International Journal on Economics, Finance and Sustainable Development (IJEFSD)

e-ISSN: 2620 – 6269
p-ISSN: 2615 - 4021

Volume: 8 Issue: 1 | March 2026

https://journals.researchparks.org/index.php/IJEFSD

Article

The Role of an Auditor's Expertise, Experience, and Professional Certification in Auditing Financial Statements In light of Information Technology and Artificial Intelligence Approaches (A study of the perspectives of a sample of auditors in Iraq)

Mahdi Abbas Ibadi[1], Muhannad Abbas Ayyash[2]

1. Teacher Al-Iraqia University, College of Administration and Economic
2. Assistant Teacher Al-Iraqia University, College of Administration and Economic

* Correspondence: mahdi.lbadi@aliraqia.edu.iq, m75hnd@gmail.com

Abstract: The purpose of this study is to to highlight the importance of expertise, experience, and professional and scientific qualifications play in the auditor's ability to employ techniques including artificial intelligence, information technology, and electronic accounting systems in the field of accounting and auditing. With the purpose of demonstrating knowledge, experience, and professional qualifications' effects and roles in the use of the previously described methods in the accounting and auditing fields, the study was initiated in light of the hypotheses that were defined for it. The theoretical aspect was utilized by the researcher in order to provide an explanation of the theoretical features that are associated with the ideas of experience and professional certification of the auditor as well as procedures involving artificial intelligence. In order to support the research hypotheses, the researcher also employed statistical techniques using the generated questionnaire form. A collection of academic specialists, auditing offices, and auditing firms made up the research sample. The study came to a number of conclusions, chief among them that the auditor's educational background and professional experience increase the accuracy of the audit process's findings and that the auditor's scientific background in artificial intelligence methods and accounting information technology, provides ample opportunity for the auditor to apply this knowledge in creating reports that enhance the audit process's quality. Among the recommendations made by the study, the most significant one was that the accounting and auditing professions must keep up with the quick changes in artificial intelligence methods and the accounting information technology environment. they also needed professional organizations that specialize keeping an eye on the previously mentioned advances in accounting and auditing regulations, and establishing standards and a framework that work with the ways these technologies are being used.

Keywords: Expertise, Professional Certification, Experience, Information Technology, Artificial Intelligence

Citation: Ibadi, M. A & Ayyash, M. A. The Role of an Auditor's Expertise, Experience, and Professional Certification in Auditing Financial StatementsIn light of Information Technology and Artificial Intelligence Approaches, (A study of the perspectives of a sample of auditors in Iraq). International Journal on Economics, Finance and Sustainable Development 2026, 8(1), 45-61

Received: 10th May 2025
Revised: 16th Jun 2025
Accepted: 24th Jul 2025
Published: 28th Aug 2025

Copyright: © 2026 by the authors. Submitted for open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/licenses/by/4.0/)

1. Introduction

The auditing profession is certainly influenced by the innovations surrounding it and within which it operates. Among the most important of these innovations is the use of electronic systems and modern technologies, such as artificial intelligence and electronic accounting systems, in the field of accounting and auditing. The use of these accounting applications and systems has impacted auditing and oversight methods and procedures, as well as various accounting processes [1]. These changes and developments have imposed on auditors levels of scientific and practical knowledge of information technology and the accompanying modern technologies and techniques and methods of using artificial intelligence in accounting and auditing [2], [3]. Therefore, it must be considered that among the fundamentals that an auditor must possess is professional specialization and knowledge of auditors and audit firms in using these technologies and

technologies, and increasing their knowledge and experience in these technologies and systems. In order for an auditor to be able to perform their assigned auditing tasks with high quality, they must possess scientific and practical knowledge of information technology and artificial intelligence technologies, and the use of these technologies in electronic programs, as well as in implementing audit operations, evaluating internal control, and all the procedures undertaken by the auditor during the performance of their work [4], [5]. Hence, the idea of the study came from the point of view of demonstrating the extent of the impact of the auditor's professional background and experience in view of the application of electronic accounting systems and various artificial intelligence technologies [6].

2. Materials and Methods

2.1 Research problem

Given the significant developments taking place in the modern Artificial Intelligence and the Information technology environment technologies and systems, this has led to the need to develop the academic and practical qualifications of auditors. The problem lies in these rapid and successive developments in information systems, information technology, and the newly emerging artificial intelligence technologies used in the implementation and preparation of financial statements for institutions and economic establishments, and the extent to which the auditing profession keeps pace with them. Given that the auditing process is one of the most important means relied upon by management in these economic establishments to verify all financial and operational processes, achieve control and review of all financial events and control systems, and provide adequate protection for assets and records, as well as evaluate and ensure the effectiveness of the systems used, this has called for research into the importance and extent of the importance of the auditor's training and credentials when examining financial accounts created with artificial intelligence and information technology accordingly, the research problem can be summarized in the following question:

Does the level of experience and professional qualifications of the auditor influence the auditing of financial statements prepared using information technology and artificial intelligence technologies? The following questions branch out from the main question:

a. What is the impact of the auditor's academic qualifications on the audit of financial statements prepared using information technology and artificial intelligence techniques?
b. What is the impact of the auditor's knowledge, practical experience, and professional specialization on the audit of financial statements prepared using information technology and artificial intelligence techniques?

2.2 Research Importance

The study derives its importance from the crucial role played by auditors in light of the increasing use of techniques from artificial intelligence and information technology in various financial and accounting activities. This study also examines the requirements that auditors must possess in terms of experience, knowledge, and professional qualifications, enabling them to possess the necessary competence and ability to overcome all challenges they may face in light of artificial intelligence and information technology-based electronic accounting systems and their rapid developments.

2.3 Research objectives

The study aims to identify the auditor's required experience, knowledge, academic and practical qualifications, and professional specializations that enable them to keep pace with with advancements in artificial intelligence and information technology, as well as all the risks associated with auditing financial statements prepared using such modern electronic systems.

2.4 Research Hypotheses

The research is based on the following basic hypotheses:

a. There is a statistically significant effect of the level of experience and professional qualification of the auditor on the audit of financial statements prepared using information technology and artificial intelligence techniques.

The following hypotheses branch out from this:

a. There is a statistically significant effect of the auditor's academic qualification on the audit of financial statements prepared using information technology and artificial intelligence techniques.
b. There is a statistically significant effect of the auditor's knowledge, practical experience, and professional specialization on the audit of financial statements prepared using information technology and artificial intelligence techniques.

2.5 Previous Studies

a. Jihan's study, "The Impact of Using Artificial Intelligence Applications on the Future of the Accounting and Auditing Profession: A Field Study"

The study aimed to identify the conceptual framework of artificial intelligence and to determine its impact and dimensions on the future of the accounting and auditing profession by surveying the opinions of a group of people interested in the future of the accounting and auditing profession in light of modern artificial intelligence technologies. To test the study's hypotheses, the researcher utilized a set of statistical methods to prepare a field study to achieve the study's objectives. One of the most important results reached by the study was that the majority of the surveyed group recognized the relationship between the use of artificial intelligence applications and technologies and the accounting and auditing profession, which was statistically significant. The researcher made a list of suggestions, the most crucial of which was to encourage accountants and auditors to use artificial intelligence applications in the stages of preparing any future visions and strategies that may be related to the development and organization of the accounting and auditing profession. She also recommended the necessity of issuing guidelines and instructions by professional organizations related to accounting and auditing regarding the use of artificial intelligence systems and their applications by accountants. And auditors effectively.

b. Reem's study, "The Importance of Professional Specialization of the External Auditor in the Accounting Information System in Providing Audit Services in an Information Technology Environment: A Field Study in Jordanian Banks."

The study aimed to identify the role and importance of professional specialization and experience of the external auditor when providing audit services, as well as to analyze the importance of this professional specialization for the external auditor in light of the increasing use of information technology techniques in various business sectors. The study came to a number of conclusions, the most significant of which was the full awareness of the importance of professional specialization in information technology for external auditors when performing audit services in the Jordanian banks sampled in the study. Furthermore, the professional specialization of the external auditor in Jordanian banks brings significant benefits at a high level and contributes to improving the quality of audit services provided by external auditors in Jordanian banks. The researcher recommended the need to motivate and encourage Jordanian banks to establish audit departments specializing in information technology, whereby the cadres of these departments are qualified scientifically and professionally through specialized training courses.

3. Results.and Discussion

The theoretical framework for the concept of experience, knowledge and professional qualification of the auditor

3.1 The Concept of Experience and Methods of Acquiring It

Professional experience is the foundation upon which all specialized work and various activities are based, including the auditing and accounting profession. Practitioners of this profession must possess an acceptable level of knowledge in their field of specialization, which, in turn, reflects the level of expertise they attain in performing the auditing process [7].

There is no unified, agreed-upon concept of professional experience. The accounting literature has described it in various ways, with professional experience being described

as the skills, knowledge, and level of ability to carry out tasks, activities, and function [8], [9].

3.2 The Concept of Professional Expertise

Experience is generally defined as consisting of knowledge in a specific activity, an understanding of specific problems, and the skill to solve those problems [10]. Experience has also been defined as "the amount of time a person spends in a specific job specialty to perform a specific task" [11].

A number of researchers have provided a set of definitions that address the concept of professional experience, including:

Professional experience has been defined as "the auditor's acquisition of professional knowledge and skills through actual practice in the auditing and reviewing profession in a manner that enables him to confront the situations and circumstances that may arise when performing his assigned professional duties and to take appropriate measures to resolve the problems encountered."[12]

It has also been defined as "the ability to perform complex tasks efficiently based on accumulated knowledge in a specific field of specialization and the procedures established for performing these tasks."[13]

Experience has also been defined as "possessing a sufficient range of scientific knowledge and skills in a specific field, and the knowledge acquired by the auditor through his specialization in auditing financial statements for clients within a specific specialized industry or performing a specific task".

3.3 Determinants of Professional Experience and Methods of Acquiring It

The subject of auditor professional experience has received considerable attention from researchers. This is because many of the judgments issued by the external auditor are based on the auditor's personal judgment and judgment, and consequently, the validity and accuracy of these judgments when performing the task of auditing financial statements and financial reports.

Some of the determinants of professional experience in the external auditing profession have been identified, the most important of which are:

1. Acquiring knowledge through continuing education
2. Specialization in a specific activity
3. Leadership ability
4. The ability to make appropriate decisions when under work pressure
5. The extent of the ability to communicate with managers and employees

As for the question of methods for acquiring experience, some researchers have indicated that professional experience for the external auditor is acquired through seniority, i.e., years of practice, as well as various types of knowledge, whether general or specialized in a particular activity or environment [14], [15]. This is achieved through several variables and influences on the acquisition of professional experience. These variables and influences can be summarized in the following points:

First: Academic Qualification:

This refers to knowledge of the fundamentals and rules of the profession (accounting and auditing), acquired through university education, training and development, as well as familiarity with the professional standards of the auditing profession.

Second: Practicing Auditing Duties in Practice

This refers to the actual practice of auditing, i.e., the auditor undertakes the actual practical exercises of the audit task and then obtains the necessary information for feedback to complete the audit process. This practice is embodied in the auditor's procedural knowledge [16].

Third: Professional Specialization in a Specific Activity

This refers to gaining experience through professional specialization in a specific activity. This refers to the auditor's acquisition of experience, knowledge, and skills in a specific activity or economic sector, whether commercial, industrial, or service, in a manner that enables them to perform the task efficiently and effectively [17].

Fourth: Continuing Education

This refers to gaining experience through continuing professional and academic education. This occurs through a set of educational activities aimed at maintaining and improving the professional competence of the auditor and other members of the profession by acquiring the knowledge and skills necessary to keep pace with modern economic and technological developments in the profession. This leads to the development of the professional performance of auditors and auditors, and this is reflected in overall professional performance.

3.4 Academic and Practical Qualification of the External Auditor

Legislation and professional organizations worldwide emphasize the need for those practicing the accounting and auditing professions to have sufficient academic and practical experience and qualifications. Some professional organizations have established conditions and rules that ensure the academic and practical competence of those practicing the profession, ensuring the quality of the auditing process and the highest degree of efficiency and effectiveness [18], [19].

Academic qualification and professional practical experience complement each other. Professional training requires that practitioners be constantly informed of legislative, regulatory, and professional developments that have a significant impact on professional practice. Furthermore, academic qualifications for practicing the accounting or auditing professions require a period of time in colleges or higher institutes specializing in accounting and auditing to acquire the necessary skills in these sciences and other supporting disciplines. In addition to academic qualifications, the auditing profession requires its members to spend a sufficient period of time in practical training in the profession before commencing their practice [20]. Trainees must complete their professional training period in a practicing office, whether an accounting organization office, an auditing office, or a firm [21].

As previously mentioned, the strength of any profession stems from the individuals who practice it and their adherence to the rules of professional conduct. Furthermore, the strength of these individuals is primarily based on the availability of academic competence. In addition to academic and professional competence, there are a set of qualifications that an auditor needs to qualify them to perform their work [22]. These qualifications are:

a. Academic qualification with a specific academic degree.
b. Ability through experience, training, and continuous education.
c. Feedback.
d. Familiarity with applicable legislation, instructions, and policies.
e. Professional competence requires that the practitioner possess a good level of knowledge and professional skill that enables them to perform the assigned task with the required care and reasonable competence, without negligence.

It should be noted that professional qualification is a dynamic, not a static, concept. Simply obtaining the academic qualification required to practice the profession does not mean the end of education, development, and training. A policy of continuing education and training must be adopted through participation in training courses, workshops, and professional courses related to auditing standards and principles [23].

3.5 The Importance of Academic and Practical Qualification for the Auditor

Many professional organizations concerned with the accounting and auditing profession, as well as researchers in this field, agree on the importance of academic and real-world credentials for the external auditor. This is due to the rapid and significant changes taking place in the business environment. The most prominent of these changes is the use of information technology, disclosure through modern electronic means, and artificial intelligence technologies. Therefore, the role currently played by the external auditor is not compatible with the modern business environment. Consequently, there are many challenges facing the external auditor in light of these changes in the business environment. Therefore, to meet these challenges, it has become imperative for them to ensure that they have the academic and practical qualifications that are commensurate with these changes [24].

3.6 The Academic and Practical Qualification of the External Auditor in the Light of the Electronic Environment and Modern Technologies

It is no secret to anyone following the rapid developments in the economic and financial business environment that information technology has a profound impact on the lives of most financial institutions worldwide. This is due to the rapid transformation the world is witnessing in the field of technology and the successive developments in the field of computer hardware, various software, communications devices, and other artificial intelligence technologies and their various means. The dominant feature of many modern organizations has become the use of information technology in processing their data and managing their businesses. These developments in information technology have presented the auditing profession with a major challenge, requiring it to develop the audit tools and methods used in the audit process in order to continue providing audit services with high quality and efficiency [25], [26]. Therefore, the auditing profession requires advanced methods to increase the reliability of financial reports in the light of the electronic environment, information technology, and electronic accounting systems. Therefore, auditors have become in dire need of keeping keeping up with these quick changes, whether in the context of information technology or other technologies, which require auditors to possess high-level technical skills that can be employed in the audit process. This has obliged auditors to exert their utmost efforts in Increase academic and practical qualifications in the field of information technology and its uses in the auditing process, as well as other advanced technologies such as artificial intelligence and technologies used in accounting [27].

3.7 Professional Qualification Requirements for External Auditors in Light of the Operation of Accounting Data According to Electronic Systems and Modern Technologies.

In order for the external auditor to be able to control the audit process under an accounting system processed electronically, especially in light of the increasing use of these electronic systems, responding to these changes requires the auditor to possess the following experience and knowledge:

a. Understanding the nature of electronic accounting data processing, related software, smart technologies, and operating systems.
b. Knowledge and thorough familiarity with the computer programs used in various business establishments that operate accounting systems, and familiarity with their auditing mechanisms.
c. Knowledge and familiarity with the computer languages applied and available in practice and used in operating software and electronic operating systems.
d. Knowledge and familiarity with the available mathematical and statistical methods that can be utilized in performing the audit process, which has become simpler with the introduction of electronic computers.
e. Knowledge and familiarity with the capabilities of the programs used in modern computer-based auditing and the feasibility of their use in the audit process.
f. Knowledge and familiarity with various integrated information systems and regional, local, or international information networks.

There are a number of requirements that must be met in order to fulfill these requirements related to the auditor's educational background and professional experience in the e-business environment and modern technologies. These requirements include: (Noureddine, 2019: 49)

a. The curricula of universities and various vocational schools concerned with the accounting and auditing profession must include some basic knowledge about the use of computers and their technologies, information processing, and modern electronic methods.
b. Professional organizations concerned with accounting and auditing must organize advanced training courses specializing in the capabilities and applications of the electronic environment in the field of accounting and auditing.
c. Examinations for granting licenses to practice accounting, auditing, and forensic accounting must include questions on the theoretical and practical aspects of

computer applications and modern technologies in the field of accounting and auditing.

d. Theoretical Framework for Information Technology and Artificial Intelligence Concepts

Information technology has become one of the most important tools used by various for-profit and non-profit businesses in their various operations, whether in planning and supervision, financial, administrative, and accounting affairs, or other aspects of activity. At the same time, the auditing process has witnessed increasing developments to keep pace with advances in information technology for these businesses and companies. As a result of these developments, a concept called computer systems auditing and computer technology review has emerged. This field has witnessed significant developments and great interest from regulators of the auditing and accounting professions. Several professional and international standards have been issued to guide auditors in this field.

4.1 The Concept of Information Technology

It is impossible to arrive at a unified definition or term for information technology, scientifically or practically, at the global, Arab, or local levels. This is due to the multiplicity of business environments that have emerged based on information technology. However, some researchers have provided some definitions of the concept of information technology.

Information technology has been defined as "modern technological systems and devices that aim to deliver information to its beneficiaries with minimal cost, minimal effort, and in the shortest possible time".

It has also been defined as "a set of technologies that contain messages, equipment, devices, and techniques that can be handled with expertise and skill to obtain solutions in the field of communicating information and knowledge.".

It is also defined as "the use of computers and all other advanced means by individuals qualified with technical knowledge to store and process data that can be obtained quickly, processed, stored, retrieved, and converted into reliable and dependable information for timely decision-making."

4.2 Information Technology and Accounting Systems

The use of advanced information technology leads to continuous change in the processes of collecting, processing, and disseminating accounting data and information. These developments have led to fundamental changes in the tools previously used (traditional tools) to process accounting data and information, thereby contributing to increased efficiency and capacity of the accounting system in data processing and obtaining accounting information. This technology has provided significant potential that has improved the performance of accounting information systems and advanced most of their components, structures, and tools. This information technology has also generated significant potential that has led to the development of accounting information systems, making them more flexible, responsive, and adaptable to the changes the world is experiencing today. We can summarize the most important trends influencing information technology on accounting information systems as follows:

- Information technology is an effective tool for reducing costs, reorganizing, and reducing the size of the administrative apparatus, as well as the size of the labor force used in production, which leads to reduced accounting processing costs. The use of information technology helps expand the scope of oversight over senior management and expand the distribution of decision-making to executive departments, meaning centralized oversight and decentralized decision-making. These two approaches can achieve high flexibility in the information generated by the accounting information system.

Information technology contributes to increasing the ability of accounting information systems to quickly adapt and adjust to the operating environment within the economic unit by providing effective economic tools for storing and retrieving data to provide it for timely decision-making, thus increasing the effectiveness of accounting information systems.

4.3 The Concept of Artificial Intelligence

New applications for information systems and new standards for designing these systems have emerged. The widespread use of these developments has been facilitated by several factors, most notably the world's commitment to keeping pace with emerging technological developments worldwide, as well as the availability of abundant data for learning. All of this has led to the creation of artificial intelligence algorithms, making artificial intelligence one of the most prominent modern applications of information systems.

According to some studies, artificial intelligence aims to direct computers to perform tasks that humans perform better. This is accomplished using advanced, specialized programming languages that aim to simulate computer behaviors characterized by intelligence. This is achieved by providing computers with technologies and programs that enable them to solve problems.

Other studies have also indicated that artificial intelligence represents a technology dedicated to programming machines to perform tasks that require human intelligence to solve, i.e., simulating human intelligent behavior. It is also described as attempts to build machines that think and behave like humans, are capable of learning, and use their knowledge to solve problems on their own.

4.4 Forms of Artificial Intelligence

Artificial intelligence is divided into four basic types. The simplest types of AI can only perform basic functions, while the most advanced types are self-aware and aware of their surroundings, closely resembling human consciousness. These types are:

a. Interactive machines
b. Limited memory
c. Theory of mind
d. Self-awareness

4.5 Areas of Application of Artificial Intelligence (AI):

First: Expert Systems: These are described as complex computer-based systems that collect specialized information and present it in a form that enables the computer to apply this information to similar or identical problems.

Second: Artificial Neural Networks: One aspect of AI is electronic models of the human brain's neural structures. The teaching and learning mechanisms of these neural networks are based on experience. Neural networks are one of the most important fields of control engineering and artificial intelligence, reflecting a significant development in the way humans think.

Third: Robots: These are mechanical machines capable of performing a set of programmed tasks through direct human control or signals from computer programs to execute specific tasks.

Fourth: Fuzzy Logic: This is a theory through which expert systems can be built. It represents a logical system based on the generalization of binary evaluation logic to reach results under uncertain conditions.

4.6 Artificial Intelligence Technologies and the Accounting and Auditing Profession

It can be said that artificial intelligence technologies are now entering the business world. Intelligent systems used in economic units have proven the critical role they play in performing complex and precise tasks with high efficiency and effectiveness, particularly in terms of their ability to solve problems, select alternatives, and arrive at the best possible solutions.

The qualitative development brought about by the information technology revolution has led to the emergence of new applications and programs characterized by diversity and innovation, leading to increased competition worldwide. Modern applications of information technology have shifted toward the use of artificial intelligence and intelligent systems in the fields of accounting and auditing. This has resulted in artificial intelligence systems becoming capable of handling many accounting and auditing functions, such as tax transactions, some bank settlements, and risk assessment.

Some studies indicate that artificial intelligence is one of the most important technologies at present and will be the language of the near future, as it can analyze and

understand spoken commands, as well as communicate with humans in a comprehensive manner. The rapid development in this field requires countries to utilize the latest technologies to access artificial intelligence and benefit from its applications in accounting, auditing, and other fields.

4.7 The Use of Artificial Intelligence Technologies in Auditing

The auditing profession has undergone a number of changes over the past period due to technological changes. Many changes have been witnessed in this profession. Through the auditing profession, new services have been provided to clients, such as financial consulting and studies, in addition to the development of new types of audit services, making the auditing profession more competitive than ever before. Accordingly, auditors have widely relied on the new methods and tools provided by information technology and artificial intelligence to accelerate the decision-making process and improve the quality of the audit process.

From the above, we can say that developments in the field of business intelligence and the use of computers have led to an increased interest in using modern technologies in the auditing process. This may result in addressing some human shortcomings in the exercise of professional judgment, and this is reflected in improving the efficiency and effectiveness of the auditing process. Modern auditing methodologies have begun to adopt the concept of risk, which includes strategic dimensions related to the ability of the economic unit to achieve its goals. This will certainly require auditors to use advanced technologies that enable economic units to achieve their goals. This has necessitated the introduction of Artificial intelligence techniques in the implementation of audit work, as well as the emergence of digital auditing and professional standards that guide the methods of dealing with these systems, where digital auditing using modern artificial intelligence techniques can contribute to enhancing the efficiency and effectiveness of the audit process and completing audit tasks with less cost and time, which contributes to improving and enhancing the efficiency and quality of audit services provided and reducing their risks.

5. Practical aspect

5.1 Research Community and Field

The research community represents first-class audit firms, the accounting and auditing office, and auditors in audit firms, in terms of their use of information technology and artificial intelligence techniques, and their adoption of electronic programs and computer technologies in auditing operations and electronic applications. A systematic random sampling method was used to sample employees working in the field of auditing. The study sample consisted of (120) individuals, and the number of questionnaires returned and approved for analysis was (89) questionnaires, after (31) questionnaire forms were excluded.

5.2 Study tool

To achieve the main research objectives and test the study hypotheses, the questionnaire tool was used, which was prepared according to the dimensions of the research topic and to realize the importance of the data and information required from the study population and sample, as the "questionnaire" included three sections: The first included the descriptive characteristics of the study sample While the second section included phrases for the variable " The extent to which the auditor's practical and practical qualifications contribute to enhancing the process of auditing financial statements prepared using information technology and artificial intelligence techniques" which was measured through (8 phrases), while the last section included the variable " The extent to which the auditor's experience, knowledge, and professional specialization contribute to enhancing the audit process of financial statements prepared using information technology and artificial intelligence techniques" which was measured through (12 phrases).

5.3 Reliability Scale

Reliability of the study tool refers to obtaining the same results if it is reapplied several times in a row. To calculate the reliability and statistical validity of the study tool, the

researcher used Cronbach's Alpha test and the self-reliability test for the statements to verify the reliability, stability, and validity of the data collected for statistical analysis.

Table 1. Reliability test

	Domain	Number of phrases	Reliability Coefficient	Self-Validity
1	The extent to which the auditor's practical and practical qualifications contribute to enhancing the process of auditing financial statements prepared using information technology and artificial intelligence techniques	8 phrases	**0.787**	**0.887**
2	The extent to which the auditor's experience, knowledge, and professional specialization contribute to enhancing the audit process of financial statements prepared using information technology and artificial intelligence techniques	12 phrases	**0.812**	**0.901**
3	Total	20 phrases	**0.928**	**0.963**

From the table 1 above we notice that the Cronbach's alpha value is high as it recorded (0.787, 0.812) while it recorded overall for the questionnaire as a whole (0.928). The values of the self- Validity coefficient for the research variables also confirm, as they reached within the range (0.887, 0.901) while it recorded overall (0.963). The results confirm that the study tool enjoys a high level of validity and reliability and its suitability for practical analysis and testing the main research hypotheses.

5.4 Data normality test

To determine whether the research population is normally distributed, and by applying the rule of thumb at a significance level of (5%), the statistical decision is made accordingly, relying on the (Kolmogorov-Smirnov) test.

Table 2. Normality test for data

	Domain	Kolmogorov-Smirnov Z	Asymp. Sig. (2-tailed)
1	The extent to which the auditor's practical and practical qualifications contribute to enhancing the process of auditing financial statements prepared using information technology and artificial intelligence techniques	1.937	0.087
2	The extent to which the auditor's experience, knowledge, and professional specialization contribute to enhancing the audit process of financial statements prepared using information technology and artificial intelligence techniques	1.884	0.075

The statistical results, according to the outputs of the table 2 above, show us that the probability value of this test is greater than (5%), meaning that the parametric statistical indicators can be used for the study data, meaning that the data has a normal distribution.

5.5 Descriptive Statistics Research Axes

All the measures of central tendency included (arithmetic means, standard deviation, and relative importance) were calculated for each of the statements in the first axis. The arithmetic mean of the statement was also compared to the hypothetical mean according to the five-point Likert scale of (3), where the condition of agreement for the statement is met if the arithmetic mean of the statement is greater than the hypothetical mean.

5.5.1 Descriptive statistics for the first axis phrases

Table 3. Descriptive statistics for the first axis phrases

	Phrases	Standard Deviation	Arithmetic Mean	Relative Importance	Sort
1	The auditor's academic and practical qualifications increase the efficiency of the audit process of financial statements prepared using information technology and artificial intelligence technologies.	**0.663**	**3.89**	**77.8%**	**7**
2	The auditor's academic and practical qualifications increase confidence in the results of the audit process of statements prepared using information technology and artificial intelligence technologies	**0.684**	**3.79**	**75.8%**	**8**
3	The auditor's academic and practical qualifications enable them to use modern technologies in the audit process, including artificial intelligence and information technology.	**0.794**	**4.25**	**85.0%**	**2**
4	The auditor's academic and practical qualifications improve the quality of the audit process of financial statements prepared using information technology and artificial intelligence technologies.	**0.802**	**4.13**	**82.6%**	**3**
5	The auditor's academic and practical qualifications increase the accuracy of the audit results of financial statements prepared using information technology and artificial intelligence technologies.	**0.563**	**4.05**	**81.0%**	**6**
6	The auditor's academic and practical qualifications contribute to increasing the efficiency and effectiveness of the audit process of financial statements prepared using information technology and artificial intelligence technologies.	**0.729**	**4.1**	**82.0%**	**5**
7	The auditor's academic and practical qualifications help develop appropriate plans for performing the audit of financial statements using information technology and artificial intelligence technologies.	**0.678**	**4.32**	**86.4%**	**1**
8	The auditor's academic and practical qualifications help them carefully and professionally perform the audit of financial	**0.654**	**4.11**	**82.2%**	**4**

	statements prepared using information technology and artificial intelligence technologies.				
	Total for the first axis phrases	**0.695**	**4.09**	**81.8%**	

The results presented in Table 3 reveal the following:

a. All statements in the first axis, which states (the extent to which the auditor's academic and practical qualifications contribute to enhancing the auditing process of financial statements prepared using information technology and artificial intelligence techniques), had an arithmetic mean greater than the hypothetical mean (3). These results indicate that most members of the study sample agreed with all statements measuring the axis.
b. The statement (the auditor's academic and practical qualifications help in developing appropriate plans for performing the financial statements audit process using information technology and artificial intelligence techniques) recorded the highest arithmetic mean (4.32) with a standard deviation of (0.678), with a percentage of agreement in the content of the statement reaching (86.4%).
c. The statement (the auditor's academic and practical qualifications lead to increased confidence in the results of the auditing process of data prepared using information technology and artificial intelligence techniques) recorded the highest mean. The lowest rate of agreement was with an arithmetic mean of (3.79), greater than the hypothetical mean of (3), and with a standard deviation of (0.684), while the intensity of agreement in the content of the statement was (75.8%).

5.5.2 Descriptive statistics for the second axis phrases

Table 4. Descriptive statistics for the second axis phrases

	Phrases	**Standard Deviation**	**Arithmetic Mean**	**Relative Importance**	**Sort**
1	The auditor's specialized practical experience and knowledge of accounting information technology systems and artificial intelligence technologies enables them to use this knowledge to prepare reports that enhance the quality of audit performance.	**0.728**	**4.35**	**87.0%**	**1**
2	The auditor's professional specialization in information technology, electronic accounting systems, and artificial intelligence technologies contributes to the performance of audit tasks with high quality and professional efficiency.	**0.663**	**4.11**	**82.2%**	**7**
3	The auditor's specialized scientific and practical experience and knowledge in electronic accounting information systems and information technology enhances their ability and ability to use this knowledge and expertise to gather evidence and enhance the quality of professional performance and service provided.	**0.709**	**4.05**	**81.0%**	**8**
4	The auditor's professional experience contributes to improving and enhancing the quality of the audit process by periodically updating their professional and practical knowledge of information technology and artificial intelligence technologies.	**0.868**	**4.21**	**84.2%**	**4**

5	The auditor's professional experience, knowledge, and specialization in information technology contribute to the use of modern technologies in the audit process to provide high-quality and efficient audit services.	**0.674**	**3.97**	**79.4%**	**9**
6	The auditor's scientific and practical experience and knowledge of electronic internal control systems contributes to their ability to use this expertise and knowledge to audit these systems, which results in the preparation of a high-quality report that enhances the audit process.	**0.731**	**3.81**	**76.2%**	**11**
7	The auditor's specialized knowledge of the uses of information technology tools and artificial intelligence technologies contributes to coordinating the audit process and gathering sufficient evidence in the information technology environment.	**0.656**	**4.13**	**82.6%**	**6**
8	Knowledge and experience in all aspects of information technology and artificial intelligence technologies enable the auditor to perform their work with greater efficiency and effectiveness and to better gather evidence in the information technology and artificial intelligence environment.	**0.794**	**3.89**	**77.8%**	**10**
9	The auditor's professional specialization in information technology and artificial intelligence technologies helps enhance the assessment of risks associated with the use of these technologies and applications.	**0.942**	**3.76**	**75.2%**	**12**
10	The auditor's professional specialization in information technology and artificial intelligence technologies contributes to a greater degree of assessment or knowledge of the risks of exploiting these electronic systems for fraud and financial deception.	**0.549**	**4.26**	**85.2%**	**2**
11	The auditor's specialization in the uses of information technology and artificial intelligence technologies significantly helps in providing client services.	**0.735**	**4.19**	**83.8%**	**5**
12	The auditor's professional specialization and knowledge in information technology and artificial intelligence technologies contributes to advancing the auditing profession in light of the ongoing developments in the electronic information environment.	**0.639**	**4.23**	**84.6%**	**3**
	Total for the second axis statements	**4.07**	**0.724**	**81.6%**	

The results presented in Table 4 reveal the following:

a. All statements in the second axis, which states (the extent to which the auditor's experience, knowledge, and professional specialization contribute to enhancing the audit process of financial statements prepared using information technology and artificial intelligence techniques), had an arithmetic mean greater than the

hypothetical mean (3). These results indicate that most members of the study sample agreed with all statements measuring the axis.

b. The statement (the auditor's availability of specialized practical experience and knowledge in accounting information technology systems and artificial intelligence techniques enables him to use this knowledge in preparing reports that enhance the quality of audit performance) recorded the highest arithmetic mean (4.35) with a standard deviation of (0.728), with a percentage of agreement in the content of the statement reaching (87%).

c. The statement (the auditor's professional specialization in information technology and artificial intelligence techniques helps enhance the assessment of risks associated with the use of these technologies and techniques) recorded the highest mean. The lowest rate of agreement was with an arithmetic mean of (3.76), greater than the hypothetical mean of (3), and with a standard deviation of (0.942), while the intensity of agreement in the content of the statement was (75.2%).

5.6 Testing and analyzing the significance of research variables

a. The first hypothesis of the research aimed to test the extent to which the auditor's practical and practical qualifications contribute to enhancing the audit process of financial statements prepared using information technology and artificial intelligence techniques.

Table 5. Testing the first hypothesis

Arithmetic mean	Standard deviation	Calculated t-value	Degrees of freedom	T-value	P -value	Significance
4.09	0.695	33.703	89	1.984	Less than 5%	Statistically significant

From the table 5 above, the hypothesis was accepted as the (P value) was less than 5% at a confidence level of 95%. This result also confirms the (t-test) in testing the significance of the contribution of the practical and practical qualification of the auditor in enhancing the process of auditing financial statements prepared in light of the use of information technology and artificial intelligence techniques, as its value reached greater than its table value. It also confirms the significant differences in favor of the arithmetic mean of (4.09), which indicates that the expressions of the first variable are significant in favor of the arithmetic mean and are greater than the hypothetical mean. Through the above, we conclude that there is a practical and practical role for the auditor in enhancing the process of auditing financial statements prepared in light of the use of information technology and artificial intelligence techniques, which contributes to improving the quality of the audit process for financial statements prepared in light of information technology and artificial intelligence techniques. This result confirms the acceptance of the first hypothesis of the research, which includes "the extent to which the practical and practical qualification of the auditor contributes to enhancing the process of auditing financial statements prepared in light of the use of information technology and artificial intelligence techniques."

b. The second hypothesis of the research aimed to test the extent to which the auditor's experience, knowledge, and professional specialization contribute to enhancing the process of auditing financial statements prepared using information technology and artificial intelligence techniques.

Table 6. Testing the Second Hypothesis

Arithmetic mean	Standard deviation	Calculated t-value	Degrees of freedom	T-value	P - value	Significance
4.07	0.724	33.703	89	1.984	Less than 5%	Statistically significant

From the table 6 above, the hypothesis was accepted as the (P value) was less than 5% at a confidence level of 95%. This result also confirms the (t-test) test in testing the significance of the contribution of the auditor's experience, knowledge and professional specialization in enhancing the audit process of financial statements prepared in light of

the use of information technology and artificial intelligence techniques, as its value reached greater than its table value. It also confirms the significant differences in favor of the arithmetic mean of (4.07), which indicates that the expressions of the second variable are significant in favor of the arithmetic mean and are greater than the hypothetical mean value. Through the above, we conclude that the availability of experience and specialized practical knowledge of accounting information technology systems, electronic internal control systems and artificial intelligence techniques for the auditor has the ability to use this knowledge in preparing reports that enhance the quality of the audit process performance, as this result confirms the acceptance of the second hypothesis "the contribution of the auditor's experience, knowledge and professional specialization in enhancing the audit process of financial statements prepared in light of the use of information technology and artificial intelligence techniques."

4. Conclusion

a. The auditor's academic and practical qualifications increase the precision of the financial statements audit process's findings prepared using information technology and artificial intelligence techniques.
b. The auditor can apply specific expertise and hands-on experience in artificial intelligence techniques and information technology accounting systems to prepare reports that enhance the quality of the audit process.
c. The results indicated the significant contribution of the auditor's practical and practical qualifications in enhancing the process of auditing financial statements prepared using techniques from artificial intelligence and information technology, This is in terms of the importance of the auditor's academic and practical qualifications in developing appropriate plans for performance and in increasing the efficiency and effectiveness of the data audit process
d. The results indicated the significant contribution of the auditor's expertise, experience, and area of expertise in improving the auditing process of financial statements created with artificial intelligence and information technology, in terms of periodically updating their professional and practical knowledge of information technology and artificial intelligence techniques, which contributes to enabling the auditor to perform his work with high efficiency and effectiveness and a greater ability to collect evidence, which is reflected in the preparation of a high-quality report that enhances the auditing process.

Recommendations

a. Emphasize the necessity of professional organizations dedicated to regulating accounting and auditing, as well as the necessity for the accounting and auditing profession to keep up with the quick advancements in artificial intelligence and the accounting information technology environment. to monitor developments in the field of artificial intelligence and establish frameworks and standards appropriate to the applications of these technologies.
b. Emphasize the need to encourage auditors and accountants to acquire greater experience, knowledge, and competence related to auditing financial statements using electronic accounting systems and artificial intelligence technologies by participating in courses, seminars, workshops, and all aspects that enhance their knowledge and experience in this field.
c. Increase the holding of scientific conferences, seminars, and workshops that highlight the importance of academic and practical training for accountants and auditors, particularly with regard to accounting processes and auditing modern electronic accounting systems.
d. The need for specialized professional organizations in Iraq, especially the Accountants and Auditors Syndicate, to develop intensive training programs for auditors to keep pace with rapid developments in artificial intelligence technologies and electronic accounting systems.
e. The need to focus on developing curricula in universities, institutes, and professional accounting institutions that focus on teaching the latest

developments in accounting information technology and the use of artificial intelligence techniques in the field of accounting and auditing, in a way that serves the labor market in order to keep pace with these developments and their impact on the professional qualifications of accountants and auditors.

REFERENCES

[1] R. A. Abdullah, A. Ahmed, and E. T. Abdel-Baqi, "The Role of the External Auditor's Professional Experience in Detecting Fraudulent Application of Alternative Accounting Policies," Journal of Economic and Social Studies, Dongola University, Faculty of Economics and Administrative Sciences, Issue 9, 2019.

[2] Y. S. Al-Frijat, M. E. Al-Hajaia, and M. E., "AUDITOR'S TECHNICAL, DIGITAL, AND CREATIVITY SKILLS AND THEIR ROLE IN SUPPORTING AUDIT OUTCOMES IN LIGHT OF DIGITAL TRANSFORMATION STRATEGY," Corporate Board: Role, Duties and Composition, vol. 21, no. 1, 2025.

[3] M. Y. Al-Adimi, "Variables Associated with the Personality of the Auditor and Their Impact on Performance Quality," Journal of Business and Administrative Studies, Issue 4, Alexandria University, 2016.

[4] M. A. Al-Diyasti, "A Proposed Framework for the Components of Auditing Expertise: An Applied Study of the Central Auditing Organization," Egyptian Journal of Business Studies, vol. 36, no. 3, Mansoura University, 2001.

[5] A. H. S. Al-Hasban, "Measuring the Ability of Internal Control Systems to Keep Up with Information Technology Requirements in Jordanian Public Shareholding Companies," Unpublished PhD Thesis, Amman Arab University for Graduate Studies, Amman, Jordan, 2009.

[6] N. M. S. Al-Kassah and N. M. B. Naim, "The Scientific and Practical Qualification of the External Auditor and Its Impact on the Auditing Process: An Applied Study," Al-Zaytoonah University Journal, Issue 32, 2020.

[7] M. T. S. Al-Maqtari, "The Importance of Professional Specialization in the Auditor in Improving Audit Risk Assessment," Damascus University Journal of Economic Sciences, vol. 27, no. 4, 2011. - J. A. Amirhom, "The Impact of Using Artificial Intelligence Applications on the Future of the Accounting and Auditing Profession: A Field Study," Journal of Financial and Commercial Research, Port Said University, vol. 23, no. 2, 2022.

[8] H. A. H. Al-Mustawfi, "The Impact of Information Technology on Enhancing the Effectiveness and Efficiency of Accounting Data," Al-Mustansiriya Journal of Arab and International Studies, vol. 16, no. 66, 2019.

[9] F. Al-Mutairi, "The Importance of Information Technology in Controlling Audit Quality and Obstacles to Its Use from the Perspective of Auditors in the State of Kuwait," Master's Thesis, Middle East University, Jordan, 2013.

[10] H. Y. Al-Qadi and H. A. Dahdouh, Advanced Auditing: Theoretical Framework and Practical Procedures, 1st ed., Dar Al-Thaqafa for Publishing and Distribution, Amman, 2009.

[11] A. I. Al-Samarrai and N. A. A. Al-Sharida, "The Role of Artificial Intelligence Technologies Using Digital Auditing in Achieving Audit Quality and Supporting its Strategies from the Perspective of Auditors - A Field Study in Audit Firms in the Kingdom of Bahrain," International Journal of Economics and Business, vol. 8, no. 1, 2020.

[12] R. Aqab, "The Importance of the External Auditor's Professional Specialization in the Accounting Information System in Providing Auditing Services in an Information Technology Environment: A Field Study in Jordanian Banks," Al-Balqa Journal of Research and Studies, vol. 23, no. 1, 2020.

[13] M. N. A. Bakhit, "Measuring and Interpreting the Auditor's Cognitive Dimension to Increase the Efficiency and Effectiveness of the Auditing Process," Unpublished PhD Thesis, Faculty of Commerce, Ain Shams University, Egypt, 2004.

[14] S. El-Sayed Fouda, "The Quality of the Auditor's Professional Performance and Its Impact on the Behavior of Stock Prices," Journal of Commercial and Administrative Studies, Faculty of Commerce, Alexandria University, Issue 1, 2008.

[15] Z. Li and L. Zheng, "The Impact of Artificial Intelligence on Accounting," in 2018 4th International Conference on Social Science and Higher Education, Atlantis Press, pp. 971–978, 2018.

[16] A. E. L. S. Ahmed, "The Effects of Professional Experience on the Efficiency and Effectiveness of Auditors' Decisions and Judgments," Scientific Journal of Economics and Commerce, Supplement to Issue 1, Faculty of Commerce, Ain Shams University, 1995.

[17] Z. Zahoufi, "External Auditor Qualification Systems in Light of Electronic Accounting Data Processing," Journal of Financial Accounting and Auditing, vol. 1, no. 2, 2019.

[18] L. C. Odoh, S. C. Ochefu, U. B. Ugwuanyi, and N. V. Chukwuani, "Effect of Artificial Intelligence on the Performance of Accounting Operations among Accounting Firms in South East Nigeria," Asian Journal of Economics, Business and Accounting, vol. 7, no. 2, pp. 1–11, 2018.

[19] S. Safahloo and R. J. Bouzian, "The Use of Information Technology in Auditing and Its Impact on the Training and Qualification of Auditors," Journal of Accounting and Financial Auditing, vol. 1, no. 2, Algeria, 2019.

[20] S. E. Sayed Shehata, "The Impact of Auditors' Experience and the Evaluation of Their Establishments on the Quality of External Auditing," Faculty of Commerce Journal for Scientific Research, Alexandria University, Faculty of Commerce, vol. 25, no. 2, 2015.

[21] S. Sutton, M. Holt, and V. Arnold, "The reports of my death are greatly exaggerated – artificial intelligence research in accounting," International Journal of Accounting Information Systems, vol. 22, pp. 60–73, 2016. https://doi.org/10.1016/j.accinf.2016.07.005.

[22] I. E. Othman Yassin, "External Auditor Professional Experience and Its Role in Evaluating Some Factors Associated with Audit Risk," Master's Thesis, Nilein University, College of Graduate Studies, Sudan, 2016.

[23] K. Law and M. Shen, "How Does Artificial Intelligence Shape the Audit Industry," pp. 5–43, Available at SSRN 37183243. Electronic copy available at: https://ssrn.com/abstract=3718343, Nanyang Business School Research Paper No. 20-31, 2020.

[24] R. Sari and S. Andrian, "The Influence of Professional Skepticism, Auditor's Experiences, and Competency on Fraud Detection," International Journal of Research in Business & Social Science, vol. 12, no. 3, 2023.

[25] R. Soleimani, S. Mohammed, F. Rashed, and W. W. Elkelish, "The Impact of Artificial Intelligence on Corporate Control," Corporate Ownership & Control, vol. 17, no. 3, pp. 171–178, 2020.