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The contribution of digital information technology to the development of the accounting profession: The case of Algeria

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Abstract---This study seeks to address a major problem centered around "The role of digital information technology in the development of the accounting profession in Algeria", with a view to addressing the gap in literature that suggests that Algeria's current accounting practices are insufficient to meet the challenges of digital information technology. We have transformed the visibility of a range of ideas on digital accounting prospects as one of the requirements of the digital revolution. The study concluded that the use of digital transformation tools in the field of accounting would contribute to improving the quality of the business of accounting practitioners in Algeria.

Keywords---modern technologies; digital transformation; digital accounting; accounting profession.

1. Methodological framework of the study:

1.1. Introduction:

In recent years, the globalization phenomenon has been growing, multidimensional and secretions, the main pillars of these transformations are the rapid development of information technology, the widespread dissemination of computers and the emergence of modern information systems. (Ben Hamada & Sid, 2022,p756).

As microcomputers and processors become more important in our lives, we are increasingly hearing about new topics that have become a modern field of digital transformation with its various tools. (Big data, cloud computing, IoT, artificial intelligence and robots, block chains, 3D printer, electronic payment systems, virtual reality) and the extent to which it influences accounting theory and thinking in order to develop accounting practices. The interaction of these elements is considered as one of the research gaps that it is interested in studying in order to determine the extent to which information technology has influenced accounting theory and thinking in order to develop accounting practices.

A joint report of the Institute of Management Accounting (IMA) and the Association of Certified Accountants (ACCA) was issued in October 2013 with the participation of researchers, accounting experts and more than 2,100 members of the Institute and the Association, indicating that the top ten technologies will reformulate the accounting profession in the present and near future: Big Data, Cloud Computing, Mobil, Artificial Intelligence and Robotics, Cyber Confidentiality education, e-payment systems, virtual reality, digital service connectivity and social networking and that participants were surveyed on their expectations of the impact of technological developments on accounting thinking and practices over the next 10 years, The 81% thought they expected a change somewhat or very much to the profession, while 18% expected a complete change, while only 1% saw no change. (Jamal Ali Mohammadi, 2018,pp 7-8).

1.2. Literature Review:

One of the alphabets of scientific research is the need to build on previous studies of the research topic. This is in order to identify the research gap. A study cannot be conceived without previous studies. Therefore, we have presented the most prominent research and previous studies related to the research topic, which consists of a split between articles and interventions as follows:

Table N° 01: Previous Studies.

Authors / Year	Title	Country	Method or type of search	Most important findings
Oualid meraghni Latifa benkkouche Zakaria demdoum	Impact of Digital Transformation on Accounting Information Systems – Evidence from	Algeria	Survey of a number of Algerian economic institutions	This study found that there is a weak degree of awareness of the importance of digital transformation and a weak effort to develop accounting information systems

(2021)	Algerian Firms-			in line with the requirements of digital transformation, all because of the existence of many high-impact challenges for the development of accounting information systems in Algerian institutions.
Nasreen Kermiya and Hanifa Ben Rabi (2021)	The Accounting Profession Under Digital Technology Opportunities and Challenges.	Algeria	Analytical descriptive study	<ul style="list-style-type: none"> - Block chain technology contributes to a field of public action: responding to red tape, ensuring quality, addressing corruption, removing mediation and reducing costs; - Increase the quality of accounting information by achieving accuracy, transparency, auditability and reliability of information; - Enabling the preparation of reports in real time, thus making appropriate decisions without delay thanks to the integration of accounting information systems.

<p>Noor Al-Huda Marah and Mohammed Taulib (2022)</p>	<p>Future of The Accounting Profession Under Transformation Techniques Digital – Block Chain Technology Model -.</p>	<p>Algeria</p>	<p>Analytical descriptive study</p>	<ul style="list-style-type: none"> - Digital transformation is an imperative that has invaded all areas, including accounting; - The application of digital transformation techniques to the accounting profession faces a range of challenges such as full reliance on the Internet and the likelihood of reducing jobs; - Block chain technology changes the role of accountants by making them advisors to companies considering adopting this technology, by advising on the possible disadvantages and advantages of this system.
<p>Abdul Wahid Mohammed (2022)</p>	<p>The Challenges of Applying Block Chain Technology in Accounting</p>	<p>Algeria</p>	<p>Survey of a number of Algerian economic institutions</p>	<ul style="list-style-type: none"> - Applying the triple entry would revolutionize the accounting world by digitally recording transactions, facilitating the audit process with minimal effort and cost; - The majority of the study samples confirmed that they had never heard of this technology; - The Contribution of Digital Information Technology to The Development of The Accounting Profession - The Case of Algeria
				<ul style="list-style-type: none"> - Digitizing the work of the certified

Noara Iman (2023)	Certified Accountant Services in Light of The Adoption of Digitalization in Algeria.	Algeria	Analytical descriptive study	accountant has facilitated its functions and improved the quality of services along with time, effort and costs; - The digital transformation of the departments has made the public service upgrade and develop to improve the speed of response and the level of effectiveness of the accounting offices while performing their functions and providing services to their clients.
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Source: Prepared by the authors

By presenting previous studies, the following can be found:

- 1.** Previous studies have agreed to clarify the theoretical framework of information technology and digital transformation and their effects on the practice of the accounting profession. We have also experienced a rise in interest in the last three years in studying digital transformation and its relevance through academic research conducted in the local, Arab and international environment.
- 2.** There is agreement among researchers on the importance of the use of information technology and the need to move towards digital transformation in business organizations. This is due to the impact of this transformation on many areas including the practice of the accounting and auditing profession and its systems, which demonstrates the importance of the use of information technology under digitization, the topic of the use of information technology and the need to move towards digital transformation is therefore of vital importance given its positive impact on various journals, including accounting practices.
- 3.** The current study agreed with previous studies, which aim to learn about the impact of digital transformation on the exercise of the accounting and auditing profession. The current study differs from previous studies by addressing the impact of digital transformation on the development of the accounting profession through the presentation of the digitization of the accounting business in Algeria.
- 4.** Although studies on digital transformation are numerous, there are few studies in the local business environment to the researcher's knowledge, and foreign studies applied in different environments from the local environment, and their results are therefore difficult to generalize and there is therefore a need to study the impact of the contribution of information technology to the development of the accounting profession in Algeria.

1.3. Problem Statement:

Digital technology increasingly affects the accounting and auditing profession as we become faced with the need to adapt to the conditions and variables created by information technology by taking advantage of the use of this technology while performing tasks. In view of the impact of the fourth and fifth industrial revolution, accounting practitioners must respond to changes and developments resulting from digitization and technological developments, according to the foregoing, the problem of research is evident in the following question:

How Much Has Digital Information Technology Contributed to The Development of Algeria's Accounting Profession?

To answer the question, we ask the sub-questions derived from the main question in order to address all aspects of the research as follows:

- What are the new trends of the accounting profession under modern information technology and digital transformation?
- Which departments and bodies have adopted digitization and are dealt with by accountants?
- How will digital transformation contribute to the development and improvement of accounting practices?

1.4. Objectives of the study:

The research aims to examine the extent to which IT contributes to the development of the accounting profession as a requirement for digital transformation and the impact of its various tools on accounting practices. This goal has several sub-objectives:

- ✓ Presentation of the most important technologies and identification of the mechanism of their work, and the impact of their application on the area of accounting and finance;
- ✓ Knowledge of new opportunities created in the accounting profession through digitization;
- ✓ Trying to highlight the most important advantages of using technology and digitization in the accounting profession and its challenges.

The importance of the study is as follow:

First: Scientific significance: This study derives its importance from the importance of the topic on which it is considered as one of the topics at the international and local level. It is one of the topics relevant to the field of accounting and auditing, and this is the result of the enormous surge in information technology and the emergence of the need to respond to the requirements of digital transformation in accounting work, this has led us to try to recognize the extent to which accounting work is affected by these requirements. This study is therefore a new addition to the Library of Studies and Literature on this subject.

Second: Practical importance: The results of the study will provide both researchers and those interested in accounting and even government and professional bodies with important information in order to work on the development of professional practices in order to meet the requirements of accounting work in the digital environment and it is hoped that the results of this

study will be used in some subsequent research that could address the same topic through other dimensions and perspectives.

1.5. Methodology:

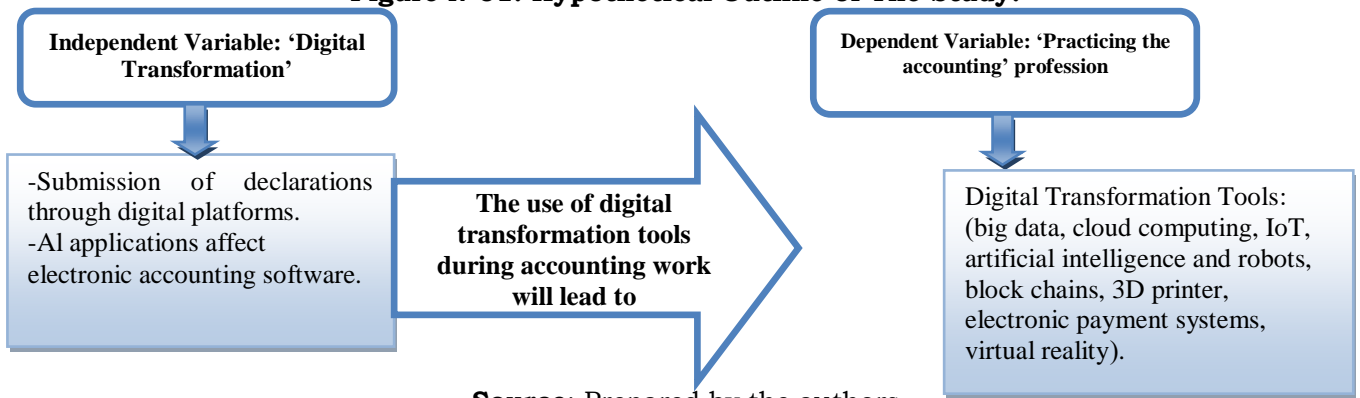
For the purpose of the study topic in accounting literature, we adopt the qualitative approach through extrapolation and extrapolation in theory. In order to ascertain the validity of the study hypotheses or deny them and produce the results of the study, the most important methods and methods used in private accounting offices and accounting and financial interests in institutions and companies.

For the purpose of the study topic in accounting literature, we adopt the qualitative approach through extrapolation and extrapolation in theoretical section, and inference in order to ascertain the validity and credibility of the study hypotheses or deny them and produce the results of the study.

1.6. Hypotheses:

In order to clarify the relationship between the study variables, the hypothetical blueprint for the research is used through which we can highlight the relationship between the study variables and the formulation of hypotheses.

Figure N°01: Hypothetical Outline of The Study.



Source: Prepared by the authors

The research begins with the following **hypothesis**:

- ❖ The use of digital transformation tools during accounting work improves business quality as a result of the use of electronic accounting software and digital platforms in Algeria.

The First topic: Conceptual Framework for Digital Transformation.

1. Concepts of Digital Transformation:

Before addressing the conceptual framework for digital transformation, we will try to simplify some terms. This is in order to better understand the process of digital transformation in the business environment through the next table:

Table N°02: Comparison of Digitization, Digital Processing and Digital Transformation Terminology.

Comparison	Digitization	Digital Processing (Automation)	Digital Transformation
Focus Range	Data Transfer	Information Processing	Leveraging Knowledge
Target	Change analog formula to digital format	Automation of the company's current operations	Changing the business culture and the way it works
Mission	Convert paper documents, photos, cunning and film on digital format	Create fully digital operations	Creating a fully digital company or becoming a digital company
Tools	Computers, conversion equipment and encryption	Information Technology Systems and Computer Applications	New Digital Technologies Matrix
Challenges	Material Size	Cost	Workers' resistance to change
Examples	Scanning of forms and registration documents	Electronic registration process	Everything electronic from registration to delivery content

Source: (Abdel Nasser, 2021,p8)

In addition to highlighting the difference between terms, the table shows the different stages of the use of digital technology in the business environment, where the process starts from embracing digitization and then moving on digital processing of information and data to digital transformation using its various aforementioned tools, and to avoid confusing the concept between the term "Digitization", "automation" and "digital transformation" when describing the use of digital technology and technologies, **Digitization** means "the creation of a digital image through which information is converted from a paper-written image to an image on automated devices, so that it is circulated on a local or international information network" (Wikipedia,2023). while **automation** is "one of the most important steps in the business digital transformation process where the automation of employees' tasks depends on people's ability to perceive and analyse, While process automation depends on robots and RPA technology, respectively, Thus, RPA can do so to be successfully implemented and used in any type of company or department and in the context of our study even in the case of companies providing professional accounting and auditing services" (Lacurezeanu, Tiron-Tudo, & Bresfelean, 2020,p753). In addition, **the digital transformation** according to monaco, is defined as "the process by which paper-based, traditional performance-to-technical, digital-in-practice, and service-based performance can be optimized to increase competitiveness." (Hanan, 2022,p221).

The researcher believes that digital transformation and various concepts interconnected with it are "Digital transformation is the process of using modern technologies and its various tools to perform various works and tasks in order to increase the quality of the business and the tasks assigned to the human component at all levels and at the macro and micro levels. Digital transformation is linked to a set of concepts of e-government and e-governance where all these terms indicate the utilization of modern technologies in business performance."

2. Digital Transformation Tools (Advantages - Challenges - Impact):

The most important digital technology tools used in digital transformation are big data Big Data, Block Chain, IoT, cloud computing, augmented reality, virtual, artificial intelligence and electronic physical systems and also the use of social media tools, mobile, analytics, and compact devices and the digital product is defined as an intangible asset or a piece of media that can be sold and distributed frequently online without the need to replenish the inventory, These products often come in the form of downloadable digital files or broadcasts files, such as MP3 files, PDF files, videos, plugins and templates. (Ahmed Abdullah, 2022,p510)

The application of digital transformation tools by accounting practitioners contributes to a range of benefits. They are also guided by challenges that must be overcome in order to maximize the use of these technologies to develop the profession. Through the next table, the most important advantages and challenges of applying digital transformation tools to the accounting profession will be illustrated.

Table N°03: Advantages and Challenges of Applying Digital Transformation Tools To The Accounting Profession.

Tool	Application Advantages	Application Challenges
Artificial Intelligence	<ul style="list-style-type: none"> - Providing better and cheaper data to support decision-making, improving the efficiency of the workflow and practice systems; -Generate new insights from data analysis ; -Saving time to focus on the most valuable tasks such as strategy development, relationship building and leadership ; -Improved fraud detection and prediction of fraudulent activities ; - Improved access to and analysis of unstructured data, such as contracts and emails. 	<ul style="list-style-type: none"> - The absence of the principle of privacy and ethics, as it depends on personal data to detect fraud; - Possible reductions in posts; - Lack of financial investments; - Increased competitiveness.
Cloud Computing	<ul style="list-style-type: none"> - Access anytime, anywhere; - Provides multiple levels of security to protect software and 	<ul style="list-style-type: none"> - Full reliance on the Internet, for operation; - Security problems (piracy);

	<p>data;</p> <ul style="list-style-type: none"> - Not to increase investment in the purchase of devices for the storage and preservation of data in their own locations; - Automatic backups, no lower risk of data loss; - Lower costs, ease of use; - Increased productivity, infinite storage capacity. 	<ul style="list-style-type: none"> - Increased competitiveness.
Big Data	<ul style="list-style-type: none"> - Improving the quality of accounting data by facilitating accuracy and completeness and making them available for use in real-time decision-making; - Ability to accurately predict the future of the business. 	<ul style="list-style-type: none"> - Data challenges: size, diversity, speed, honesty, data quality, data detection and relevance, inclusivity and privacy; - Challenges related to the process include difficulty in choosing between similar data, data conversion and data models, understanding of outputs...; - Management challenges include data privacy, security, governance and ethics.
IoT	<ul style="list-style-type: none"> - Employee productivity; - Automate the entry and processing of transactions; - Improved asset management through location, control and better usage; - Improving costs through their analysis and better absorption (splitting indirect costs per product unit), supporting management accounting tools, such as activity cost, and calculating target cost. 	<ul style="list-style-type: none"> - Lack of precise legal provisions regarding the implementation and use of the Internet; - Workers' resistance to change and innovation; - Lack of knowledge and skills in IoT in the market; - Lack of knowledge about the benefits of IoT application; - Loss of privacy and confidentiality by accessing and processing personal data; - Cybersecurity threats; - Doubts about the accuracy of sensors Used in IoT solutions.

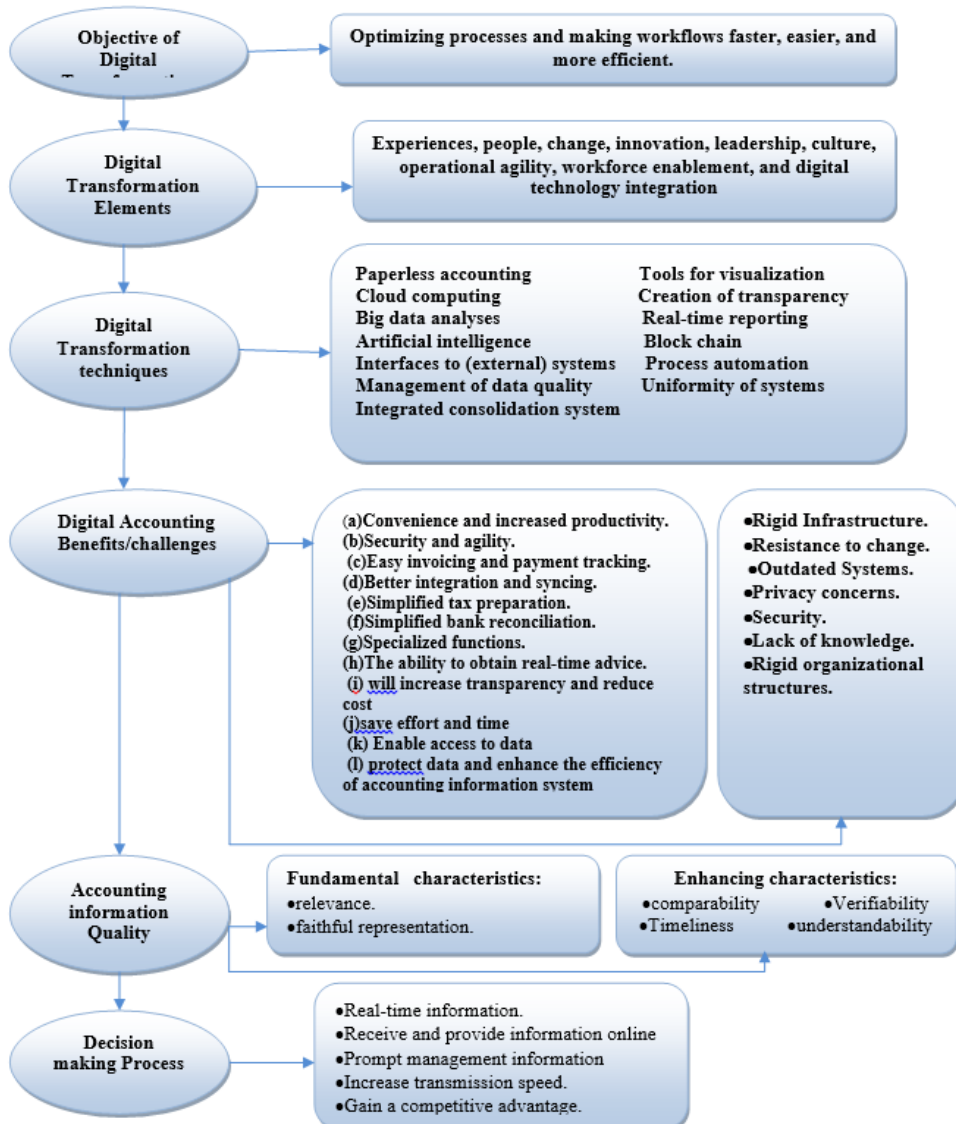
Source: (Marah & Touileb, 2022,p32)

From what we want in Table 00, it is clear to us that digital transformation (D.T) will make radical changes in the accounting environment and this is reflected in the trend towards the automation of the accounting cycle phase and thus the need for prompt, systematic and more accurate analysis of accounting data, as well as contributing to (D.T) also reduces opportunistic behavior practices and improves the quality of accounting information and financial reporting. If we want to capture the challenges of applying digital transformation tools, we must

maintain electronic information security by relying on an immediate oversight structure and the need to manage cybersecurity risks. (Nasr Ali, 2022,p22)

Based on the fact that accounting is a technique aimed at collecting, classifying and tabulating data and then presenting them in the form of lists and reports in order to ensure the proper making of various administrative decisions, we will clarify through the format of the subsequent to the impact of digital transformation on the quality and usefulness of accounting information.

Figure N°02: Digital Transformation's Impact on The Quality and Usefulness Of Accounting Information.



Source: (Amal & Ahmad ,p7)

The table shows us the impact of the digital revolution through digital transformation tools on the quality of accounting information and its contribution to improved decisions. These technologies will increase transparency and reduce cost, save effort and time, enable access to data, protect data and enhance the efficiency of the accounting information system and the quality of financial reports.

Digital accounting increases transparency by improving global comparability and quality of financial statements and enhances accountability by closing the information gap between shareholders and management and reduces information asymmetry and uncertainty between companies and external capital providers, It contributes to economic efficiency by helping investors identify risks and opportunities worldwide and improves monitoring of companies' performance in order to reduce opportunistic behavior by reducing profit management.

The Second Topic: The Impact of Digital Transformation on The Present and Future of The Accounting Profession in Algeria.

1.Impact Of Digital Transformation On The Accounting Profession:

Many accountancy offices and companies still operate in the traditional way with a lot of paperwork, bureaucracy and little innovation and technology, and with the technological boom it has become necessary for these offices and companies to be aware of the digital transformation that will change the way the business performs, and this also applies to accounting office clients. (Anselmo, José, Vinicius, & José Roberto, 2022 ,p9)

In order to take advantage of digital transformation privileges during accounting work, we present the table to illustrate the main effects of digitization on the accounting profession and the performance of accounting functions.

Table N°04: Key Effects of Digitalization on The Accounting Profession and Performing of Accounting Tasks.

Area	Effect
Main digital solutions	<ul style="list-style-type: none"> • Artificial intelligence; • Block chain; • Cloud computing; • Big data.
Performing accounting tasks	<ul style="list-style-type: none"> • Automatization of routine, repetitive and structured tasks (e.g. invoicing, payroll) • Non-routine and non-structured tasks will require human thinking and additional skills and knowledge (e.g. interpreting and analysing financial information).
Education and training	<ul style="list-style-type: none"> • Changes and modification of university programs; • Critical thinking Problem solving; • Skills regarding the use of artificial intelligence; • Accounting engineering; • Interpersonal interaction and communication.

Source: (Gulin, Hladika, & Valenta, 2019,p434)

As an illustration of the above table, we can say that digital accounting has become part of the present underpinned by the requirements of the fourth industrial revolution, from which we are faced with the imperative of digitizing the accounting business using various digital transformation tools, and digital accounting is expected to become popular and more in demand than traditional accounting horizons 2025.

Today's digital transformation technology technologies automate traditional accounting practices and so in the near future we will see the widespread use of digital accounting in accounting processors from data entry and document preservation to electronic auditing and inspection, Overall, the highlights of the extent to which digital transformation technology technologies affect accounting practices can be summarized as follows:

- Remove the focus on data entry and guide the focus on the data content, analysis and determination of the real value of the data;
- Provide timely information for decision-making;
- Provide a combination of accounting applications that provide distinctive solutions to many everyday problems;
- E-disclosure will enable accountants and non-accountants and users of financial and accounting information to obtain all financial and accounting information they return via Intranet; (Mahmoud Nafa, 2022,p 8).

In the same vein, Ali Abbas Ali Shenin's study highlighted that the application of digital transformation will result in many advantages for the accounting profession, including:

- A.** Cost reduction: The application of digital transformation technology reduces the cost of keeping transaction records, and anyone with authority can access them at any time;
- B.** Focus on value addition activities: Since digital transformation accounting would eliminate traditional record-keeping operations, thereby providing the resources used, these resources could be channeled to other value-added activities of the Organization;
- C.** Fraud Reduction: Since records in light of digital transformation will be safe and even if changed will be easy to track and significantly reduce manipulation opportunities.
- D.** Eliminate the need for settlements: since transactions will be recorded real-time with the ledger updated immediately and first, no accounting adjustments will be required.
- E.** Low errors: Once data is entered into digital transformation, smart contracts verify them, making many accounting functions perform automatically and reduce human errors.
- F.** Reduced review time: The distributed ledger has the ability to reduce audits through smart contracts. (Ali Abbas, 2023,p208).

Therefore, the researcher believes that the use of digital transformation technologies in the field of accounting, mainly automation and block chain, will contribute to a huge boom by transferring accounting practices from manual routines to digital processors by automation and block chain. In Algeria,

accounting practitioners must prepare themselves to enter digital accounting science, take advantage of the opportunity and move away from traditional routine manual tasks and move towards digital accounting and transition to the role of financial adviser and financial data analyst in the context of the digital transformation of the field of accounting.

2. Digitization of Accounting Functions in Algeria:

Within the framework of the general direction of the Algerian government to move towards the digitization of departments, the bodies and institutions affiliated to each of the Ministry of Finance, the Ministry of Trade, and the Ministry of Labor, Employment and Social Security have adopted this strategy through the creation of digital platforms through which communication between departments, bodies and institutions with their affiliates takes place. In light of this trend, practitioners of the accounting profession in Algeria are depositing various statements and accounting files - fiscal and quasi-fiscal for companies and institutions that they have been assigned to through approved digital platforms.

Table N°05: The Most Important Fiscal and Semi-Fiscal Statements Deposited Through Digital Platforms by Accountants in Algeria.

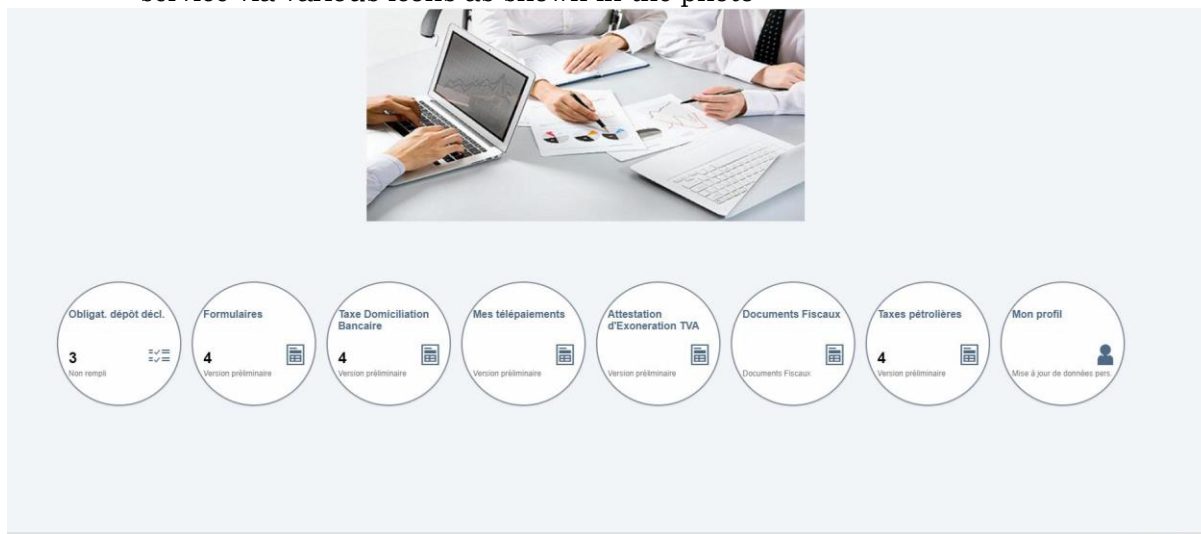
Type of permit	Département concerné	Digital Declarations Platform Link
Genuine regime's fiscal statements IRG ,IBS ,G50.	Tax Department: -The Foundation's Major Agronomy (DGE); - Tax Centre (CDI).	-E-permit portal "jibaitic " -The Electronic Portal for Remote Authorization and Payment "moussahamatic".
Registration Affiliation and Enrolment Social Statements DAC & DAS	Social Insurance Departments: - National Fund for Social Security for Working Workers (CNAS); - National Fund for Paid Holidays and Unemployment due to Bad Weather (CACOBATPH); - National Pension Fund (CNR).	Gateway to the National Fund for Social Security for Workers: https://teledclaration.cnas.dz Gateway to the National Fund for Paid Holidays and Unemployment Caused by Bad Weather: https://www.tasrihatom.dz
Social statements to non-employees CASNOS	National Fund for Social Security for Non-Employees	Gateway to the National Fund for Social Security for Non-Employees: https://damancom.casnos.dz
Legal Publicity of Social Accounts	National Commercial Registry Centre	Gateway to the National Commercial Registry Centre https://sidjilcom.cnrc.dz

Source: Prepared by the author.

The General Directorate of Taxation has also launched a new online service at the level of the permit and payment portal "JIBAYA'TIC" starting on Thursday, May

16, 2024, for applications for C20 certificates of presence and the extracts of online tables. Therefore, the taxpayers concerned can submit an application online, in their own space for the permit Remotely, to obtain the said documents as well as to see the status of progress in processing their application.

This service will be available as soon as possible for taxpayers of tax centres engaged in " JIBAYA TIC " By accessing the personal account and requesting service via various icons as shown in the photo



Nous contacter

Source: <https://mfdgi.gov.dz>

On the accounting side, the team of accountant platform Bok develops many digital applications for the management of fiscal and accounting declarations. It was announced on 28 August 2023 that the electronic billing management system was developed, enabling the preparation of invoices and access to them remotely. The same team also worked in 2023 to digitize one of the accounting offices in Algeria. (Digital Accountancy Office uses various digital and artificial intelligence tools to accomplish tasks) and May 2, 2024 on the development of an accounting application to meet accounting constraints and various financial statements automatically, thereby enhancing opportunities for digital transformation in the field of accounting in Algeria in the coming years.

3.Accounting Software and Digital Applications Used to Perform Accounting Work in Algeria

In the context of responding to the developments of digital technology and using them in the course of accounting work that allows the collection of data and financial data and their evaluation, classification, recording and presentation in the form of statements using the media and various accounting programs and applications, In order to legalize the accounting process by means of automated media systems, the Accounting Regulatory Authority issued Executive Decree No. 09-110 of 11 Rabi II of 1430 A.H. corresponding to 07 April 2009 specifying the conditions and qualifications for maintaining accounting by automated media systems, so that this Decree defines:

- a. Accounting requirements by automated media systems;
- b. Accounting standards through automated media systems and control procedures.

By allowing professionals to use accounting programs and applications in the preparation and presentation of accounting statements and reports, many accounting programs have been published, notably:

- DLG's developed software has produced three programs known as "PC-COMPTA" as a program dedicated to accounting records, accounting and fiscal lists, and the second is for managing and preparing wages and declarations under the name "PC- PAIE", and the third is for managing and managing inventories "PC- STOKS".
- Software developed by "Winalco Softwar Deveppment", where it has produced three programs that know great prominence among professionals, namely (Winalco SCF) as a program dedicated to accounting records, accounting and fiscal lists, and (Winalco Coalco) as a program dedicated to running and preparing wages and declarations under the name "Winalco PAE".

We can also indicate the availability of many programs and applications in the market used by professionals and organizations while doing business successor and accounting tasks.

4. Surveying the Opinions of a Sample of Professionals, Executives, and Accounting Firm Employees:

In order to strengthen the theoretical proposition and to achieve the study's objectives, a questionnaire was designed based mainly on previous studies of the subject, as well as the reality of the accounting software and digital applications used in accounting work in Algeria. in which an intentional sample consisting of a group of professionals, financial managers, accountants, accounting office frames and lurkers was targeted, To collect data from the individuals of the sample studied, 100 electronic forms were distributed and retrieved as a supplement. After examination and examination, we reached the adoption of 93 valid forms for study and neglect of 07 forms, Following the compilation of the questionnaire forms, we compiled and emptied the data obtained, where we obtained the following results:

a. Presentation and analysis of the characteristics of the study sample: In this section, we will present data related to the demographic information of the study sample members and analyze them in terms of profession and years of professional experience. After sorting and statistics, we have arrived at the following:

- The majority of the respondents are professionals in accounting (chief accountant - assistant accountant) and their number reached 29 people, then they were followed by the category of account keepers and their number reached 28 people, then they were followed by the category of director of the accounting department and their number reached 13 people, then followed by the category of interns and their number reached 10 people, then They are followed by the certified accountant category, numbering 9 people, then followed by the expert accountant category, numbering 4 people.
- The majority of the respondents have professional experience for more than 11 years, numbering 41 people, then the group that has less than 5 years,

numbering 30 people, then followed by the group that has professional experience ranging between 6 and 10 years, numbering 22 people.

b. Analysis and discussion of answers: In this section we will analyse and interpret the responses obtained according to:

Table N°06: Presentation of Results of The First Question.

Question Text	Answer			
	Yes		No	
	Repetiti on	Percentag e %	Repetitio n	Percentag e %
Have formative courses been conducted to enable accounting programs and applications used in accounting practices.	57	61.29	36	38.71

Source: Prepared by the author, based on the results of the questionnaire.

Algeria's field of accounting has witnessed the beginning of the use of automated media and accounting software and applications used in accounting practices for more than 20 years. The results of table 06 show us that the majority of the sample interviewed did not conduct formative courses to enable the programs and applications used in accounting practices at an estimated 61.29%. The remainder, estimated at 38.71% of the total, underwent training courses to master the use of various accounting programs and applications used in Algeria.

Based on the results obtained, we can say that the majority of accounting activists in Algeria are self-reliant in developing their competence and capabilities in order to be able to use the various methods used in accounting practices through self-learning.

Table N°07: Presentation of Results of The Second Question

Question Text	Answer							
	PC. Compta		Winalco SCF		Sage.Compta bilité		Another	
	Repetitio n	Percentag e %	Repetitio n	Percentag e %	Repetitio n	Percentag e %	Repetitio n	Percentag e %
What software you use for accounting records and preparation of accounting and fiscal lists.	57	61.29	15	16.13	02	2.15	19	20.43

Source: Prepared by the author, based on the results of the questionnaire.

The results of Table N° 07 show us that the majority of the sample interviewed uses (PC. Compta) software at an estimated 61.29%. Then we find the use of (Winalco SCF) software at an estimated 16.13%. Then we find (Sage.Comptabilité) software at an estimated 2.15%. The rest use other programs that we show in the next table.

Table n°08: The Most Important Accounting Programmes Used in The Accounting Work.

The Most Important Accounting Programmes Used in The Accounting Work	
ELBASSIT	ALGERCO
BIG FINANCES	MEGA COMPTA – MEGA.SOFT
NAAMA SOFT	ALGERICO++
ALGERCO	CIRIS ASSURANCES COMPTA
MEDISOFT	EBS ORACL
KB DEVELOPPEMENT	CIRTA IT

Source: Prepared by the author, based on the results of the questionnaire.

Table N°09: Presentation of Results of The Third Question.

Question Text	Answer							
	PC. Paie		Winalco Paie		Sage. Paie		Another	
What program you use to manage and prepare wages.	Repetitio n	Percentag e %	Repetitio n	Percentag e %	Repetitio n	Percentag e %	Repetitio n	Percentag e %
		57	61.29	10	10.75	01	1.07	25

Source: Prepared by the author, based on the results of the questionnaire.

The results of table N°09 show us that the majority of the sample interviewed uses (PC. Paie) is estimated at 61.29%, then (Winalco Paie) is estimated at 10.75%, then (Sage. Paie) is estimated at 1.07%, and the rest are using other programs that we show in the next table.

Table N°10: The Most Important Programs Used in The Preparation of Wages And Salaries.

The most important programs used in the preparation of wages and salaries	
SAGE PEOPLE	MMP. ALGERCO
PAIE ASSURANCE	MEGA. PAIE
EBS ORACL	MM. PAIE
ALGERCO. PAIE	GES. PAIE
MEDI.SOFT	ID. PAIE
KB DEVELOPPEMENT	ELBASSIT-SALAIRES

Source: Prepared by the author, based on the results of the questionnaire.

Table N°11: Presentation of Results of The Fourth Question.

Question Text	Answer					
	Uninformed		Relatively early		Very early	
Are you familiar	Repetitio n	Percentag e %	Repetitio n	Percentag e %	Repetitio n	Percentag e %

with the role and contribution of artificial intelligence in the development of accounting programs and applications?	33	35.48	47	50.54	13	13.98
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Source: Prepared by the author, based on the results of the questionnaire.

Results of table N° 11 show us that the majority of the sample interviewed is familiar with the importance and role of AI in the development of accounting software and applications. The total of relatively insiders and very insiders is 64.52%. The remainder, estimated at 35.48%, is unaware of the importance and role of AI in the development of accounting software and applications at present.

Based on the results shown in the table above, we can say that the majority of accounting practitioners in Algeria understand the importance of using artificial intelligence in the field of accounting and auditing through the development of accounting programs and applications in order to improve the quality of accounting practices.

Table N° 12: Presentation of Results of The Fifth Question.

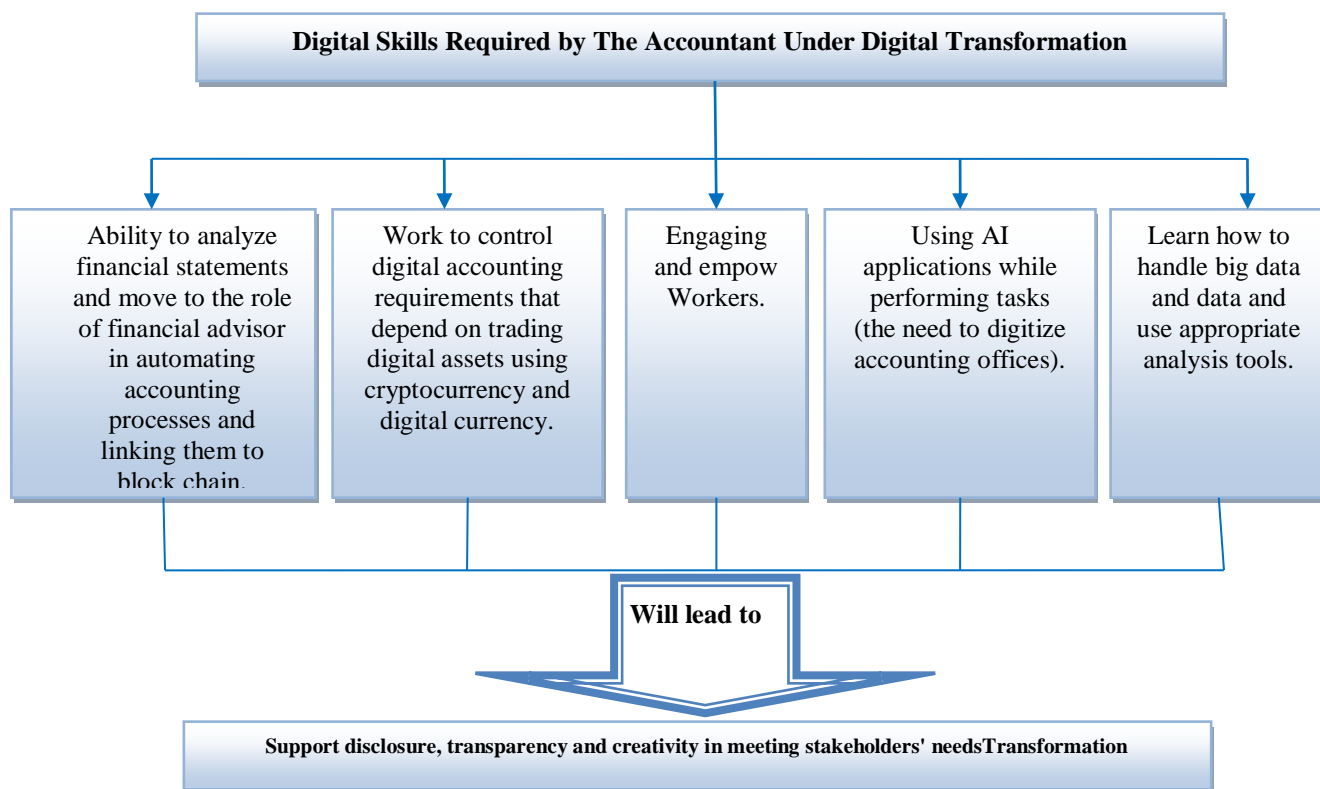
Question Text	Answer			
	Yes		No	
	Repetition	Percentage%	Repetition	Percentage%
According to your opinion, developing accounting software in Algeria using artificial intelligence techniques will improve the practices and quality of service provided to the client.	84	90.32	8	8.60

Source: Prepared by the author, based on the results of the questionnaire.

The results of table 12 show us that the majority of the respondent sample underscores the importance of developing accounting programs and applications in Algeria and making use of information technology to digitize accounting offices in order to improve practices and raise the quality of service provided to the client. The rest of the respondents are 90.32%, the rest of which is estimated at 8.60%. This is in order to make the most of the benefits of information technology and to develop accounting programs in Algeria using artificial intelligence techniques. This will thus lead to improved practices and high-quality delivery to customers.

The researcher believes that in order to ensure the digitization of accounting in Algeria, professionals and their assistants must possess a set of digital skills, which would make them capable of providing digital accounting services resulting in timely information, appropriately, for different stakeholders, through reports, clarifications, Recommendations, and consultations in the light of the digital transformation of business performance, in a form that supports the principles of disclosure and transparency, one of the most prominent of these skills we find in the next format.

Figure N°3: Current and future digital skills of the accountant to support the application of digital transformation .



Source: Prepared by the authors.

Based on the foregoing, the use of information technology in the context of the digital transformation of its various accounting tools will arguably lead to a change in the methods of compiling, processing and disseminating financial and non-financial data, and fundamental changes to traditional tools for handling accounting data and information which contributes to increasing the efficiency and operational capacity of the accounting system in the processing of data and obtaining accounting information that is quick, objective, appropriate and reliable, Therefore, accounting practitioners and practitioners should understand the changes that will affect accounting systems and accounting standards. and governing frameworks and regulations, and working to increase their skills in dealing with digital transformation mechanisms. (Ali Abbas, 2023,p201).

Conclusion

The last three years have seen the publication of numerous accounting research that includes important ideas about the shortcomings and challenges that are likely to be addressed in the context of radical changes due to the information technology age. and the importance of these ideas emerged as a result of the internationalization of the application of digital transformation at all levels, including the accounting segment, this transformation has contributed to a significant change in different occupations. Accounting is at the forefront of occupations that have been affected by technological developments. This is due to the use of digital transformation tools in the development of electronic accounting software and digital platforms used to deposit various declarations and accounting files, fiscal and semi-forensic in Algeria.

Through this study, we have turned to addressing the research gap. After theoretical rooting, analysis, diagnosis and, in line with previous literature, we have concluded that Algeria's current accounting practices are insufficient to meet the challenges of the fourth industrial revolution and the trend towards automation of accounting work. In this context, we have reached a set of results as follows:

- ✓ Digital transformation techniques will reshape the accounting and auditing profession at present and in the near future;
- ✓ Challenges to current accounting practices affected by the use of digital transformation tools to the need to develop theory and accounting thinking based on IAS/IFRS standards;
- ✓ The use of digital transformation tools in the field of accounting through the impact of AI applications on electronic accounting software leading to the compilation, recording, tabulation and resolution of data and financial reporting is done in an easier, faster and more accurate manner;
- ✓ The use of digital transformation tools in the field of accounting increases the quality of disclosure and also contributes to reducing the duration of the preparation and publication of financial lists and reports in a short period of time.
- ✓ The use of various platforms approved by the bodies and departments dealt with by accounting professionals in Algeria contributes to alleviating the pressure on professionals and agents of public administrations and agencies, thereby reducing the effort, time and cost while entering the filing of the defaulter of accounting, fiscal and semi-forensic declarations.

Through the findings we can validate the hypothesis put forward at the beginning of this study so that:

We **confirm the validity of the hypothesis**, which states that "the use of digital transformation tools during accounting work will improve the quality of the business as a result of the use of electronic accounting software and digital platforms in Algeria". This is evident through the development of many accounting programs and applications used to perform accounting work and the preparation of various declarations, as well as the use of various platforms (Collect, Register Com, Al-Hana Social Security Platform and Unemployment Insurance Platform due to bad weather) in filing the declarant.

Through previous findings, the following recommendations can be made:

- ❖ The need to develop a current and future digital policy and strategy at the regional and national levels and mobilize all actors from professionals, business organizations and public administrations in order to improve digital services and ensure the smooth and effective transition of the digital and cooperative economy.
- ❖ Professional organizations should initiate the programming of formative courses in order to narrow the digital divide of accounting practitioners in the direction of automating accounting work and taking advantage of the benefits of the digital revolution in order to enhance the quality of professional practices and their outputs.

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