
Information Technology's Place in the Auditing Process and Auditors' Training

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Abstract:

Information technology is used in the auditing process when any type of IT-based system is applied to assist the auditor in carrying out their duties in accordance with both IT-related and generally accepted auditing standards. This entails expressing an opinion on the dependability and correctness of financial statements. Before providing such an opinion, the auditor must gather sufficient and relevant information to support their conclusions. Compared to traditional methods, the kinds of audit evidence, procedures for gathering them, and methods for storing them have changed in the context of electronic accounting. As a result, auditors are now insufficiently knowledgeable about financial accounting and auditing. They must now pursue training and education in IT. Numerous studies have demonstrated that auditors must meet the requirements to manage electronic information systems and successfully complete the audit process in an IT environment, regardless of whether they are conducting the audit through, around, or on a computer. Despite all of its advantages, this technology is not without risk. These risks may surface during audit challenges, where the auditor may provide a subpar audit opinion in the meantime the financial.

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1. Introduction:

Information technology (IT) is very important because of its sophisticated tools. Since the industrial revolution, nothing has had a greater impact on human life than IT, which is now essential to the lives of individuals, organizations, and nations. The globe is seeing a dramatic shift in technology as computers, software, and communication gadgets continue to advance, and tools. Many modern organizations have adopted IT to manage their operations and process data, as it helps build successful businesses, foster strong customer relationships, increase market share, and improve productivity.

These developments in IT have posed a significant challenge for the auditing profession to develop its tools and methods to continue providing high-quality services. IT can help the auditing profession overcome some human shortcomings when exercising proper professional judgment and forming opinions. Since the audit process requires advanced methods to enhance the reliability of financial statements, auditors must keep up with technological developments, which necessitates high-level technical and material skills to be employed in the auditing process. Because of this, auditors now need to have additional training in IT and its application in the audit process, on top of their training in accounting and auditing.

This research study attempts to answer the following question in order to clarify the meaning of IT, how it is applied in auditing, and what educational background and real-world experience are required of auditors working in an IT environment: **What effect does IT have on auditor qualification and training, and how is it employed in auditing?**

This question is answered through the following points:

- The idea, goals, significance, and applications of IT in auditing.
- In an IT context, audit standards and audit evidence.
- The educational and professional requirements for auditors working in an IT setting.
- IT-based auditing techniques.
- Dangers associated with IT auditing.

2. The idea, goals, and significance of IT as well as its applications in auditing:

Information Technology has become one of the most important tools used by various types of organizations, whether profit-oriented or not, in their operations, whether in planning, supervision, documentation, administrative affairs, accounting, or other activities. At the same time, the audit process has seen increasing development in line with advancements in IT within these organizations and companies. As a result, what is known as computer system auditing or IT auditing has emerged. This field has seen continuous development, and the auditing profession has become increasingly concerned with it, with the issuance of professional standards guiding auditors in this field.

2.1. Information Technology Concept:

There is no exact meaning for the term "Information Technology" (IT) on a global, Arab, or local level, neither practically nor scientifically. This is because IT creates a wide range of environments and activities. Even though computers are used in every aspect of life, some people only consider using computers. (Jumaa, 2011).

2.1.1. Key Definitions Related to Information Technology

Systems and equipment that use contemporary technology to send information to the intended recipients quickly, easily, and with the least amount of work are referred to as information technology, or IT (Al-Mutairi, 2013). According to Al-Taie (2010), it can also be described as a collection of methods that involve instruments, machinery, and gadgets that can be used expertly and skillfully to produce information and knowledge. Technology (IT) can also be defined as the application of computers and other sophisticated tools by trained professionals who possess the technical know-how needed to store, process, and quickly transform data into trustworthy information that can be used quickly for decision-making (Al-Hasban, 2009).

From these definitions, IT can be described as technology that relies on computers and other advanced tools to process data that is obtained, with the goal of achieving speed in its processing, storage, and retrieval, and transforming it into reliable information for decision-making at the appropriate moment.

2.1.2. Information Technology's Significance

Al-Taie (2010) provided the following summary of the significance of IT:

- Eliminating time incentives in the world of finance, business, commerce, and others. With IT, it is now possible to close deals within seconds, at any time, via the internet or electronic devices.
- IT allows for the expansion of computer networks, enabling direct communication between computers and facilitating the exchange of inputs and outputs through these networks.
- IT development has met the economic and social advancements and the expansion of goals, serving both business owners and society at large.
- By implementing contemporary technical techniques, especially high accuracy, cutting expenses, saving time, and lowering dangers related to the quick increase of information and data, the usage of IT enhances the quality of work produced.

2.1.3. The Features of the Accounting Information System

Operating, processing, storing, transferring, and extracting financial data via computers, communication devices, and networks all depend on the accounting information system (AIS). For it to be successful and efficient, it needs to have a few qualities. "An integrated structure within an economic entity that uses available resources and other parts to transform economic data into accounting information to meet the needs of different informationusers" is how the AIS is defined (Al-Saqqa and Eth, 2006). It may also be referred to as "a

fundamental and important part of the management information system in the economic entity, which collects financial data from external and internal sources, processes it, and converts it into useful financial information for both internal and external users" (Dahmash and Abu Zour, 2005).

It is noteworthy that paying attention to AIS design enhances procedural efficiency, lowers costs, boosts decision-making capacities, and promotes knowledge exchange. The design of electronic AIS is influenced by an institution's organizational structure, as well as by the operational strategies, tactics, and degree of IT infrastructure that the institution has access to (Al-Dahrawi, 2010). Therefore, giving accounting information to different users is the main goal of any AIS.

The AIS has several characteristics that make it a vital system, ensuring it fulfills its intended function in the organization. According to Al-Dayya (2009), these characteristics include:

- Achieving a high degree of accuracy and speed in processing financial data when transforming it into information.
- Providing managers with timely access to the accounting data they need to make decisions.
- Giving management the data they require to monitor and assess the economic entity's operations.
- Providing management with the data required for short-, medium-, and long-term business planning.
- Having the ability to quickly and precisely get functional and quantitative data from its databases when needed, while maintaining enough flexibility to update and develop it in response to organizational changes.

2.2. The Purpose of Auditing in the Information Technology Context:

According to Jumaa (2009), "the defined audit objectives for the auditor do not change whether accounting data is processed manually or through the use of computers" (paragraph (12) of International Standard No. (401), published by the International Federation of Accountants. Consequently, the use of IT in auditing has not altered the audit's overall goal. Computer use, however, changes how financial data is handled, saved, retrieved, and shared, which could have an impact on the company's internal control systems and accounting. The following are the goals of auditing when utilizing IT (Hung and Wen, 2011):

- Ensuring the effectiveness of internal controls over data, computers, and networks from unauthorized access, aimed at copying, modifying, and destroying;
- Ensuring that software acquisition and development are carried out under management authorization;
- Ensuring that financial operations, files, reports, and any other electronic records are processed accurately and completely;
- Ensuring that erroneous source data is identified and processed according to management policies;
- Ensuring the accuracy, completeness, and confidentiality of files stored in electronic accounting information systems.

2.3. The Significance of Auditing in the Information Technology Context:

In general, the cost of the audit process is decreased and clerical and math labor is reduced when computers are used in various auditing domains. The following advantages make it crucial for usage in auditing fields (Al-Dinibat, 2010):

- Raising the overall caliber of the audit process and strengthening the decision-making and personal judgment processes;
- Improving audit businesses' standing as a result of using computers to do audits, which uplifts clients' positive opinions;
- The possibility of utilizing modern methods and conducting audits using specialized computer software, which increases the chances of audit firms acquiring more clients.

2.4. Areas of IT Use in Auditing

The main areas where IT is used in auditing are as follows:

- Ensuring trust in the electronic exchange of data and information: With current and anticipated technological advancements, new systems for expertise and decision support via electronic computers will allow the auditor to integrate personal judgment with computer outputs (through human/machine interaction to produce information). This information is meaningful and can meet the decision-making requirements of information users (Al-Bakou, 2006).
- When auditing comprehensive electronic information systems, trust in the electronically exchanged data should be confirmed using a systems approach to audit planning (Moorthy et al., 2011).
- There are several levels of auditors involved in the audit process, differing in their knowledge and expertise in electronic information systems and how to audit them using electronic devices and software. Auditors should link audit objectives with the controls on these processes while coordinating between advanced technology devices, specialized software, and the skills needed for the audit process (Amin Lotfi, 2005).

3. Auditing Standards and Evidence in the Context of Using Information Technology:

Auditing standards serve as clear benchmarks through which we can evaluate the auditing process and assess its effectiveness. Auditing standards are defined as the behavioral patterns that the auditor must follow when carrying out their duties. They serve as guidelines enabling professionals to refer to them when making judgments. The work quality, the goals to be met, the professional attributes of the auditor, and their decisions made during fieldwork and report preparation are the main topics of these standards (Ya'qub, 2012, p. 56). The information that the auditor obtained in order to draw the conclusions that serve as the foundation for their view is known as audit evidence. A presentation of these criteria and the supporting data is given below.

3.1. Information Technology Use-Related Auditing Standards

The International Auditing and Assurance Standards Board (IAASB) released a number of International Audit Practice Statements beginning in 1987, revised in 2001, and discontinued in 2004 in response to the growing use of IT and its effects on auditing. In 2008, the International Standard on Auditing (ISA) No. 315 was updated, and the sections under "Understanding the entity and its environment, including the risks of material misstatement" (Jumaa, 2009, p.15) included references to them. The most important of these statements are as follows (Al-Khuzam and Al-Ghurair, 2008, p.25):

- International Audit Practice Statement No. "1001": "Electronic Information Systems Environment with the Use of Small Computers." This statement helps auditors apply international auditing standards when the audited entity relies heavily or entirely on small computers for its financial data.
- International Audit Practice Statement No. "1002": "Electronic Information Systems Environment with Direct Computer Systems," highlights direct computer systems that allow users to access data and programs directly through terminals.
- "1003"-International Audit Practice Statement: "Electronic Information Systems and the Use of Databases."
- "Auditing in an Electronic Information Systems Environment," or ISA 401, outlines the steps for performing audits on organizations that process their financial data electronically.

3.2. Electronic Audit Evidence

Gathering enough and trustworthy audit evidence is the goal of fieldwork in auditing so that the ultimate goal of expressing an opinion on the financial statements can be accomplished. The core of the audit process is the study and interpretation of the audit evidence, which must be used to support the conclusions reached by the auditor. The nature, methods of collection, and preservation of audit evidence have evolved in the electronic accounting environment when compared to manual evidence. Furthermore, evidence has surfaced that was not available in the manual environment. The concept of electronic audit evidence, together with its attributes, issues, and suggested fixes, are given below (Burkayib, 2017, p.146).

3.2.1 Definition of Electronic Audit Evidence

All information prepared, transmitted, exchanged, processed, recorded, and/or stored electronically to support the auditor's opinion and the contents of the audit report on financial statements is considered electronic audit evidence, according to the Canadian Institute of Chartered Accountants' definition in its report (Paramnanathan, 2014, p.04). This study also makes it clear that electronic evidence can potentially take the form of photos, videos, or audio recordings in addition to electronic documents and papers. Even in this scenario, the audit evidence is still deemed electronic rather than manual because it is prepared, delivered, and stored electronically (Paramnanathan, 2014, p.05).

However, some auditors would rather print electronic audit evidence and convert it to paper format. While some electronic accounting systems simply give electronic audit proof, others generate a combination of manual and electronic evidence. Checks, bank transfer orders, purchase orders, and invoices are now processed via Electronic Data Interchange (EDI) systems. Moreover, photocopies have been supplanted by image processing systems (AICPA, 1972, p. 18). Gathering this data without the use of IT is impossible because accounting records have become electronic, with the exception of reports, financial statements, and summarized compilations, which are printed.

3.2.2. Characteristics of Electronic Audit Evidence

For the purpose of evaluating the financial statements' fairness and trustworthiness, the auditor must be persuaded by the audit evidence. Here, two requirements must be met in order for there to be persuasiveness: the evidence must be both sufficient and relevant (A, Aren!, Beasl, Elder, 2014, p.176).

- **Relevance:** This is the evidence quality metric, which is based on two factors: the evidence's form and substance reliability as well as its relevance to the audit's objectives.
- **Sufficiency:** Based on the size of the audit samples the auditor utilized, this is a measurement of the volume and amount of evidence required to meet the audit objective. The sufficiency increases with sample size. The appropriateness and adequacy of audit evidence are closely related. Accordingly, the risk of material misstatements (the higher the risk, the more convincing evidence is needed) and the quality of the evidence (the higher the quality, the less quantity is needed) determine how much evidence is needed to form a sound professional opinion (ISA 500).

3.2.3. Issues Related to Electronic Audit Evidence and Proposed Solutions to Overcome Them

The main issues related to electronic audit evidence and some proposed solutions to overcome them can be summarized in Table 01 below.

Table 01: Key Points of Problems Related to Electronic Evidence

Issues and Concerns	Issues and Concerns
Dependency on electronic audit evidence: The evidence's dependability depends on its legality, consistency, and integrity of the electronic system that produced it. - In an electronic setting, conventional techniques for gathering high-quality evidence—such as inspection, observation, questioning, and confirmations—might not be appropriate.	A robust internal control system that guarantees the security, accuracy, completeness, dependability, and integrity of the data produced by the electronic system is necessary to gather adequate and high-quality audit evidence. The auditor should concentrate on the efficacy of internal control rather than the quality of the evidence if these requirements are met, as this will result in high-quality audit evidence.
Different forms of electronic audit evidence: - Electronic information may be incomplete or partial, or the auditor may not be able to determine whether the information received is complete and unaltered. - Electronic information may constitute incomplete audit evidence, and the auditor's failure to detect this may lead to reliance on a false representation of the company.	To ensure the consistency and completeness of the data and information gathered, the auditor must possess the necessary IT knowledge and be qualified to apply electronic audit procedures, such as using general audit software.
Access to audit evidence: - Information may not be available to the auditor due to loss or lack of backup, or because the company uses new accounting software incompatible with the old technology, making it unreadable.	The auditor must be able to use computer-assisted audit tools appropriately and/or rely on continuous auditing.
Incompatibility of electronic evidence collection tools: - The technology used to extract information from the electronic system may malfunction, rendering it incapable of extracting information completely. - Lack of data organization in unified files within the programs may prevent the auditor from obtaining interconnected and complete evidence.	The auditor must have sufficient knowledge of the IT system in general and be qualified to use the accounting software used by the audited company, capable of assessing it, understanding its functionality, and identifying its weaknesses.
Error detection: Unnoticed alterations and distortions can lead to inaccuracies in audit evidence, hence augmenting audit risk. - Data transfer errors, hacking errors, or undetectable modification errors.	The company's electronic systems must incorporate error prevention measures, and the auditor is responsible for testing and assessing the internal control system's capacity to stop and identify errors.
Assessment of internal controls: - Because electronic control methods are opaque, it is challenging to verify their efficacy. The efficacy of the internal control framework determines the caliber of audit evidence. - Internal control effectiveness is called into question because of the diminished division of responsibilities brought about by the technological environment.	In order to properly undertake the evaluation of the electronic internal control system, the auditor must have adequate IT skills, or they should consult an IT specialist who is a member of the audit team.

Source: (Nour El Din El Safty, 2009, pp. 32-33)

An important conclusion that can be drawn from table (1) is that the problems associated with electronic audit evidence are not only a product of the evidence's electronic format; rather, they stem from the accounting environment's general shift to an electronic one. This covers the elements of the new electronic evidence collection methods, internal control systems, and the electronic accounting information system. We further note that auditors who concentrate on acquiring specific knowledge in information technology will be better equipped to address these issues.

4. Scientific and Practical Qualifications for Auditors in an IT Environment

The auditor must have the scientific and practical credentials required for their position in order to grasp the fundamentals of information technology as a component of the auditing environment and as a tool for completing the audit process. This is especially significant since the public considers auditors to be knowledgeable and skilled professionals in all areas of expertise (Abu Owaisa, 2017, p. 83). In order to stay current with technical changes, the auditor must possess not just a foundational education, such as a university degree, but also ongoing education (Abu Owaisa, 2017, p. 83).

4.1. The training of auditors to handle information technology as an integral part of the audit

environment has been a concern for many international professional organizations related to auditing. Each organization has developed a qualification model that aligns with its view of the knowledge areas that auditors must be proficient in. Among the most important of these models, we mention the following (Bourkaib, 2017, pp. 227-235):

4.1.1 Information Technology for Accountants, International Education Practice Statement IEPS 2.

The International Accounting Education Standards Board (AESB1) of the International Federation of Accountants (IFAC) released the second International Education Practice Statement (IEPS2), "Information Technology for Professional Accountants," with the goal of helping IFAC members implement generally accepted good practices in the education and development of auditors' competency to work in an IT environment. It offers direction for implementing best practices in education (IFAC, 2014, p. 05). The first IEPS2 discusses auditor qualification to handle IT as a tool for conducting audits and as a component of the audit environment. This section, which is split into two sections-one about education prior to earning the title of auditor and the other about guidelines for handling IT in the workplace-focuses on these issues (IFAC, 2014, p.126).

- **Pre-qualification Education:** According to the first IEPS2, candidates for the audit profession should be trained in and educated in five information technology-related subjects (IFAC, 2014, p. 126).

- General information technology understanding;
- Information technology control knowledge;
- IT control competency;

- Information technology use competency; and at least one of the following roles: manager, evaluator, or information system designer.
- **Education Following Qualification:** IEPs2's second section offers guidelines for making sure auditors receive ongoing training even after they start working in the field. Maintaining the abilities that the auditor gained during the earlier educational phase and adapting these skills to new technology breakthroughs are the goals of ongoing training (IFAC, 2014, p. 137). The areas of continuous education are the same as those of foundational education, but they incorporate new developments in technology.

4.1.2 Information Technology as a Component of the Auditing Environment: The American Institute of Certified Public Accountants (AICPA) Educational Framework

The "Core Competency Framework," published by the AICPA in 2008, is a list of essential skills required to move on with the qualification process for those wishing to work in auditing. The training program is a cohesive method that starts in university and helps students make the transition from academic life to professional life. It is not separated into foundational or continuing training. In their professional lives, they must adhere to this paradigm even when they are not in the classroom (Bourkaib, 2017, p. 235).

4.2 Providing IT as a Tool for Auditors to Use in the Audit Process

The International Education Guide of the International Federation of Accountants (IFAC) and the educational curriculum of the American Institute of Certified Public Accountants (AICPA) have considered the use of information technology as a tool in the auditing process as follows:

4.2.1 International Education Practice Statement (IEPS) 2, when considering information technology as a tool in the audit process:

Three primary areas should be covered, according to the International Education Practice Statement (IEPS2), which addresses auditor certification with reference to information technology literature and information technology application in the audit process (IFAC, 2014, p. 138):

- Applying control over human resource information systems;
- Understanding management and accounting information systems;
- Putting into practice the proper IT systems and tools for handling administrative and accounting concerns.

Although IEPS 2 defines these abilities as covering general issues, they also involve using office software (Office), particularly Word, Excel, and PowerPoint. It also entails using accounting software that businesses frequently use, operating all computer-assisted audit tools (CAATs), conducting electronic information searches, managing and storing electronic files, and comprehending the concepts and procedures associated with electronic authentication (IFAC, 2014, p.168).

4.2.2 Information Technology as a Tool in the Audit Process: An Examination of the American Institute of Certified Public Accountants' (AICPA) Educational Curriculum

The American Institute of Certified Public Accountants (AICPA) has developed a Core Competency Framework that outlines the necessary competencies for performing audits using information technology. The competencies mentioned in the second International Education Practice Statement (IEPS2) are identical to these ones. The curriculum outlines the functional abilities required of an auditor in order for them to be able to use information technology as a tool to carry out their duties. The auditor must be able to do the following in order to meet the information technology goal (AICPA, 2016, p. 04):

- Access and use the company's databases for decision-making;
- Use computer-aided audit tools (CAATs) to manage audit files and working papers, assess audit risk, and review internal control systems.
- Create models of the business's activities using Excel and other software.

5. Information Technology-Based Auditing Techniques

The three types of information technology auditing methodologies are auditing via, auditing around, and auditing using computers.

5.1 Surveilling the Computer Area

In electronic data processing systems, a technique called Auditing Around the Computer is employed. It ignores the processing part of the system and concentrates only on inputs and outputs. Without taking into account the underlying workings of the computer, it is assumed that general control systems guarantee the correctness of inputs and outputs. The auditor ignores internal processing in favor of concentrating on the data inputs and outputs. (Abidi, 2012)

5.2 Auditing Through the Computer

As auditors' familiarity with electronic data processing systems grows, increasingly sophisticated techniques for evaluating program accuracy have been created, replacing the outdated approach of viewing the computer as a "black box." The process is called "Auditing Through the Computer." Frequently, the auditor discovers that auditing just the computer is inadequate and that internal controls inside the systems, as well as auditing inputs, outputs, and processing procedures, are the areas that require attention. This approach makes the assumption that accurate results will result from accurate inputs and processing. Auditors test the internal workings of the computer systems using a method called Computer-Assisted Audit Techniques (CAATs). (Aboughaya, 2009), and the following is a breakdown of the key techniques (Arens, et al., 2012).

❖ Key Techniques in Auditing Through the Computer:

5.2.1. Test Data Technique: The auditor prepares both valid and invalid input data and processes them through the company's programs to compare the results with predetermined outcomes, assessing the correctness and efficiency of the processing operations. (Al-Matarneh, 2009)

5.2.2. Parallel Simulation: a system that replicates the client's system by using the auditor's software to enter the client's real data and guarantee matched outcomes. Several times a year, this procedure is carried out utilizing applications that are comparable to ones the client uses. Al-Dhneibat (2010)

5.2.3. Integrated Audit Model: With this method, the auditor generates dummy files to add to the client's files in order to capture transactions or balances that fit predetermined criteria, so forming tiny subsystems within the client's computer system. (Arens and others, 2012)

❖ Integrated Test Facility (ITF):

This method extends previous approaches by allowing the auditor to create a hypothetical economic entity and process its data using the client's software, simulating a full range of operations. (Al-Dhneibat, 2010)

5.2.4. Concurrent Processing: A technique involving modifying software programs to meet audit objectives, where supervisory programs are designed to monitor data processing, ensuring the accuracy of real data during electronic processing. (Al-Saadi, 2010)

5.2.5. Tagging and Tracing Techniques: In order to assure proper data management, this entails tracing data via intricate systems by marking certain computer-processed transactions and adhering to the processing procedures. (Hijazi, 2010)

5.3. Computer-Assisted Auditing:

Using electronic audit programs, the auditor audits electronic systems in accordance with this method. These programs can be made specific for a given audit or general, which means they are made to carry out the audit process. These programs carry out a number of duties required to carry out the audit. With this method, the auditor conducts the audit using a computer (Auditing with Computer). Computer programs can be utilized for a variety of audit duties at any point during the audit process, including planning, carrying out control tests, and conducting comprehensive testing. These applications are used for organizing, recording, choosing their components, calculating sample sizes, and assessing the outcomes. Numerous programs are employed for these objectives (Dhneibat, 2010).

5.3.1. Programs for Special Audits

One strategy that external auditors employ to accomplish particular goals during the audit process is this one. These programs are made to work with the client's information system, enabling access to data stored in a format that can be read by computers. These applications can then be used by the auditor to conduct audit

procedures. These programs are made to carry out specific audit functions in harmony with the system of the customer. The auditor confers with the client's program designers or specialists in these systems when creating these programs. The following factors need to be taken into mind when creating these programs (Jumaa, 2012):

- These programs should align with the audit's objectives, which requires defining the goals before designing the programs.
- A procedural description of all details related to the task or process must be provided to ensure that all aspects are considered when designing the program.
- To illustrate the order of operations, from inputs to processes and outputs, a flowchart needs to be made.
- Using these procedures as a guide, the auditor collaborates with subject-matter experts to build the program.
- To make sure the program meets its goals and is error-free, it should be tested.

5.3.2. General Audit Programs

Regardless of the kind of business or sector, these applications are made to enable the auditor to use them for auditing different kinds of electronic data processing systems. These are universal programs that can be utilized with a wide range of clients and applications; they are not tailored to any one application or client. They are employed in verification tests of balances, totals, and computations for numerous accounts and procedures, including reorder inventories, discounts, provisions, and financial ratio computations. The following are some audit tasks that the auditor can carry out using the electronic computer's capabilities (Abu Ghayah, 2009).

❖ Verifying the accuracy of calculations:

- Extracting abnormal balances.
- Using the capabilities of electronic computers to regenerate financial statements and reports at short intervals.
- Gaining access to informational feedback mechanisms.

6. Dangers associated with information technology use in auditing

Because IT risk has an impact on researching and assessing internal control systems in different firms, interest in the auditing profession has grown in relation to IT risk. Since these risks may have an impact on a company's sustainability due to the unreliability of data and information, many businesses are attempting to examine the risks connected with information technology by defining risk factors for each area and concentrating on installing controls (Al-Husban2009).

6.1. IT environment auditing risks:

Statement No. (11) made reference to the idea of audit risk, which the American Institute of Certified Public Accountants (AICPA) defined as "the risk arising from the auditor's failure, without being aware, to express an appropriate opinion regarding financial statements that contain material errors." Audit risk is described as "the

auditor's unintentional failure to appropriately amend their opinion on financial statements that are materially misstated" in the audit guidelines published by professional organizations (Farjani, 2013).

Audit risk is additionally referred to as "the risk that arises when the auditor issues an inappropriate opinion in their report on the information contained in the financial statements when those statements contain material errors." Audit risk has drawn attention from numerous professional bodies due to the substantial influence that electronic data processing systems have on the auditing process. The capacity of the auditor to identify fraud and inaccuracies (misstatements) is correlated with the quality of the audit process. The audit risk decreases and the auditor's ability to prevent fraud in error detection increases with the quality of the audit process. This provides the auditor with the assurances they need to provide an unbiased technical opinion about the integrity and correctness of the electronically created financial statements (Yaqoub, 2012).

6.2. Audit Risks in an Electronically Managed Setting

Three categories can be used to categorize audit risks: inherent, control, and detection.

6.2.1 Inherent Risk (often referred to as intrinsic or inherent risk)

Since the elements or indicators of this risk cannot be eliminated while organizing the audit process, it is one of the components of audit risk. Inherent risk has been defined by professional organizations as: "The susceptibility of a specific account balance or type of transaction to a material error, which becomes material when combined with other errors in account balances or other operations, in the absence of internal control procedures or controls." According to Al-Mutairi (2013). Clearly, the distinctive features of the organization's business and the electronic operating system in use, as well as the challenges it presents in terms of auditing it, have an impact on the degree of inherent risk. Planning the audit process requires the auditor to assess the level of inherent risk, which improves the auditor's ability to identify mistakes and infractions that could result in serious misstatements in the financial statements. Al-Saadi (2013).

6.2.2. Control Risk

Control risk is referred to as: "The risk that significant errors will not be prevented or detected by the internal control structure and its associated policies and procedures." Control risks are further defined as: "The risk of incorrect information occurring in an account balance or a class of transactions that could be material on its own, or when combined with incorrect information in other accounts or classes, which cannot be prevented, detected, or corrected in a timely manner by the accounting system or internal control system" (Al-Abidi, (2012)). Since the internal control structure contains additional control mechanisms to guard against two categories of risks, the assessment of control risk is carried out using a variety of methodologies (Badawi, 2011):

- The possibility of gaining access to private data files, considering that the central processing unit can be accessed by numerous people.

- The danger of wiping off the audit trail in order to hide instances of fraud and manipulation by the executors by updating the primary files instantly and continuously.

6.2.3. Risk Detection

Detection risk is the possibility that an internal control system may not avoid or identify substantial errors and violations in the financial statements that the auditor will overlook. According to Al-Abidi (2012), audit risk is the total likelihood of its three components: inherent risk, control risk, and detection risk. Of these, only detection risk is subject to auditor control, which may be adjusted by varying the breadth of substantive tests. By evaluating and analyzing inherent risk as well as control risk, the auditor can manage detection risk during the audit process's planning and execution phases. By regularly visiting the entity's sites and branches on a weekly or monthly basis to see how the control systems are operating, the auditor can lower the risk of detection by testing the compliance of the internal control systems. The more sophisticated and intricate automated processing systems get, the more crucial it is to carry out this test (Farjani, 2013).

6.3. Conditions and Requirements to Mitigate the Risks of Using Information Technology

According to the Arab Society of Certified Accountants (2011), the following conditions must be met to reduce these risks:

- **Security:** Security is one of the most critical issues in online interactions. It is essential to ensure the financial information is secured when the company conducts its activities, by safeguarding the system from unauthorized intrusions and ensuring the protection of information from illegal access by intruders.
- **System Availability:** Ensuring that the system is ready to function when needed, according to the established policies.
- **Integrity of Procedures During Processing:** Ensuring that the operational procedures follow the planned processes and provide accurate and authorized information at the appropriate time.
- **Online Privacy:** Making sure that the system's output is used in compliance with the guidelines established by the company's management to safeguard users' and clients' privacy.
- **Confidentiality:** Ensuring that the set confidentiality conditions for specific information are met.
- **Monitoring:** The implementation of the system should be monitored by the company's management, financial management, and other pertinent parties starting with data intake and ending with output.

Therefore, risk assessment is an ongoing responsibility of management. It should be viewed in relation to changes, opportunities, objectives, and control measures. This assessment examines threats not only to financial performance and control but also to the organization's strategies and goals (Dahmash and Abu Zour, 2005).

7. Conclusion:

External parties rely on the auditing profession when making investment and financial decisions. Consequently, boosting the level of trust that is necessary in the auditor's report depends critically on how reliable financial statements are and how much internal and external users rely on them. Auditors must stay up to date with technology advancements in order to use both material and technical abilities in the audit process, as modern approaches are needed to increase the trustworthiness of financial data.

The swift progress in information technology, especially with regard to electronic computer usage, has greatly affected institutional accounting and administrative systems, resulting in a fundamental shift in auditing methods, approaches, and systems. In contrast to the conventional manual data processing, this has consequently had an impact on the professional, academic, and personal growth of auditors.

In order to draw attention to this modification and its impact on the auditor's formation, the following study problem was put forth: What role does information technology play in auditing, and how does it affect auditor education and training?

After addressing the key points, the following conclusions were reached:

- Information technology eliminates time constraints in the fields of finance, business, and commerce, allowing transactions to be completed in seconds, at any time, via the internet or other modern technical devices.
- Information technology assists the auditing profession in overcoming some limits imposed by human nature when it comes to expressing ideas and using proper professional judgment. A system of any kind that uses information technology to help the auditor plan, control, and document audit work is applied in what is known as "Automation Audit," the use of technology in the audit process.
- The difficulties posed by electronic evidence were not just related to the evidence's electronic format; rather, they resulted from the electronic transformation of the accounting environment as a whole, encompassing new electronic processes for gathering evidence as well as internal control systems and electronic parts of the electronic accounting information system.
- A robust internal control system that guarantees the security, accuracy, completeness, dependability, and integrity of the data generated by the electronic system is necessary to collect enough high-quality evidence. When these prerequisites are satisfied, the evidence's quality is guaranteed, and the auditor concentrates more on how well internal controls are working than the evidence's quality.
- Auditors need to be knowledgeable in the accounting software used by the audited organization, have a solid understanding of information technology in general, be able to use Computer-Assisted Audit Tools (CAATs) appropriately, and be able to evaluate and comprehend the program in order to pinpoint any flaws.

- The auditor's capacity to identify mistakes and fraud has a direct bearing on the caliber of the audit process. Higher audit quality results in decreased audit risk and more precise fraud and error detection, giving the auditor the confidence to render an unbiased opinion on the accuracy of electronically created financial statements.

Recommendations:

- Auditors should acquire knowledge and competencies related to IT control and its proper usage.
- Continuous training for auditors is essential to maintain acquired skills and adapt them to technological developments.
- Auditors must learn how to use accounting software and employ all CAATs, electronic information retrieval tools, and file management tools. They should also master the concepts and techniques of electronic authentication associated with these processes.

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