., & McGowan, L. (2023). Preconception health and care policies, strategies and guidelines in the UK and Ireland: A scoping review protocol. *BMJ Open*, *13*(5). https://doi.org/10.1136/bmjopen-2022-067822

[46] Castaño, C., Mirasierra, M., Vallejo, M., Novials, A., & Párrizas, M. (2020). Delivery of muscle-derived exosomal miRNAs induced by HIIT improves insulin sensitivity through down-regulation of hepatic FoxO1 in mice. *Proceedings of the National Academy of Sciences of the United States of America*, *117*(48), 30335–30343. https://doi.org/10.1073/pnas.2016112117

[47] Catho, G., Centemero, N. S., Catho, H., Ranzani, A., Balmelli, C., Landelle, C., Zanichelli, V., & Huttner, B. D. (2020). Factors determining the adherence to antimicrobial guidelines and the adoption of computerised decision support systems by physicians: A qualitative study in three European hospitals. *International Journal of Medical Informatics*, *141*(January), 104233. https://doi.org/10.1016/j.ijmedinf.2020.104233

[48] Champagne, B. M., Ochoa, E. A., Khanchandani, H. S., & Schoj, V. (2022). Civil society's role in improving hypertension control in Latin America. *Revista Panamericana de Salud Publica/Pan American Journal of Public Health*, *46*, 1–5. https://doi.org/10.26633/RPSP.2022.165

[49] Chan, K. S., Wan, E. Y. F., Chin, W. Y., Cheng, W. H. G., Ho, M. K., Yu, E. Y. T., & Lam, C. L. K. (2021). Effects of continuity of care on health outcomes among patients with diabetes mellitus and/or hypertension: a systematic review. *BMC Family Practice*, *22*(1), 1–13. https://doi.org/10.1186/s12875-021-01493-x

[50] Chandran, M., Ebeling, P. R., Mitchell, P. J., & Nguyen, T. V. (2020). Harmonization of Osteoporosis Guidelines: Paving the Way for Disrupting the Status Quo in Osteoporosis Management in the Asia Pacific. *Journal of Bone and Mineral Research*, *37*(4), 608–615. https://doi.org/10.1002/jbmr.4544

[51] Chang, Z., Rusu, V., & Kohler, J. C. (2021). The Global Fund: why anti-corruption, transparency and accountability matter. *Globalization and Health*, *17*(1), 1–11. https://doi.org/10.1186/s12992-021-00753-w

[52] Chatterjee, C., & Shankarprasad, K. R. (2022). Quality Management Systems Implementation In Tmeic Motor Factory. *Journal of Mines, Metals and Fuels*, *70*(8), 346–354. https://doi.org/10.18311/jmmf/2022/31996

[53] Chen, S., Hong, J., Milton, K., Klepac, B., Ma, J., & Pedisic, Z. (2023). Analysis of national physical activity and sedentary behaviour policies in China. *BMC Public Health*, *23*(1), 1–12. https://doi.org/10.1186/s12889-023-15865-8

[54] Chen, W., He, L., Zhong, L., Sun, J., Zhang, L., Wei, D., & Wu, C. (2021). Identification of active compounds and mechanism of huangtu decoction for the treatment of ulcerative colitis by network pharmacology combined with experimental verification. *Drug Design, Development and Therapy*, *15*, 4125–4140. https://doi.org/10.2147/DDDT.S328333

[55] Chen, X., Shang, T., Zhang, F., Liu, J., & Guan, Z. (2020). Dynamic data auditing scheme for big data storage. *Frontiers of Computer Science*, *14*(1), 219–229. https://doi.org/10.1007/s11704-018-8117-6

[56] Chen, Y. S., Yang, C. C., & Yang, Y. F. (2020). Higher academic qualifications, professional training and operating performance of audit firms. *Sustainability (Switzerland)*, *12*(3), 1–16. https://doi.org/10.3390/su12031254

[57] Chester, H., Hughes, J., Bowns, I., Abendstern, M., Davies, S., & Challis, D. (2021). Electronic Information Sharing Between Nursing and Adult Social Care Practitioners in Separate Locations: A Mixed-Methods Case Study. *Journal of Long-Term Care*, *2021*, 1–11. https://doi.org/10.31389/jltc.16

[58] Chin, C., Wicks, M., Feyasa, M., & Koen, N. (2023). Food and nutrition labelling as a nutrition education tool: understanding, perspectives and practices of South African dietitians. *South African Journal of Clinical Nutrition*, *36*(3), 108–117.

https://doi.org/10.1080/16070658.2022.2135186

[59] Chng, S., & Cheah, L. (2020). Understanding autonomous road public transport acceptance: A study of Singapore. *Sustainability (Switzerland)*, *12*(12), 1–12. https://doi.org/10.3390/su12124974

[60] Čirjevskis, A. (2022). Valuing Collaborative Synergies with Real Options Application: From Dynamic Political Capabilities Perspective. *Journal of Risk and Financial Management*, *15*(7). https://doi.org/10.3390/jrfm15070281

[61] Cunningham, P. B., Gilmore, J., Naar, S., Preston, S. D., Eubanks, C. F., Hubig, N. C., McClendon, J., Ghosh, S., & Ryan-Pettes, S. (2023). Opening the Black Box of Family-Based Treatments: An Artificial Intelligence Framework to Examine Therapeutic Alliance and Therapist Empathy. *Clinical Child and Family Psychology Review*, *26*(4), 975–993. https://doi.org/10.1007/s10567-023-00451-6

[62] D'Arcy, N., Ashiru-Oredope, D., Olaoye, O., Afriyie, D., Akello, Z., Ankrah, D., Asima, D., Banda, D. C., Barrett, S., Brandish, C., Brayson, J., Benedict, P., Dodoo, C. C., Garraghan, F., Hoyelah, J., Jani, Y., Kitutu, F. E., Kizito, I. M., Labi, A. K., … Versporten, A. (2021). Antibiotic prescribing patterns in Ghana, Uganda, Zambia and Tanzania hospitals: Results from the global point prevalence survey (G-PPS) on antimicrobial use and stewardship interventions implemented. *Antibiotics*, *10*(9), 1–15. https://doi.org/10.3390/antibiotics10091122

[63] de Groot, E., der Vossen, M. M. van, Slootweg, I., Çorum, M., Kramer, A., Muris, J., Scherpbier, N., Thoonen, B., & Damoiseaux, R. (2024). Advancing collaboration in health professions education in the general practice domain, developing a national research agenda. *Advances in Health Sciences Education*, *29*(4), 1417–1434. https://doi.org/10.1007/s10459-024-10340-4

[64] Deandres-Tame, I., Tolosana, R., Vera-Rodriguez, R., Morales, A., Fierrez, J., & Ortega-Garcia, J. (2024). How Good Is ChatGPT at Face Biometrics? A First Look into Recognition, Soft Biometrics, and Explainability. *IEEE Access*, *12*(February), 34390–34401. https://doi.org/10.1109/ACCESS.2024.3370437

[65] Delgado-Von-eitzen, C., Anido-Rifón, L., & Fernández-Iglesias, M. J. (2021). Application of blockchain in education: GDPR-compliant and scalable certification and verification of academic information. *Applied Sciences (Switzerland)*, *11*(10). https://doi.org/10.3390/app11104537

[66] Desveaux, L., Ivers, N. M., Devotta, K., Ramji, N., Weyman, K., & Kiran, T. (2021). Unpacking the intention to action gap: a qualitative study understanding how physicians engage with audit and feedback. *Implementation Science*, *16*(1), 1–9. https://doi.org/10.1186/s13012-021-01088-1

[67] do Nascimento, A. P., dos Santos, W. R., & de Oliveira, M. P. V. (2020). The risk mentality in organizations: An analysis of inserting risk management in ISO 9001 and ISO 14001: 2015 standards. *Gestao e Producao*, *27*(2), 1–19. https://doi.org/10.1590/0104-530X4043-20

[68] Do, B. L., Nguyen, V. T., Dinh, H. N., Dao, T. C., & Nguyen, B. M. (2022). Blockchain for Education: Verification and Management of Lifelong Learning Data. *Computer Systems Science and Engineering*, *43*(2), 591–604. https://doi.org/10.32604/csse.2022.023508

[69] Doğan, B., Chu, L. K., Ghosh, S., Diep Truong, H. H., & Balsalobre-Lorente, D. (2022). How environmental taxes and carbon emissions are related in the G7 economies? *Renewable Energy*, *187*, 645–656. https://doi.org/10.1016/j.renene.2022.01.077

[70] Dos Reis Fonseca, A., Jorge, S., & Nascimento, C. (2020). The role of internal auditing in promoting accountability in higher education institutions. *Revista de Administracao Publica*, *54*(2), 243–265. https://doi.org/10.1590/0034-761220190267x

[71] Duda, A., Fenicki, A., Molski, P., Szostak, E., & Duda, P. (2020). Design and operation of a modern polish plant for plastic waste recycling through the degradative depolymerization process. A case study. *Energies*, *13*(24). https://doi.org/10.3390/en13246620

[72] Dunwoodie, K., Due, C., Baker, S., Newman, A., & Tran, C. (2022). Supporting (or not) the career development of culturally and linguistically diverse migrants and refugees in universities: insights from Australia. *International Journal for Educational and Vocational Guidance*, *22*(2), 467–490. https://doi.org/10.1007/s10775-021-09506-

y
[73] Edu, A. S., Agozie, D., & Agoyi, M. (2021). Digital security vulnerabilities and threats implications for financial institutions deploying digital technology platforms and application: FMEA and FTOPSIS analysis. *PeerJ Computer Science*, *7*, 1–26. https://doi.org/10.7717/PEERJ-CS.658

[74] Ellsworth-Krebs, K., Rampen, C., Rogers, E., Dudley, L., & Wishart, L. (2022). Circular economy infrastructure: Why we need track and trace for reusable packaging. *Sustainable Production and Consumption*, *29*, 249–258. https://doi.org/10.1016/j.spc.2021.10.007

[75] Elmer, G., & Neville, S. J. (2021). The resonate prison: Earwitnessing the panacoustic affect. *Surveillance and Society*, *19*(1), 11–21. https://doi.org/10.24908/ss.v19i1.13923

[76] Eulerich, M., Masli, A., Pickerd, J., & Wood, D. A. (2023). The Impact of Audit Technology on Audit Task Outcomes: Evidence for Technology-Based Audit Techniques*. *Contemporary Accounting Research*, *40*(2), 981–1012. https://doi.org/10.1111/1911-3846.12847

[77] Eze, P., Agu, U. J., Aniebo, C. L., Agu, S. A., Lawani, L. O., & Acharya, Y. (2021). Factors associated with incomplete immunisation in children aged 12-23 months at subnational level, Nigeria: A cross-sectional study. *BMJ Open*, *11*(6). https://doi.org/10.1136/bmjopen-2020-047445

[78] Faccia, A., Pandey, V., & Banga, C. (2022). Is Permissioned Blockchain the Key to Support the External Audit Shift to Entirely Open Innovation Paradigm? *Journal of Open Innovation: Technology, Market, and Complexity*, *8*(2), 85. https://doi.org/10.3390/joitmc8020085

[79] Fadahunsi, K. P., Wark, P. A., Mastellos, N., Neves, A. L., Gallagher, J., Majeed, A., Webster, A., Smith, A., Choo-Kang, B., Leon, C., Edwards, C., O'Shea, C., Heitz, E., Kayode, O. V., Nash, M., Kowalski, M., Jiwani, M., O'Callaghan, M. E., Zary, N., … Car, J. (2022). Assessment of Clinical Information Quality in Digital Health Technologies: International eDelphi Study. *Journal of Medical Internet Research*, *24*(12), e41889. https://doi.org/10.2196/41889

[80] Fang, Y., & Shao, Z. (2022). Whether Green Finance Can Effectively Moderate the Green Technology Innovation Effect of Heterogeneous Environmental Regulation. *International Journal of Environmental Research and Public Health*, *19*(6). https://doi.org/10.3390/ijerph19063646

[81] Ferrari, V. (2020). The regulation of crypto-assets in the EU – investment and payment tokens under the radar. *Maastricht Journal of European and Comparative Law*, *27*(3), 325–342. https://doi.org/10.1177/1023263X20911538

[82] Ferry, L., & Midgley, H. (2022). Democracy, accountability and audit: the creation of the UK NAO as a defence of liberty. *Accounting, Auditing & Accountability Journal*, *35*(2), 413–438. https://doi.org/10.1108/AAAJ-10-2020-4985

[83] Fonseca, E. M. da, Shadlen, K. C., & Bastos, F. I. (2021). The politics of COVID-19 vaccination in middle-income countries: Lessons from Brazil. *Social Science and Medicine*, *281*(May), 114093. https://doi.org/10.1016/j.socscimed.2021.114093

[84] Gannon, H., Chimhuya, S., Chimhini, G., Neal, S. R., Shaw, L. P., Crehan, C., Hull-Bailey, T., Ferrand, R. A., Klein, N., Sharland, M., Borja, M. C., Robertson, V., Heys, M., & Fitzgerald, F. C. (2021). Electronic application to improve management of infections in low-income neonatal units: Pilot implementation of the NeoTree beta app in a public sector hospital in Zimbabwe. *BMJ Open Quality*, *10*(1), 1–7. https://doi.org/10.1136/bmjoq-2020-001043

[85] Gao, X., Yu, J., Chang, Y., Wang, H., & Fan, J. (2022). Checking Only When It Is Necessary: Enabling Integrity Auditing Based on the Keyword With Sensitive Information Privacy for Encrypted Cloud Data. *IEEE Transactions on Dependable and Secure Computing*, *19*(6), 3774–3789. https://doi.org/10.1109/TDSC.2021.3106780

[86] Garcia-Torea, N., Luque-Vílchez, M., & Rodríguez-Gutiérrez, P. (2024). The EU Taxonomy, sustainability reporting and financial institutions: understanding the elements driving regulatory uncertainty. *Accounting Forum*. https://doi.org/10.1080/01559982.2024.2364953

[87] Gauthier, M. P., & Brender, N. (2021). How do the current auditing standards fit the emergent use of blockchain? *Managerial Auditing Journal*, *36*(3), 365–385. https://doi.org/10.1108/MAJ-12-2019-2513

[88] Glasgo, B., Khan, N., & Azevedo, I. L. (2020). Simulating a residential building stock to support regional efficiency policy. *Applied Energy*, *261*(January), 114223. https://doi.org/10.1016/j.apenergy.2019.114223

[89] Glazer, A. K., Spertus, J. V., & Stark, P. B. (2021). More Style, Less Work: Card-style Data Decrease Risk-limiting Audit Sample Sizes. *Digital Threats: Research and Practice*, *2*(4). https://doi.org/10.1145/3457907

[90] Gloger, E. M., & Suhr, J. A. (2020). Correlates of poor sleep and subsequent risk of misdiagnosis in college students presenting with cognitive complaints. *Archives of Clinical Neuropsychology*, *35*(6), 692–700. https://doi.org/10.1093/arclin/acaa023

[91] Gosling, J., Mays, N., Erens, B., Reid, D., & Exley, J. (2021). Quality improvement in general practice: what do GPs and practice managers think? Results from a nationally representative survey of UK GPs and practice managers. *BMJ Open Quality*, *10*(2), 1–7. https://doi.org/10.1136/bmjoq-2020-001309

[92] Gotham, D., Moja, L., van der Heijden, M., Paulin, S., Smith, I., & Beyer, P. (2021). Reimbursement models to tackle market failures for antimicrobials: Approaches taken in France, Germany, Sweden, the United Kingdom, and the United States. *Health Policy*, *125*(3), 296–306. https://doi.org/10.1016/j.healthpol.2020.11.015

[93] Gould, D., Lindström, H., Purssell, E., & Wigglesworth, N. (2020). Electronic hand hygiene monitoring: accuracy, impact on the Hawthorne effect and efficiency. *Journal of Infection Prevention*, *21*(4), 136–143. https://doi.org/10.1177/1757177420907999

[94] Grijalvo, M., & Sanz-Samalea, B. (2021). Exploring EN 9100: current key results and future opportunities–a study in the Spanish aerospace industry. *Economic Research-Ekonomska Istrazivanja*, *34*(1), 2712–2728. https://doi.org/10.1080/1331677X.2020.1838312

[95] Grima, S., Baldacchino, P. J., Grima, S., Kizilkaya, M., Tabone, N., & Ellul, L. (2023). Designing a Characteristics Effectiveness Model for Internal Audit. *Journal of Risk and Financial Management*, *16*(2). https://doi.org/10.3390/jrfm16020056

[96] Guerrero, E. G., Frimpong, J., Kong, Y., Fenwick, K., & Aarons, G. A. (2020). Advancing theory on the multilevel role of leadership in the implementation of evidence-based health care practices. *Health Care Management Review*, *45*(2), 151–161. https://doi.org/10.1097/HMR.0000000000000213

[97] Guo, Y., Zu, L., Chen, D., & Zhang, H. (2023). Research on Influencing Factors of Satisfaction with the Use of Public Health Internet Platform: Evidence from Ding Xiang Doctor (DXY) Internet Medical Platform. *International Journal of Environmental Research and Public Health*, *20*(3). https://doi.org/10.3390/ijerph20032276

[98] Gupta, B. (2023). Status of Autonomy in Engineering and Polytechnic Colleges of India. *Journal of Engineering Education Transformations*, *36*(3), 115–123. https://doi.org/10.16920/jeet/2023/v36i3/23103

[99] Haeler, E., Bolte, A., Buchacher, R., Hänninen, H., Jandl, R., Juutinen, A., Kuhlmey, K., Kurttila, M., Lidestav, G., Mäkipää, R., Rosenkranz, L., Triplat, M., Vilhar, U., Westin, K., & Schueler, S. (2023). Forest subsidy distribution in five European countries. *Forest Policy and Economics*, *146*(February 2022). https://doi.org/10.1016/j.forpol.2022.102882

[100] Hajizadeh, A., Zamanzadeh, V., Kakemam, E., Bahreini, R., & Khodayari-Zarnaq, R. (2021). Factors influencing nurses participation in the health policy-making process: a systematic review. *BMC Nursing*, *20*(1), 1–9. https://doi.org/10.1186/s12912-021-00648-6

[101] Han, H., Shiwakoti, R. K., Jarvis, R., Mordi, C., & Botchie, D. (2023). Accounting and auditing with blockchain technology and artificial Intelligence: A literature review. *International Journal of Accounting Information Systems*, *48*(March 2021), 100598. https://doi.org/10.1016/j.accinf.2022.100598

[102] Hanefah, M. M., Kamaruddin, M. I. H., Salleh, S., Shafii, Z., & Zakaria, N. (2020). Internal control, risk and Sharīʿah non-compliant income in Islamic financial institutions. *ISRA International Journal of Islamic Finance*, *12*(3), 401–417. https://doi.org/10.1108/IJIF-02-2019-0025

[103] Haseeb, A., Faidah, H. S., Al-Gethamy, M., Iqbal, M. S., Barnawi, A. M., Elahe, S. S., Bukhari, D. N., Noor Al-Sulaimani, T. M., Fadaaq, M., Alghamdi, S., Almalki, W. H., Saleem, Z., Elrggal, M. E., Khan, A. H., Algarni, M. A., Ashgar, S. S., & Hassali, M. A. (2021). Evaluation of a Multidisciplinary Antimicrobial Stewardship Program in a Saudi Critical Care Unit: A Quasi-Experimental Study. *Frontiers in*

Pharmacology, *11*(March), 1–10. https://doi.org/10.3389/fphar.2020.570238

[104] Heath, J. K., Clancy, C. B., Pluta, W., Weissman, G. E., Anderson, U., Kogan, J. R., Dine, C. J., & Shea, J. A. (2023). Natural Language Processing of Learners' Evaluations of Attendings to Identify Professionalism Lapses. *Evaluation and the Health Professions*, *46*(3), 225–232. https://doi.org/10.1177/01632787231158128

[105] Heltne, U. M., Sarkadi, A., Lien, L., & Dybdahl, R. (2023). Correction: Training non-specialists in teaching recovery techniques (TRT) to help traumatised children in humanitarian settings: a qualitative analysis of experiences gained from 20 years of practice (International Journal for Equity in Health, (2023), 2. *International Journal for Equity in Health*, *22*(1), 1–14. https://doi.org/10.1186/s12939-023-02021-2

[106] Hogan, C., Gustafsson, L., Di Tommaso, A., Hodson, T., Bissett, M., & Shirota, C. (2023). Establishing the normative and comparative needs of assistive technology provision in Queensland from the agency and funding scheme perspective. *Brain Impairment*, *24*(2), 204–218. https://doi.org/10.1017/BrImp.2023.10

[107] Höller, S., Dilger, T., Spiess, T., Ploder, C., & Bernsteiner, R. (2023). Awareness of Unethical Artificial Intelligence and its Mitigation Measures. *European Journal of Interdisciplinary Studies*, *15*(2), 67–89. https://doi.org/10.24818/ejis.2023.17

[108] Hrazdil, K., Simunic, D. A., & Suwanyangyuan, N. (2024). Auditor Choice and the Informativeness of 10-K Reports. *Journal of Accounting, Auditing and Finance*, *39*(2), 388–413. https://doi.org/10.1177/0148558X211062430

[109] Hu, K. H., Hsu, M. F., Chen, F. H., & Liu, M. Z. (2021). Identifying the key factors of subsidiary supervision and management using an innovative hybrid architecture in a big data environment. *Financial Innovation*, *7*(1). https://doi.org/10.1186/s40854-020-00219-9

[110] Hubais, A. S. A., Kadir, M. R. A., & Bilal, Z. O. (2023). The Impact of Auditor's Independence, Ethics, and Competency in Audit Quality: Using Auditor's Integrity as a Mediator in the Sultanate of Oman. *WSEAS Transactions on Computer Research*, *11*, 440–449. https://doi.org/10.37394/232018.2023.11.40

[111] Igibayeva, Z., Kazhmukhametova, A., Beisenova, L., & Nikiforova, E. (2020). Modern trends of Kazakhstan's internal state audit: The US and UK experience. *Problems and Perspectives in Management*, *18*(2), 1–12. https://doi.org/10.21511/ppm.18(2).2020.01

[112] Jałowiec, T., Wojtaszek, H., & Miciuła, I. (2021). Green energy management through the implementation of res in the eu. Analysis of the opinions of poland and germany. *Energies*, *14*(23). https://doi.org/10.3390/en14238097

[113] Javeri, Y., Jagathkar, G., Dixit, S., Chaudhary, D., Zirpe, K. G., Mehta, Y., Govil, D., Mishra, R. C., Samavedam, S., Pandit, R. A., Savio, R. D., Clerk, A. M., Srinivasan, S., Juneja, D., Ray, S., Sahoo, T. K., Jakkinaboina, S., Jampala, N., & Jain, R. (2020). Indian society of critical care medicine position statement for central venous catheterization and management 2020. *Indian Journal of Critical Care Medicine*, *24*, 6–30. https://doi.org/10.5005/jp-journals-10071-G23183

[114] Jones, E. R., Van Vliet, M. T. H., Qadir, M., & Bierkens, M. F. P. (2021). Country-level and gridded estimates of wastewater production, collection, treatment and reuse. *Earth System Science Data*, *13*(2), 237–254. https://doi.org/10.5194/essd-13-237-2021

[115] Kairy, D., Mostafavi, M. A., Blanchette-Dallaire, C., Belanger, E., Corbeil, A., Kandiah, M., Wu, T. Q., & Mazer, B. (2021). A mobile app to optimize social participation for individuals with physical disabilities: Content validation and usability testing. *International Journal of Environmental Research and Public Health*, *18*(4), 1–20. https://doi.org/10.3390/ijerph18041753

[116] Kamara, I. F., Tengbe, S. M., Fofanah, B. D., Bunn, J. E., Njuguna, C. K., Kallon, C., & Kumar, A. M. V. (2022). Infection Prevention and Control in Three Tertiary Healthcare Facilities in Freetown, Sierra Leone during the COVID-19 Pandemic: More Needs to Be Done! *International Journal of Environmental Research and Public Health*, *19*(9). https://doi.org/10.3390/ijerph19095275

[117] Kamaruddin, M. I. H., & Hanefah, M. M. (2023). Professional shariah audit training via the e-learning approach during COVID-19: challenges and prospects. *Asian Journal of Accounting Research*, *8*(3), 250–268. https://doi.org/10.1108/AJAR-12-2021-0284

[118] Karikari Appiah, M., Tettevi, P. K., Amaning, N., Opoku Ware, E., & Kwarteng, C.

(2022). Modeling the implications of internal audit effectiveness on value for money and sustainable procurement performance: An application of structural equation modeling. *Cogent Business and Management*, *9*(1). https://doi.org/10.1080/23311975.2022.2102127

[119] Karkee, R., Tumbahanghe, K. M., Morgan, A., Maharjan, N., Budhathoki, B., & Manandhar, D. S. (2022). Policies and actions to reduce maternal mortality in Nepal: perspectives of key informants. *Sexual and Reproductive Health Matters*, *29*(2), 167–181. https://doi.org/10.1080/26410397.2021.1907026

[120] Kavaliauskaitė, J., Kazlauskaitė, A., Lazutka, J. R., Mozolevskis, G., & Stirkė, A. (2022). Pulsed electric fields alter expression of nf-κb promoter-controlled gene. *International Journal of Molecular Sciences*, *23*(1). https://doi.org/10.3390/ijms23010451

[121] Kenfang Wambe, L. (2024). the Effectiveness of Regulatory and Technological Mechanisms of Banking Internal Control: an Exploration Based on the Origins of Banks. *Risk Governance and Control: Financial Markets and Institutions*, *14*(2), 44–53. https://doi.org/10.22495/rgcv14i2p5

[122] Khamis, T., Naseem, A., Khamis, A., & Petrucka, P. (2021). The COVID-19 pandemic: a catalyst for creativity and collaboration for online learning and work-based higher education systems and processes. *Journal of Work-Applied Management*, *13*(2), 184–196. https://doi.org/10.1108/JWAM-01-2021-0010

[123] Khan, S., Bond, S. E., Bakhit, M., Hasan, S. S., Sadeq, A. A., Conway, B. R., & Aldeyab, M. A. (2022). COVID-19 Mixed Impact on Hospital Antimicrobial Stewardship Activities: A Qualitative Study in UK-Based Hospitals. *Antibiotics*, *11*(11). https://doi.org/10.3390/antibiotics11111600

[124] Kirwan, R., McCullough, D., Butler, T., Perez de Heredia, F., Davies, I. G., & Stewart, C. (2020). Sarcopenia during COVID-19 lockdown restrictions: long-term health effects of short-term muscle loss. *GeroScience*, *42*(6), 1547–1578. https://doi.org/10.1007/s11357-020-00272-3

[125] Kivalov, S. (2020). Seafarers' certification in Ukraine: Towards an effective model. *Lex Portus*, *5*(25), 7–33. https://doi.org/10.26886/2524-101X.5.2020.1

[126] Komal, B., Bilal, Ezeani, E., Shahzad, A., Usman, M., & Sun, J. (2023). Age diversity of audit committee financial experts, ownership structure and earnings management: Evidence from China. *International Journal of Finance & Economics*, *28*(3), 2664–2682. https://doi.org/10.1002/ijfe.2556

[127] Korn, A. R., Walsh-Bailey, C., Pilar, M., Sandler, B., Bhattacharjee, P., Moore, W. T., Brownson, R. C., Emmons, K. M., & Oh, A. Y. (2022). Social determinants of health and cancer screening implementation and outcomes in the USA: a systematic review protocol. *Systematic Reviews*, *11*(1), 1–8. https://doi.org/10.1186/s13643-022-01995-4

[128] Krambia Kapardis, M., & Levi, M. (2023). Fraud and corruption in football: lessons from a survey of match-fixing in Cyprus. *Journal of Financial Crime*, *30*(4), 891–907. https://doi.org/10.1108/JFC-03-2023-0046

[129] Krishnappa, R., & Agarwal, P. (2024). Alleviation of Poverty Through Panchayat Raj Institutions: A Critical Study of Challenges and Prospects in Karnataka, India. *Revista de Gestao Social e Ambiental*, *18*(1), 1–11. https://doi.org/10.24857/RGSA.V18N1-071

[130] Kumutha, K., & Jayalakshmi, S. (2021). The Impact of the Blockchain on Academic Certificate Verification System-Review. *EAI Endorsed Transactions on Energy Web*, *8*(36), 1–8. https://doi.org/10.4108/eai.29-4-2021.169426

[131] Lanzinger, S., Zimmermann, A., Ranjan, A. G., Gani, O., Pons Perez, S., Akesson, K., Majidi, S., Witsch, M., Hofer, S., Johnson, S., Pilgaard, K. A., Kummernes, S. J., Robinson, H., Eeg-Olofsson, K., Ebekozien, O., Holl, R. W., Svensson, J., Skrivarhaug, T., Warner, J., … Maahs, D. (2022). A collaborative comparison of international pediatric diabetes registries. *Pediatric Diabetes*, *23*(6), 627–640. https://doi.org/10.1111/pedi.13362

[132] Lawson, D. O., Wang, M. K., Kim, K., Eikelboom, R., Rodrigues, M., Trapsa, D., Thabane, L., & Moher, D. (2022). Lessons from the COVID-19 pandemic and recent developments on the communication of clinical trials, publishing practices, and research integrity: in conversation with Dr. David Moher. *Trials*, *23*(1), 1–10. https://doi.org/10.1186/s13063-022-06624-y

[133] Lee, J. R. H., Pavlova, M., Famouri, M., & Wong, A. (2022). Cancer-Net SCa: Tailored deep neural network designs for the detection of skin cancer from dermoscopy images. *BMC Medical Imaging*, *22*(1), 1–12. https://doi.org/10.1186/s12880-022-00871-w

[134] Lekagul, A., Tangcharoensathien, V., Liverani, M., Mills, A., Rushton, J., & Yeung, S. (2021). Understanding antibiotic use for pig farming in Thailand: a qualitative study. *Antimicrobial Resistance and Infection Control*, *10*(1), 1–11. https://doi.org/10.1186/s13756-020-00865-9

[135] Li, J., Hu, Z., & Pan, L. (2022). Analysis of school support: Systematic literature review of core Chinese- and English-language journals published in 2000–2021. *Frontiers in Psychology*, *13*. https://doi.org/10.3389/fpsyg.2022.933695

[136] Li, R., Wang, X. A., Yang, H., Niu, K., Tang, D., & Yang, X. (2022). Efficient certificateless public integrity auditing of cloud data with a designated verifier for batch audit. *Journal of King Saud University - Computer and Information Sciences*, *34*(10), 8079–8089. https://doi.org/10.1016/j.jksuci.2022.07.020

[137] Li, W., Chien, F., Ngo, Q. T., Nguyen, T. D., Iqbal, S., & Bilal, A. R. (2021). Vertical financial disparity, energy prices, and emission reduction: Empirical insights from Pakistan. *Journal of Environmental Management*, *294*(May), 112946. https://doi.org/10.1016/j.jenvman.2021.112946

[138] Lian, H., Wang, L., Ma, N., Zhou, C. M., Han, L., Zhang, T. Q., & Wang, J. W. (2021). Redundant and specific roles of individual MIR172 genes in plant development. *PLoS Biology*, *19*(2), 1–25. https://doi.org/10.1371/journal.pbio.3001044

[139] Lim, H. J., & Mali, D. (2021). Do credit ratings influence the demand/supply of audit efforts? *Journal of Applied Accounting Research*, *22*(1), 72–92. https://doi.org/10.1108/JAAR-02-2020-0028

[140] Lim, M. Y., Kamaruzaman, H. F., Wu, O., & Geue, C. (2023). Health financing challenges in Southeast Asian countries for universal health coverage: a systematic review. *Archives of Public Health*, *81*(1), 1–12. https://doi.org/10.1186/s13690-023-01159-3

[141] Lin, J. C., Bowser, K. E., Drudi, L. M., DiLosa, K. L., & Yi, J. (2021). Equal pay for equal work: Disparities in compensation in vascular surgery. *Journal of Vascular Surgery*, *74*(2), 21S-28S. https://doi.org/10.1016/j.jvs.2021.03.052

[142] Liu, J., Wang, X. A., Liu, Z., Wang, H., & Yang, X. (2020). Privacy-Preserving Public Cloud Audit Scheme Supporting Dynamic Data for Unmanned Aerial Vehicles. *IEEE Access*, *8*, 79428–79439. https://doi.org/10.1109/ACCESS.2020.2991033

[143] Liu, X., Liu, B., Han, C., & Li, W. (2022). Construction of an IoT customer operation analysis system based on big data analysis and human-centered artificial intelligence for Web 4.0. *Journal of Intelligent Systems*, *31*(1), 927–943. https://doi.org/10.1515/jisys-2022-0067

[144] Liu, X., Lu, T., He, X., Yang, X., & Niu, S. (2020). Verifiable Attribute-Based Keyword Search over Encrypted Cloud Data Supporting Data Deduplication. *IEEE Access*, *8*, 52062–52074. https://doi.org/10.1109/ACCESS.2020.2980627

[145] Liu, X., Wang, X., Lu, F., Liu, S., & Chen, K. (2022). Evaluation of Water Environmental Governance Efficiency in Yangtze River Delta from the Perspective of Multivariate Synergies. *International Journal of Environmental Research and Public Health*, *19*(4), 1–19. https://doi.org/10.3390/ijerph19042347

[146] Liu, Z., Ren, L., Li, R., Liu, Q., & Zhao, Y. (2022). ID-based sanitizable signature data integrity auditing scheme with privacy-preserving. *Computers and Security*, p. *121*, 102858. https://doi.org/10.1016/j.cose.2022.102858

[147] Lo Piano, S., Sheikholeslami, R., Puy, A., & Saltelli, A. (2022). Unpacking the modeling process via sensitivity auditing. *Futures*, *144*(July), 103041. https://doi.org/10.1016/j.futures.2022.103041

[148] Long, E., Vijaykumar, S., Gyi, S., & Hamidi, F. (2021). Rapid Transitions: Experiences with Accessibility and Special Education during the COVID-19 Crisis. *Frontiers in Computer Science*, *2*(February), 1–10. https://doi.org/10.3389/fcomp.2020.617006

[149] Long, W., Zhang, M., Qu, X., Yao, D. (Troy), & Hu, Z. (2023). Can carbon emission trading schemes reshape audit reporting aggressiveness? Evidence from an

incremental information perspective. *Finance Research Letters*, *58*(PD), 104667. https://doi.org/10.1016/j.frl.2023.104667

[150] Lowik, A. J., Parkyn, J., Wiesenthal, E., Hubinette, M., & Wiedmeyer, M. ling. (2024). A Curricular Audit Method: Addressing the Erasure of Intersex, Trans and Two-Spirit People and the Imprecise Use of Gender and Sex Concepts in Undergraduate Medical Education. *Teaching and Learning in Medicine*, *36*(3), 280–292. https://doi.org/10.1080/10401334.2023.2226651

[151] Lucock, X., & Westbrooke, V. (2021). Trusting in the "eye in the sky"? Farmers' and auditors' perceptions of drone use in environmental auditing. *Sustainability (Switzerland)*, *13*(23). https://doi.org/10.3390/su132313208

[152] Lundahl, C., & Serder, M. (2023). Figures fighting figures–unpacking state authority's mis/trust in PISA statistics. *Discourse*, *44*(6), 829–843. https://doi.org/10.1080/01596306.2023.2186374

[153] Lutfi, A., & Alqudah, H. (2023). The Influence of Technological Factors on the Computer-Assisted Audit Tools and Techniques Usage during COVID-19. *Sustainability (Switzerland)*, *15*(9). https://doi.org/10.3390/su15097704

[154] Lyu, F., Li, Y., Yan, Z., He, Q., Cheng, L., Zhang, P., Liu, B., Liu, C., Song, Y., & Xing, Y. (2022). Identification of ISG15 and ZFP36 as novel hypoxia- and immune-related gene signatures contributing to a new perspective for the treatment of prostate cancer by bioinformatics and experimental verification. *Journal of Translational Medicine*, *20*(1), 1–18. https://doi.org/10.1186/s12967-022-03398-4

[155] Mao, D., Zhou, N., Zheng, D., Yue, J., Zhao, Q., Luo, B., Guan, D., Zhou, Y., & Hu, B. (2020). Guide to forensic pathology practice for death cases related to coronavirus disease 2019 (COVID-19) (Trial draft)‡. *Forensic Sciences Research*, *5*(1), 1–7. https://doi.org/10.1080/20961790.2020.1744400

[156] Marcos, F. L., & Plangklang, B. (2024). A highly accurate, user-friendly energy audit platform of a university building using ANN Bayesian regularization and Levenberg-Marquardt algorithm. *Energy Reports*, *11*(February), 2220–2235. https://doi.org/10.1016/j.egyr.2024.01.062

[157] Martín-Cuadrado, A. M., Lavandera-Ponce, S., Mora-Jaureguialde, B., Sánchez-Romero, C., & Pérez-Sánchez, L. (2021). Working methodology with public universities in Peru during the pandemic-continuity of virtual/online teaching and learning. *Education Sciences*, *11*(7). https://doi.org/10.3390/educsci11070351

[158] Masli, A. M., Mangena, M., Gerged, A. M., & Harradine, D. (2022). Stakeholder perception of the determinants of audit committee effectiveness in a developing economy: evidence from the Libyan banking sector. *Journal of Accounting in Emerging Economies*, *12*(2), 345–379. https://doi.org/10.1108/JAEE-09-2019-0182

[159] Mat Ridzuan, N. I., Said, J., Razali, F. M., Abdul Manan, D. I., & Sulaiman, N. (2022). Examining the Role of Personality Traits, Digital Technology Skills and Competency on the Effectiveness of Fraud Risk Assessment among External Auditors. *Journal of Risk and Financial Management*, *15*(11). https://doi.org/10.3390/jrfm15110536

[160] Matchuk, S., Havrylenko, V., Lukanovska, I., Kharkhalis, T., & Ostapenko, Y. (2024). The evolution of accounting and auditing in the era of digital technologies: the role of cloud services and process automation. *Salud, Ciencia y Tecnologia - Serie de Conferencias*, *3*. https://doi.org/10.56294/sctconf2024.1134

[161] Matete, R. E. (2022). Forms of decentralization and their implications for educational accountability in Tanzania. *Heliyon*, *8*(5), e09436. https://doi.org/10.1016/j.heliyon.2022.e09436

[162] Mellis, S., Zhang, Y., & McAteer, D. (2024). Awareness of radiation risks by medical students & referrers requesting radiological examinations in the North of Scotland: an audit. *BMC Medical Education*, *24*(1), 1–16. https://doi.org/10.1186/s12909-024-05461-8

[163] Meng, C., Abdullah, D. F., Khatib, S. F. A., & Idris, N. (2024). Assessing the impact of intellectual capital on audit quality within the audit market dynamics. *Environment and Social Psychology*, *9*(5), 1–19. https://doi.org/10.54517/esp.v9i5.2269

[164] Mercado-Caruso, N., Segarra-Oña, M., Ovallos-Gazabon, D., & Peiró-Signes, A. (2020). Identifying endogenous and exogenous indicators to measure eco-innovation within clusters. *Sustainability (Switzerland)*, *12*(15). https://doi.org/10.3390/su12156088

[165] Meyer, C., Gerlitz, L., & Henesey, L. (2021). Cross-Border Capacity-Building for Port Ecosystems in Small and Medium-Sized Baltic Ports. *TalTech Journal of European Studies*, *11*(1), 113–132. https://doi.org/10.2478/bjes-2021-0008

[166] Mfarrej, B., Gaude, J., Couquiaud, J., Calmels, B., Chabannon, C., & Lemarie, C. (2021). Validation of a flow cytometry-based method to quantify viable lymphocyte subtypes in fresh and cryopreserved hematopoietic cellular products. *Cytotherapy*, *23*(1), 77–87. https://doi.org/10.1016/j.jcyt.2020.06.005

[167] Mitchell, A. S., Hartig, R., Basso, M. A., Jarrett, W., Kastner, S., & Poirier, C. (2021). International primate neuroscience research regulation, public engagement, and transparency opportunities. *NeuroImage*, *229*(January), 117700. https://doi.org/10.1016/j.neuroimage.2020.117700

[168] Mueller, K. L., Lauvaux, T., Gurney, K. R., Roest, G., Ghosh, S., Gourdji, S. M., Karion, A., DeCola, P., & Whetstone, J. (2021). An emerging GHG estimation approach can help cities achieve their climate and sustainability goals. *Environmental Research Letters*, *16*(8). https://doi.org/10.1088/1748-9326/ac0f25

[169] Murikah, W., Nthenge, J. K., & Musyoka, F. M. (2024). Bias and ethics of AI systems applied in auditing - A systematic review. *Scientific African*, *25*, e02281. https://doi.org/10.1016/j.sciaf.2024.e02281

[170] Musyoka, C. M., Mbwayo, A., Donovan, D. M., & Mathai, M. (2021). mHealth-based peer mentoring for prevention of alcohol and substance abuse among first-year university students: protocol for quasi-experimental intervention. *Journal of Substance Use*, *26*(1), 53–59. https://doi.org/10.1080/14659891.2020.1766131

[171] Nabyonga-Orem, J., Asamani, J. A., & Makanga, M. (2021). The state of health research governance in Africa: What do we know and how can we improve? *Health Research Policy and Systems*, *19*(1), 1–14. https://doi.org/10.1186/s12961-020-00676-9

[172] Nathanson, M. H., Andrzejowski, J., Dinsmore, J., Eynon, C. A., Ferguson, K., Hooper, T., Kashyap, A., Kendall, J., McCormack, V., Shinde, S., Smith, A., & Thomas, E. (2020). Guidelines for the safe transfer of the brain-injured patient: trauma and stroke, 2019: Guidelines from the Association of Anaesthetists and the Neuro Anaesthesia and Critical Care Society. *Anaesthesia*, *75*(2), 234–246. https://doi.org/10.1111/anae.14866

[173] Ni, Y., Sun, B., & Wang, Y. (2021). Blockchain-Based BIM Digital Project Management Mechanism Research. *IEEE Access*, *9*, 161342–161351. https://doi.org/10.1109/ACCESS.2021.3130270

[174] Nonki Tadida, E. Z. (2023). Public auditing: What impact does the quality of the institutional framework have on the level of corruption? *International Review of Administrative Sciences*, *89*(4), 1131–1146. https://doi.org/10.1177/00208523231155385

[175] Ogundajo, G. O., Adegbie, F. F., Oyegoke, S. K., Akande, F., & Ajayi-Owoeye, E. A. (2023). Examining the impact of corporate governance and corporate financial reporting on firm value: A study of selected banks in Nigeria. *International Journal of Applied Economics, Finance and Accounting*, *16*(2), 106–117. https://doi.org/10.33094/ijaefa.v16i2.926

[176] Omar, A., & Almaghthawi, A. (2020). Towards an integrated model of data governance and integration for the implementation of digital transformation processes in Saudi Universities. *International Journal of Advanced Computer Science and Applications*, *11*(8), 588–593. https://doi.org/10.14569/IJACSA.2020.0110873

[177] Omurgazieva, N., Tilekeeva, B., Bekkozhaeva, A., Chanachev, N., & Cholponkulov, T. (2024). Impact of tax policy on the development of agrarian enterprises and organizations. *Ekonomika APK*, *31*(3), 34–44. https://doi.org/10.32317/2221-1055.2024030.34

[178] Pache, B., Hübner, M., Martin, D., Addor, V., Ljungqvist, O., Demartines, N., & Grass, F. (2021). Requirements for a successful Enhanced Recovery After Surgery (ERAS) program: a multicenter international survey among ERAS nurses. *European Surgery - Acta Chirurgica Austriaca*, *53*(5), 246–250. https://doi.org/10.1007/s10353-021-00698-9

[179] Pak, A., McBryde, E., & Adegboye, O. A. (2021). Does high public trust amplify compliance with stringent COVID-19 government health guidelines? A multi-country analysis using data from 102,627 individuals. *Risk Management and Healthcare*

Policy, *14*, 293–302. https://doi.org/10.2147/RMHP.S278774

[180] Pan, J., Yang, H., Zhu, L., Lou, Y., & Jin, B. (2022). Qingfei Jiedu decoction inhibits PD-L1 expression in lung adenocarcinoma based on network pharmacology analysis, molecular docking, and experimental verification. *Frontiers in Pharmacology*, *13*(August), 1–19. https://doi.org/10.3389/fphar.2022.897966

[181] Pan, Y., Weng, G., Li, C., & Li, J. (2021). Coupling coordination and influencing factors among tourism carbon emission, tourism economics, and tourism innovation. *International Journal of Environmental Research and Public Health*, *18*(4), 1–17. https://doi.org/10.3390/ijerph18041601

[182] Parker, L. D., Guthrie, J., & Martin-Sardesai, A. (2024). Performance management in the Australian higher education system – A historically informed critique. *Accounting History*, *29*(2), 215–235. https://doi.org/10.1177/10323732241230348

[183] Pellikka, T., & Kajolinna, T. (2020). Emission measurements of heavy metals with the European standard reference methods EN 14385 and EN 13211—observations from interlaboratory comparison (ILC) measurements performed at the waste-to-energy plant in Finland. *Journal of the Air and Waste Management Association*, *70*(10), 990–1008. https://doi.org/10.1080/10962247.2020.1797926

[184] Peres, K. G., Reher, P., de Castro, R. D., & Vieira, A. R. (2020). COVID-19-related challenges in dental education: Experiences from Brazil, the USA, and Australia. *Pesquisa Brasileira Em Odontopediatria e Clinica Integrada*, *20*, 1–10. https://doi.org/10.1590/pboci.2020.130

[185] Perkins, G. D., Hawkes, C. A., Eli, K., Griffin, J., Jacques, C., Huxley, C. J., Couper, K., Ochieng, C., Fuld, J., Fritz, Z., George, R., Gould, D., Lilford, R., Underwood, M., Baldock, C., Bassford, C., Fortune, P. M., Speakman, J., Wilkinson, A., … Slowther, A. M. (2022). Recommended summary plan for emergency care and treatment: ReSPECT a mixed-methods study. *Health and Social Care Delivery Research*, *10*(40). https://doi.org/10.3310/LFPE3627

[186] Pham, A., Edelson, M., Nouri, A., & Kuo, T. T. (2024). Distributed management of patient data-sharing informed consent for clinical research. *Computers in Biology and Medicine*, *180*(August), 108956. https://doi.org/10.1016/j.compbiomed.2024.108956

[187] Prussi, M., Scarlat, N., Acciaro, M., & Kosmas, V. (2021). Potential and limiting factors in the use of alternative fuels in the European maritime sector. *Journal of Cleaner Production*, *291*, 125849. https://doi.org/10.1016/j.jclepro.2021.125849

[188] Rashid, M., Khan, N. U., Riaz, U., & Burton, B. (2023). Auditors' perspectives on financial fraud in Pakistan – audacity and the need for legitimacy. *Journal of Accounting in Emerging Economies*, *13*(1), 167–194. https://doi.org/10.1108/JAEE-04-2021-0135

[189] Razzaq, A. (2024). A Web3 secure platform for assessments and educational resources based on blockchain. *Computer Applications in Engineering Education*, *32*(1). https://doi.org/10.1002/cae.22677

[190] Rustemi, A., Dalipi, F., Atanasovski, V., & Risteski, A. (2024). DIAR: a blockchain-based system for the generation and verification of academic diplomas. *Discover Applied Sciences*, *6*(6). https://doi.org/10.1007/s42452-024-05984-1

[191] S., S. P. C., Sultana, A., Mehta, P., Kumar, H. S., Defalla, B. M. A., Divakaran, P., & Dean, V. R. R. (2024). Harmony in Numbers: Unifying Management and Accounting For Financial Success. *Revista de Gestão Social e Ambiental*, *18*(9), e06532. https://doi.org/10.24857/rgsa.v18n9-053

[192] Sáenz-Adán, C., García-Izquierdo, F. J., Pérez, B., Huynh, T. D., & Moreau, L. (2022). Automated and non-intrusive provenance capture with UML2PROV. *Computing*, *104*(4), 767–788. https://doi.org/10.1007/s00607-021-01012-x

[193] Saghiri, S. S., & Mirzabeiki, V. (2021). Buyer-led environmental supplier development: Can suppliers really help it? *International Journal of Production Economics*, *233*(October 2020), 107969. https://doi.org/10.1016/j.ijpe.2020.107969

[194] Said, S. H., Dida, M. A., Kosia, E. M., & Sinde, R. S. (2023). A blockchain-based conceptual model to address educational certificate verification challenges in Tanzania. *Engineering, Technology and Applied Science Research*, *13*(5), 11691–11704. https://doi.org/10.48084/etasr.6170

[195] Saminan, Rabbany, N., Aini, Z., Zulkarnain, & Murzalina, C. (2021). Open access open access. *Citizen-Based Marine Debris Collection Training: Study Case in Pangandaran*,

2(1), 56–61.

[196] Samtani, S., Li, W., Benjamin, V., & Chen, H. (2021). Informing Cyber Threat Intelligence through Dark Web Situational Awareness: The AZSecure Hacker Assets Portal. *Digital Threats: Research and Practice*, *2*(4). https://doi.org/10.1145/3450972

[197] Sangha, L., & Shortridge, J. (2023). Quantification of unreported water use for supplemental crop irrigation in humid climates using publicly available agricultural data. *Agricultural Water Management*, *287*(January), 108402. https://doi.org/10.1016/j.agwat.2023.108402

[198] Sanoran, K., & Ruangprapun, J. (2023). Initial implementation of data analytics and audit process management. *Sustainability (Switzerland)*, *15*(3). https://doi.org/10.3390/su15031766

[199] Sari, D. A., Margules, C., Lim, H. S., Sayer, J. A., Boedhihartono, A. K., Macgregor, C. J., Dale, A. P., & Poon, E. (2022). Performance auditing to assess the implementation of the sustainable development goals (SDGs) in Indonesia. *Sustainability (Switzerland)*, *14*(19). https://doi.org/10.3390/su141912772

[200] Savarirayan, R., De Bergua, J. M., Arundel, P., McDevitt, H., Cormier-Daire, V., Saraff, V., Skae, M., Delgado, B., Leiva-Gea, A., Santos-Simarro, F., Salles, J. P., Nicolino, M., Rossi, M., Kannu, P., Bober, M. B., Phillips, J., Saal, H., Harmatz, P., Burren, C., … Irving, M. (2022). Infigratinib in children with achondroplasia: the PROPEL and PROPEL 2 studies. *Therapeutic Advances in Musculoskeletal Disease*, *14*(February), 1–13. https://doi.org/10.1177/1759720X221084848

[201] Schrepp, M. (2019). User Experience Questionnaire Handbook. *URL: Https://Www. Researchgate. Net/Publication/303880829{_}User{_}Experience{_}Questionnaire{_}Handbook{_}Version{_}2.(Accessed: 02.02. 2017)*, pp. 1–15.

[202] Seferović, P. M., Piepoli, M. F., Lopatin, Y., Jankowska, E., Polovina, M., Anguita-Sanchez, M., Störk, S., Lainščak, M., Miličić, D., Milinković, I., Filippatos, G., & Coats, A. J. S. (2020). Heart failure association of the european society of cardiology quality of care centres programme: design and accreditation document. *European Journal of Heart Failure*, *22*(5), 763–774. https://doi.org/10.1002/ejhf.1784

[203] Sgaramella, L. I., Gurrado, A., Pasculli, A., de Angelis, N., Memeo, R., Prete, F. P., Berti, S., Ceccarelli, G., Rigamonti, M., Badessi, F. G. A., Solari, N., Milone, M., Catena, F., Scabini, S., Vittore, F., Perrone, G., de Werra, C., Cafiero, F., Testini, M., … Zuolo, M. (2021). The critical view of safety during laparoscopic cholecystectomy: Strasberg Yes or No? An Italian Multicentre study. *Surgical Endoscopy*, *35*(7), 3698–3708. https://doi.org/10.1007/s00464-020-07852-6

[204] Shahzad, A., Hassan, R., Aremu, A. Y., Hussain, A., & Lodhi, R. N. (2021). Effects of COVID-19 in E-learning on higher education institution students: the group comparison between male and female. *Quality and Quantity*, *55*(3), 805–826. https://doi.org/10.1007/s11135-020-01028-z

[205] Snider, S. H., Flume, P. A., Gentilin, S. L., Lesch, W. A., Sampson, R. R., & Sonne, S. C. (2020). Overcoming non-compliance with clinical trial registration and results reporting: One Institution's approach. *Contemporary Clinical Trials Communications*, *18*(March), 100557. https://doi.org/10.1016/j.conctc.2020.100557

[206] Soares, C. T. de M., Ek, M., Östmark, E., Gällstedt, M., & Karlsson, S. (2022). Recycling of multi-material multilayer plastic packaging: Current trends and future scenarios. *Resources, Conservation and Recycling*, *176*(June 2021). https://doi.org/10.1016/j.resconrec.2021.105905

[207] Solomonides, A. E., Koski, E., Atabaki, S. M., Weinberg, S., Iii, J. D. M., Kannry, J. L., Petersen, C., & Lehmann, C. U. (2022). Defining AMIA's artificial intelligence principles. *Journal of the American Medical Informatics Association, 29(4), 585-591.*

[208] Sultana, M., Hossain, A., Laila, F., Taher, K. A., & Islam, M. N. (2020). Towards developing a secure medical image-sharing system based on zero-trust principles and blockchain technology. *BMC Medical Informatics and Decision Making*, *20*(1), 1–10. https://doi.org/10.1186/s12911-020-01275-y

[209] Tao, J., Zheng, C., Lu, Z., Liang, J. C., & Tsai, C. C. (2020). Cluster analysis on Chinese university students' conceptions of English language learning and their online self-regulation. *Australasian Journal of Educational Technology*, *36*(2), 105–119. https://doi.org/10.14742/ajet.4844

[210] Taqiuddin, M. (2023). Improving the Accountability in Pris: Key Strategies and

Actions. *Journal of Rural Development*, 144–153. https://doi.org/10.25175/jrd/2023/v42/i2/173130

[211] Tavakoly Sany, S. B., Behzhad, F., Ferns, G., & Peyman, N. (2020). Communication skills training for physicians improves health literacy and medical outcomes among patients with hypertension: A randomized controlled trial. *BMC Health Services Research*, *20*(1), 1–10. https://doi.org/10.1186/s12913-020-4901-8

[212] Taylor, H. L., & Yeager, V. A. (2021). Core Competency Gaps Among Governmental Public Health Employees With and Without a Formal Public Health Degree. *Journal of Public Health Management and Practice*, *27*(1), 20–29. https://doi.org/10.1097/PHH.0000000000001071

[213] Tesfamicael, A. D., Liu, V., McKague, M., & Caelli, W. (2021). An Architecture to Facilitate Security Assurance and Legal Compliance for Call Auditing in the Wholesale Electricity Market. *IEEE Access*, *9*, 146437–146453. https://doi.org/10.1109/ACCESS.2021.3122518

[214] Thakre, A., Thabtah, F., Shahamiri, S. R., & Hammoud, S. (2022). A novel blockchain technology publication model proposal. *Applied Computing and Informatics*, *18*(3–4), 195–207. https://doi.org/10.1016/j.aci.2019.10.003

[215] Totobesola, M., Delve, R., Nkundimana, J. d'Amour, Cini, L., Gianfelici, F., Mvumi, B., Gaiani, S., Pani, A., Barraza, A. S., & Rolle, R. S. (2022). A holistic approach to food loss reduction in Africa: food loss analysis, integrated capacity development and policy implications. *Food Security*, *14*(6), 1401–1415. https://doi.org/10.1007/s12571-021-01243-y

[216] Tudorie, C. A. M., Vallés-Planells, M., Gielen, E., Arroyo, R., & Galiana, F. (2020). Towards a greener university: Perceptions of landscape services in campus open space. *Sustainability (Switzerland)*, *12*(15), 1–26. https://doi.org/10.3390/su12156047

[217] Tumwebaze, Z., Bananuka, J., Kaawaase, T. K., Bonareri, C. T., & Mutesasira, F. (2022). Audit committee effectiveness, internal audit function, and sustainability reporting practices. *Asian Journal of Accounting Research*, *7*(2), 163–181. https://doi.org/10.1108/AJAR-03-2021-0036

[218] Upadhyay, J., Singh, P., Digal, K. C., Shubham, S., Grover, R., & Basu, S. (2021). Developmentally Supportive Positioning Policy for Preterm Low Birth Weight Infants in a Tertiary Care Neonatal Unit: A Quality Improvement Initiative. *Indian Pediatrics*, *58*(8), 733–736. https://doi.org/10.1007/s13312-021-2281-8

[219] Uteshov, Y., Rysbekov, K., Galiyev, D., Nauryzbayeva, D., & Galiyev, S. (2021). Potential for increasing the efficiency of design processes for mining solid mineral deposits based on digitalization and advanced analytics. *Mining of Mineral Deposits*, *15*(2), 102–110. https://doi.org/10.33271/mining15.02.102

[220] Uusitalo, M. A., Rugeland, P., Boldi, M. R., Strinati, E. C., Demestichas, P., Ericson, M., Fettweis, G. P., Filippou, M. C., Gati, A., Hamon, M. H., Hoffmann, M., Latva-Aho, M., Parssinen, A., Richerzhagen, B., Schotten, H., Svensson, T., Wikstrom, G., Wymeersch, H., Ziegler, V., & Zou, Y. (2021). 6G Vision, Value, Use Cases, and Technologies from European 6G Flagship Project Hexa-X. *IEEE Access*, *9*, 160004–160020. https://doi.org/10.1109/ACCESS.2021.3130030

[221] Van Roy, W., Van Nieuwenhove, A., Scheldeman, K., Van Roozendael, B., Schallier, R., Mellqvist, J., & Maes, F. (2022). Measurement of Sulfur-Dioxide Emissions from Ocean-Going Vessels in Belgium Using Novel Techniques. *Atmosphere*, *13*(11). https://doi.org/10.3390/atmos13111756

[222] Vanderloo, L. M., Carsley, S., Agarwal, P., Marini, F., Dennis, C. L., & Birken, C. (2021). Selecting and evaluating mobile health apps for the healthy life trajectories initiative: Development of the eHealth resource checklist. *JMIR MHealth and UHealth*, *9*(12), 1–8. https://doi.org/10.2196/27533

[223] Villegas-Pérez, J., Navas-González, F. J., Serrano, S., García-Viejo, F., & Buffoni, L. (2023). A Quality Assurance Discrimination Tool for the Evaluation of Satellite Laboratory Practice Excellence in the Context of the European Official Meat Inspection for Trichinella spp. *Foods*, *12*(22), 1–19. https://doi.org/10.3390/foods12224186

[224] Wang, D., Zhu, Y., Zhang, Y., & Liu, G. (2020). Security assessment of blockchain in Chinese classified protection of cybersecurity. *IEEE Access*, p. *8*, 203440–203456. https://doi.org/10.1109/ACCESS.2020.3036004

[225] Wang, K., Zipperle, M., Becherer, M., Gottwalt, F., & Zhang, Y. (2020). An AI-

based automated continuous compliance awareness framework (CoCAF) for procurement auditing. *Big Data and Cognitive Computing*, *4*(3), 1–14. https://doi.org/10.3390/bdcc4030023

[226] Wang, M., Kang, J., Cao, N., Xia, Y., Fan, W., & Tong, H. (2021). Graph Ranking Auditing: Problem Definition and Fast Solutions. *IEEE Transactions on Knowledge and Data Engineering*, *33*(10), 3366–3380. https://doi.org/10.1109/TKDE.2020.2969415

[227] Wei, F. L., Zhou, C. P., Gao, Q. Y., Du, M. R., Gao, H. R., Zhu, K. L., Li, T., Qian, J. X., & Yan, X. D. (2022). Decompression alone or decompression and fusion in degenerative lumbar spondylolisthesis. *EClinicalMedicine*, *51*(169), 1–14. https://doi.org/10.1016/j.eclinm.2022.101559

[228] Werner, M., Wiese, M., & Maas, A. (2021). Embedding process mining into financial statement audits. *International Journal of Accounting Information Systems*, *41*, 100514. https://doi.org/10.1016/j.accinf.2021.100514

[229] Wilson, K., Juya, A., Abade, A., Sembuche, S., Leonard, D., Harris, J., Perkins, S., Chale, S., Bakari, M., Mghamba, J., & Kohler, P. (2021). Evaluation of a New Field Epidemiology Training Program Intermediate Course to Strengthen Public Health Workforce Capacity in Tanzania. *Public Health Reports*, *136*(5), 575–583. https://doi.org/10.1177/0033354920974663

[230] Wyssusek, K., Chan, K. Lo, Eames, G., & Whately, Y. (2022). Greenhouse gas reduction in anesthesia practice: a departmental environmental strategy. *BMJ Open Quality*, *11*(3), 1–7. https://doi.org/10.1136/bmjoq-2022-001867

[231] Yan, H., & Gui, W. (2021). Efficient Identity-Based Public Integrity Auditing of Shared Data in Cloud Storage with User Privacy Preserving. *IEEE Access*, *9*, 45822–45831. https://doi.org/10.1109/ACCESS.2021.3066497

[232] Yang, X., Wang, M., Wang, X., Chen, G., & Wang, C. (2020). Stateless Cloud Auditing Scheme for Non-Manager Dynamic Group Data with Privacy Preservation. *IEEE Access*, *8*, 212888–212903. https://doi.org/10.1109/ACCESS.2020.3039981

[233] Yatkin, S., Gerboles, M., Borowiak, A., Davila, S., Spinelli, L., Bartonova, A., Dauge, F., Schneider, P., Van Poppel, M., Peters, J., Matheeussen, C., & Signorini, M. (2022). Modified Target Diagram to check compliance of low-cost sensors with the Data Quality Objectives of the European air quality directive. *Atmospheric Environment*, *273*(January), 118967. https://doi.org/10.1016/j.atmosenv.2022.118967

[234] Zhang, S., Yu, Y., Zhu, Q., Qiu, C. M., & Tian, A. (2020). Green innovation mode under a carbon tax and innovation subsidy: An evolutionary game analysis for portfolio policies. *Sustainability (Switzerland)*, *12*(4). https://doi.org/10.3390/su12041385

[235] Zhao, F., Chen, K., Hao, H., & Liu, Z. (2020). Challenges, potential and opportunities for internal combustion engines in China. *Sustainability (Switzerland)*, *12*(12), 1–15. https://doi.org/10.3390/su12124955

[236] Zhu, H., Wang, S., Shan, C., Li, X., Tan, B., Chen, Q., Yang, Y., Yu, H., & Yang, A. (2021). Mechanism of the protective effect of the xuan-bai-cheng-qi decoction on LPS-induced acute lung injury based on an integrated network pharmacology and RNA-sequencing approach. *Respiratory Research*, *22*(1), 1–14. https://doi.org/10.1186/s12931-021-01781-1