

The Developments of the Digital Technologies in the Accounting Scientific Research in the Light of the Corona Pandemic - An Exploratory Study in the Hashemite Kingdom of Jordan

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Abstract: This study aims at identifying the uses of the digital technologies in the field of scientific research in general and the accounting scientific research; the study also has illustrated the importance of these technologies in developing the accounting scientific research and enhancing its efficiency; in addition, it has identified a set of the obstacles which the researchers may face while using the digital technologies. Inductive and descriptive analytical analyses have been used; previous studies touching upon the digital technologies in the field of scientific research have been examined in order to develop the theoretical framework and design the questionnaire; the researcher has used one of technical means; the questionnaire has been prepared by Google Drive Program and distributed through private or university e-mail technologies and WhatsApp groups in academic context placed in educational forums. The study has concluded that there are justifications and reasons such as closures during the Corona pandemic which encourage the use of the digital technologies in the accounting scientific research. Furthermore, there are various aspects of the use of the digital technologies in the field of accounting scientific research in obtaining and exchanging the data; in addition, the study has found that the digital technologies play an important role in developing the accounting scientific research and achieve various advantages while using these technologies in the accounting scientific research. However, the researcher in the accounting scientific field faces various obstacles which limit the use of the digital technologies in the accounting scientific research such as a lack of knowledge of the uses of the digital technologies, as well as a lack of trust in information exchanged by these technologies and a high cost of subscription of some scientific websites (i.e research and dissertation repositories). Finally, the study has concluded that scientific research curriculum shall be developed in order to include the digital technologies used in the scientific research and the mechanism of their use.

Key-Words:- Accounting Scientific Research, Digital Accounting Scientific Research, Digital Research, Digital Technologies

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1 Introduction

Scientific research is one of the most important requirements of knowledge society in the digital age – Knowledge economy era. Many developed countries have realized that their existence, entity, development and strength depend on their achievements of scientific research field; they, therefore, have developed plans and established scientific centres and institutes; they also have provided huge financial funds for advancing the scientific research because they have realized that investment in scientific research is significantly important and achieves socially and economically the best return. Accordingly, in digital age and knowledge society, paying

attention to all types and methods of scientific research becomes a necessity; in addition, the gap between the scientific research and its application in the societies which seek to be knowledge –based societies shall be necessarily narrowed; in order to achieve these matters, coordination and cooperation among various scientific institutes are required; furthermore, research maps shall be developed in accordance with certain bases and criteria foremost among which is priorities and goals building the knowledge society. Moreover, a balance between various (basic or applied) research patterns shall necessarily be achieved; and collective research –or so-called team research shall be encouraged.

Because accounting scientific research plays an important role in developing the mechanisms and rules of preparing the financial statements in modern and advanced environment, and creates an applied knowledge which develop various aspects of business, studying the role of the digital technologies and the fields of their uses in Arabic scientific accounting research become very necessary. Accounting scientific research is considered an added value to the scientific research in general and scientific business research in particular and contributes to the development of accounting science and profession; in addition, it is one of essential competitive components of universities as well as the countries sponsoring the scientific research in order to develop the economy.

The use of the digital technologies and the Coronal pandemic have imposed a new reality on the accounting scientific research; new methods have been imposed on the researchers due to the closures; the researchers have used digital libraries and various scientific and cognitive electronic sites (i.e stock market and companies sites for obtaining a financial report) and technical means. For example, the researchers have used electronic means such as electronic communication sites and WhatsApp groups as well as professional sites in order to distribute the questionnaires to study sample, thereby including the population of study; due to technical advancement, academic accountants and researchers could meet each other via various sites and have discussed various subjects. In this study, digital accounting scientific research and its importance are examined; in addition, the fields of its use are discussed in the light of transforming into the digital means in scientific research

2 Problem Formulation

The use of digital technologies in various economic fields has contributed to the completion of transactions quickly and with high accuracy, and the provision of services across different continents and countries, especially in light of the Corona pandemic, which imposed restrictions on movement. Scientific research is based on obtaining information and sources from digital libraries.

Hence, this study seeks to answer the following questions:

Are there justifications or reasons that encourage the use of digital technologies in the field of accounting scientific research in light of the Corona pandemic?

What are the aspects of using digital technologies in the field of accounting scientific research in light of the Corona pandemic?

Is there a role for using digital technologies in developing accounting scientific research in light of the Corona pandemic?

Are there obstacles that limit the use of digital technologies in accounting scientific research in light of the Corona pandemic?

2.1 Purposes of Study

The study aims at identifying the following:

- Justifications of the use of the digital technologies in accounting scientific research;
- Aspects of the use of the digital technologies in accounting scientific research; and
- Role of the digital technologies in developing accounting scientific research.

2.2 Importance of Study

Digital technologies play a major role in developing the capacity of scientific research which introduces various big data and information; digital technologies make the process of researching which follows the step of writing the scientific research easier for the researchers. And it is noted that a percentage of the use of digital technologies in scientific research is continuously increasing. Thus, it is a very good indicator illustrating that scientific research processes develop, and keep pace with the modern technologies.

2.3 Hypotheses of Study

The study tests the following hypotheses:

- There are statistically significant justifications or reasons at a level of significance ($\alpha \leq 0.05$) which encourage the use of the digital technologies in accounting scientific research;
- There are statistically significant aspects of the use of the digital technologies at a level of significance ($\alpha \leq 0.05$) in accounting scientific research;
- There are statistically significant role of the digital technologies at a level of significance ($\alpha \leq 0.05$) in developing the accounting scientific research; and
- There are statistically significant obstacles at a level of significance ($\alpha \leq 0.05$) which limit the use of the digital technologies in accounting scientific research.

2.4 Literature Review

- Al-Shahran's study (2002) [1], entitled 'The global information network, the Internet and its role in enhancing scientific research among students of King Saud University in Riyadh', aimed at identifying the role of the world wide web of information 'the internet' in supporting the scientific research in order to service the academic process among the students of King Saud University; it also illustrated the reasons and benefits of using the internet. In order to achieve the purposes of study, the research used descriptive analytical approach; the questionnaire, tool of study, was designed and distributed to a study sample composed of 98 students. Finally, the study concluded the benefit of using internet was varied and there were various reasons enhancing the process of scientific research among the students, foremost among which is the tremendous speed of obtaining new information in various web search engines.
- Sultan's study (2010) [2], entitled 'The Reality of Internet Use In Scientific Research in The University' aimed at highlighting the reality of the use of internet among university faculty members as well as the methods of employing and taking advantages of internet applications in scientific research through surveying the opinions of professors at university of Tebessa; in order to achieve the purposes of study, the researcher used descriptive analytical approach and designed an appropriate questionnaire, a tool of study. Finally, the study concluded that the internet is continuously used in order to access to new information and keep pace with the scientific developments of various specializations. And a percent of the respondents believed that the internet is an indispensable channel of research and scientific communication for a university professor.
- Al-Khatib's study (2011) [3], entitled 'Using The Internet in Academic Activities From Viewpoint of Students of the Faculty of Medicine at Jordan University of Science and Technology and the Difficulties Related to This Use', aimed at illustrating the use of internet in academic activities among the students of faculty of medicine; it also was to identify the most important difficulties which the sample

study face when using the internet of Jordan university of science and technology. In order to achieve the purposes of study, the research used descriptive analytical approach; in addition, an appropriate questionnaire, a tool of study, was designed and distributed to a sample of study composed of 469 male and female students. Finally, the study concluded that the statements related to the benefits of using the internet among the student reached the highest average; furthermore, the study found that regarding the statements related to the difficulties which the students faced while using the internet, slow network and time consumption reached the highest average.

- Abu-Nair and Al-Sakarneh's study (2014) [4] aimed at revealing the attitudes of faculty members of Al-Balqa Applied University towards the use of the internet in education. The population of study consisted to all faculty members of all specializations and academic ranks employing in Al-Balqa Applied University; it was conducted during the second semester of the year 2012/2013. A sample of study was composed of 33 faculty members who were randomly selected; for achieving the purposes of study, a questionnaire was designed; and it consisted of 84 statements distributed to three fields; in addition, appropriated statistical methods were used in order to analyze the data. Finally, the study concluded that the attitudes of faculty members in Al-Balqa Applied University towards the use of the internet in university education were high for all fields of study; in addition, the study found that faculty members in Al-Balqa Applied University faced moderately various obstacles while using the internet in university education.

3 Theoretical Framework

Digital transformation (or digitization) of accounting scientific research is identified as 'the transition from the traditional system of the scientific research into digital system based on information and communication technology in all fields of accounting scientific research in the light of a set of requirements including an existence of digital transformation strategy, spreading a culture of the digital transformation as well as spreading the digital libraries and databases appropriate for

financial and accounting studies and designing digital research programs plus managing and financing the digital transformation in addition to human, technical, secure and legislative requirements.

Despite of the digital transformation, an approach of accounting scientific research does not differ; however, the methods of obtaining the information become different; the digital transformation has saved time and effort and reduced the cost.

Due to a low cost of data collection process, the researchers have trended towards the use of the digital technologies. Electronic research helps the researchers save time and efforts, especially those researchers who need to obtain a general knowledge on a particular topic or those who need to ensure the validity of prior information they have. Various results of research can be collected and different forms of research results can be reviewed at the same place without a need to move or exerting an effort. In addition, electronic research has save a lot of money; the research shall only have a computer, cell phone, or tablet and internet connection in order to find the required information.

There are various aspects of the use of the digital technologies in the field of accounting scientific research as follows:

- **Digital libraries:** a digital library is defined as information and service systems which provide electronic documents (i.e text files, digital audio, digital video) stored in renewed archival or dynamic repositories. The digital library is a qualitative leap in transition from paper types such as books, academic publications, studies, researches and magazines to digital feature which enables the researchers to review electronically the library inventory; the digital content is saved as the same as the written and printed content at all times. The researcher believes that the digital libraries have contributed to the improvement of accounting scientific research quality because the researchers can view various studies conducted in different countries without a need to move or travel to another country; the cost, therefore, reduces; in addition, the researchers can view these studies at the time appropriate for them; they are not restricted to official working hours.

However, there is a cost of subscription which the researchers may not bear. Some universities, research centers and public libraries, therefore, provide subscriptions of digital libraries which enable the researchers to access to.

Digital and virtual libraries have contributed to the improvement of accounting scientific research quality through facilitating to access to varied information and researches; they have also contributed to dissemination and exchange of accounting knowledge among different countries; in addition, they allow to view countries' experiences and expertise.

- **Database:** It is a set of elements of logical data connected to each other by a mathematical relationship; it allows to exploit optimally its information digitized and classified by certain systems; a logic of its work aims at accessing quickly and optimally to the information. Furthermore, database is one of the mostly used aspects of the digital technologies in scientific research field due to a variety of services it provides and the possibility of a quick and easy retrieval of information. In other words, the research is classified on a basis of specializations; the researcher, therefore, can easily retrieve the required research; furthermore, database is characterized by a reliability.
- **Development of research writing software:** office software programs have witnessed an amazing development which has achieved a qualitative leap in formal aspects of scientific research publications and in the method of producing the final form of research. In the past, scientific research was written by using a typewriter machine. Today, the computer is used to write the research; it makes writing process easier and allows to correct the errors. Furthermore, the impact of the development of research writing software is not limit to the formal aspects of research production in its final form, but it creates new software which helps the researcher deal with the data, read the statistics and draw the tables and graphs; it also enables the researcher to write correctly the margins and references according to methodological and scientific principles recognized by major international methodological schools.

- Enhancement of the opportunities of communication among the researchers: the digital technologies –internet, e-mail and social network – allow the researchers to share their experiences and knowledge, review the studies and research and participate in various scientific activities such as forums, seminars and conferences all over the world. Communication opportunities among the researchers are continuously being enhanced due to social networks in which the researcher have created forums and groups in order to facilitate the process of communication among the persons interested in various topics, exchange the references experiences and information, and even distribute the questionnaires and field research. Electronic means have contributed to the distribution of the questionnaire to all populations of study in a manner ensuring that the questionnaires are conveyed and received. Regarding the accounting scientific research, it is noted that the digital technologies have enhanced the process of communication among the researchers and professionals in order to develop the professional aspect as well as improve the accounting system efficiency.

Despite of the advantages achieved by the use of the digital technologies in the scientific research, the researcher may face a set of challenges. For example, determining the validity of information and sources may be difficult; the possibility of modifying or deleting some electronic information may not be provided; scientific research institutes do not issue the rules or instructions on the digital scientific research methods; personal costs of some reliable research sites are high; in addition, the possibility of accessing to educational institutes in which the researcher work, through subscriptions may be difficult, the researcher, therefore, shall be present in university campus or library. Thus, the closures during the corona pandemic have been one of the challenges facing the researchers.

4 Methodology of Study

4.1 Methodology of Study and Population and Sample of Study

A descriptive analytical approach has been used; in addition, secondary sources which include the literature of subject of study have been used; regarding the primary sources, the research has depended on the questionnaire.

The questionnaire has been designed and distributed via technological tools, Google, e-mails, social communication sites and WhatsApp academic groups to a sample of researchers in the field of accounting during the period from 1-1-2021 to 30-6-2021 in order to achieve the purposes of study. The following link has stayed valid during that period.

https://docs.google.com/forms/d/e/1FAIpQLSc8QM7zA9meDT8VFy3qlrk_csgX6eNBjVZ6aX2iJ4xUF19fIg/viewform

In order to analyse the data, statistical package for social science (SPSS) has been used in order to analyze the data. In addition, five-likert scale has been used in order to test the hypotheses of study and identify the extent of agreement of respondents towards the questionnaire statements. Each of the five responses has a numerical value as follows: 5- very high, 4- high, 3- moderate, 2 – low and 1 – very low.

Table 1 shows the standard of analysis measurement in which data analysis has been conducted on the basis of the values of arithmetic means.

Table 1. Standard of Analysis Measurement

Arithmetic means	Rank
1 – 2.49	Low
Higher than 2.49 – 3.49	Moderate
Higher than 3.49 - 5	Higher

4.2 Validity and Reliability of Study Tool

In order to ensure a validity of study tool, the questionnaire has been reviewed by a group of specialists who provided some observations and opinions contributing to the development and modification of the questionnaire in order to be ready for the use. In order to test the reliability of study tool, internal consistency (Cronbach’s alpha) coefficient has been calculated; a statistically accepted value of Cronbach’s alpha is 60% or more.

Table 2. Internal Consistency (Cronbach’s alpha) Coefficient of Study Fields

Field	Internal Consistency
Justifications (Reasons) which	0.90

can encourage the use of the digital technologies in accounting scientific research	
Aspects of the use of the digital technologies in accounting scientific research	0.84
Role of the digital technologies in developing accounting scientific research	0.93
Obstacles of the use of the digital technologies in accounting scientific research	0.91

First Field of Study

First field discusses the justifications (reasons) which can encourage the use of the digital technologies in accounting scientific research.

Table 3 indicates that the reasons which encourage the researchers of accounting scientific research to use the digital technologies are varied; for example, the researchers can easily access to the required information; they save time and effort, and decrease the costs.

4.3 Data Analysis and Hypotheses Testing

Table 3. Arithmetic means and standard deviations of performing of study’s sample regarding first hypothesis

Statements	Arithmetic mean	Standard deviation	Response orientation	
There are justifications (Reasons) which can encourage the use of the digital technologies in accounting scientific research as follows:				
1	Digital technologies contribute to accessing to the results of recent research and studies submitted by the researchers and student	3.90	1.17	High
2	Using the digital technologies in disseminating the research enriches the balance of scientific research of the university where I work.	3.88	1.18	High
3	The digital technologies contribute to taking advantage of the opinions of internet surfers who are interested in the published research.	3.88	1.18	High
4	Publishment using the digital technologies is easy in comparison with other publishing methods.	3.85	1.17	High
5	Using the digital technologies contributes to the development of accounting profession.	3.84	1.17	High
6	Using the digital technologies saves the time required for performing scientific research tasks.	3.85	1.19	High
7	Using the digital technologies contributes to an increase of the speed of exchanging the information between the researchers and specialists.	3.85	1.19	High
8	The digital technologies contribute to a variety of specializations and scientific branches on world wide web (the internet).	3.86	1.18	High
9	The digital technologies enable the researcher to obtain free or semi-free information.	3.86	1.18	High

10	The digital technologies enable the researcher to obtain the information at the times which are appropriate for him/her.	3.86	1.19	High
11	Due to the use of the digital technologies, internet can be used everywhere.	3.87	1.18	High
12	The information and data can be easily typeset and categorized.	3.88	1.17	High
13	The digital technologies provide huge resources of information	3.86	1.19	High
14	The information provided by the internet and digital technologies is characterized by a modernity.	3.87	1.18	High
	Total	3.86	1.18	High

Table 3 shows arithmetic means and standard deviations of fields of the reasons encouraging the use of the digital technologies in the accounting scientific research. According to the viewpoint of the respondents of study, arithmetic mean has reached 3.86; statement 1 has reached the highest

arithmetic mean which is 3.90; Thus, response orientation has been high.

In addition, arithmetic mean of the statements and theoretical mean have been compared and tested; and one sample test shows the results of analysis as stated in table 4.

Table 4. Arithmetic Means, Standard Deviations and T-test of Statements which has formed the first hypothesis in comparison with Standard Mark 2

The reasons encouraging the researchers to the use of the digital technologies in the accounting scientific research	Arithmetic Mean	Standard Deviation	T-Value	Freedom Degree	Statistical Significance
	3.86	1.18	-6.321	18	000.

Table 4 indicates that there are statistical differences at ($\alpha=0.05$) between arithmetic mean and standard mark 2. Thus, this hypothesis stipulating that there are statistically significant justifications or reasons at a level of significance ($\alpha\leq 0.05$) which encourage the use of the digital technologies in accounting scientific research, has been accepted.

Second Field of Study

Second field discusses the aspects of the use of the digital technologies in accounting scientific research.

Table 5 illustrates the results of the responses of the respondents related to the aspects of the use of the digital technologies in accounting scientific research.

Table 5. Arithmetic means and standard deviations of performing of study's sample regarding aspects of the use of the digital technologies in accounting scientific research

Statements	Arithmetic mean	Standard deviation	Response orientation	
There are various aspects of the use of the digital technologies in the accounting scientific research as follows:				
The researchers use the following digital technologies in the fields of accounting scientific research				
1	Use of different search engines	3.70	1.300	High
2	Use of online directories of journals, universities or directory of researchers	3.70	1.300	High
3	The interview using the internet (the Messenger	3.62	1.238	High
4	E-mails used for corresponding between the journals and researchers in order to exchange the knowledge	3.62	1.238	High

5	File exchange and transfer	3.71	1.300	High
6	Electronic libraries for obtaining the reference	3.70	1.300	High
7	Chat groups	3.71	1.300	High
8	Search by using information lists	3.70	1.300	High
9	E-mails used by the researchers for corresponding between the journals and researchers in order to exchange the knowledge	3.70	1.300	High
10	Virtual libraries	3.70	1.300	High
11	Publishing the research in refereed journals	3.68	1.300	High
12	Participating in scientific forums and opinion exchange	3.69	1.300	High
13	Presenting the projects under implementation via research sites and discussing the ideas with the specialists in order enrich the research	3.67	1.300	High
	Total	3.68	1.300	High

Table 5 shows arithmetic means and standard deviations of fields of the use of the digital technologies in the accounting scientific research. According to the viewpoint of the respondents of study, arithmetic mean has reached 3.68. Thus, the mostly used aspects of the digital technologies have

been search engines, digital libraries and electronic sites for obtaining the information.

In addition, arithmetic mean of the statements and theoretical mean have been compared and tested; and one sample test shows the results of analysis as stated in table 6.

Table 6. Arithmetic Means, Standard Deviations and T-test of Statements which has formed the second hypothesis in comparison with Standard Mark 2

Aspects of the use of the digital technologies in accounting scientific research	Arithmetic Mean	Standard Deviation	T-Value	Freedom Degree	Statistical Significance
	3.68	1.300	6.334	18	000.

Table 6 indicates that there are statistical differences at ($\alpha=0.05$) between arithmetic mean and standard mark 2. Thus, this hypothesis stipulating that there are statistically significant aspects of the use of the digital technologies at a level of significance ($\alpha \leq 0.05$) in accounting scientific research, has been accepted.

Third field discusses the role of the digital technologies in developing accounting scientific research.

Table 7 illustrates the results of the responses of the respondents related to the role of the digital technologies in developing accounting scientific research.

Third Field of Study

Table 7. Arithmetic means and standard deviations of performing of study's sample regarding the role of the digital technologies in developing accounting scientific research.

Statements	Arithmetic mean	Standard deviation	Response orientation
The role of the digital technologies in developing accounting scientific research:			
1 The digital technologies contribute to mastering the skills of the accounting scientific research and	3.70	1.300	High

	ability to control the information			
2	The digital technologies contribute to access to books, scientific conferences and activities in the accounting fields.	3.70	1.300	High
3	The digital technologies contribute to access to the latest scientific research and publications of general and specialized journals.	3.62	1.238	High
4	The digital technologies enable me to transfer the information, data and software from one computer to another.	3.62	1.238	High
5	The digital technologies make the process of purchasing the books from the publishers easy.	3.71	1.300	High
6	The digital technologies contribute to the increase of the skills of self-inquiry about the information	3.70	1.300	High
7	The digital technologies contribute to access to up to date information in a real time through a continuous updating.	3.71	1.300	High
8	The digital technologies enable me to access to rare sources and documents which are available in private libraries.	3.70	1.300	High
9	The digital technologies enable me to fill my research questionnaires via e-mails	3.70	1.300	High
10	The digital technologies of accounting research enable the researcher to place the questionnaire in specialized sites in order to be filled by the visitors of these sites.	3.70	1.300	High
11	The digital technologies enable the researcher to participate in scientific seminars available all over the world without a need for traveling.	3.68	1.300	High
12	The digital technologies improve the efficiency of the research and projects I perform.	3.70	1.300	High
13	The digital technologies help the researcher in the accounting field publish article and research studies.	3.70	1.300	High
14	The digital technologies help the researcher improve the levels of Arabic and English languages	3.62	1.238	High
15	The digital technologies enable the researchers to connect with the specialized researchers across the world.	3.62	1.238	High
16	The digital technologies enable the researcher in the accounting field to take advantage of experiences of the developed countries in the accounting scientific research	3.71	1.300	High
17	The digital technologies enable the researcher in the accounting field to take advantage of the statistics issued by the universities, research centers and professional accounting authorities	3.70	1.300	High
18	The digital technologies enable the researcher in the accounting field to take advantage of the statistics issued by the financial markets	3.71	1.300	High
19	The digital technologies enable the researcher to exchange electronically the research and take the	3.70	1.300	High

	opinions into account before the research are published and refereed,			
20	The digital technologies enable the researcher to exchange electronically the scientific reports before they are published.	3.70	1.300	High
21	The digital technologies enable the researcher in the accounting field to subscribe to electronic journals via e-mails.	3.70	1.300	High
22	The digital technologies provide an instant translation service	3.68	1.300	High
23	The digital technologies provide electronic services of word processing and text format	3.69	1.300	High
24	The digital technologies provide the sites of saving and retrieving the information which the researcher can save.	3.67	1.300	High
25	The digital technologies provide inference programs which help the researcher discover the inference ratio.	3.52	1.244	High
	Total	3.84	1.273	High

Table 7 shows arithmetic means and standard deviations of fields of the role of the digital technologies in developing and improving the quality of the accounting scientific research. Sample study's responses agree highly that the digital technologies contribute to the development and improvement of the quality of the accounting scientific research. Total arithmetic mean has reached 3.83. Thus, the responses of respondents

approve highly the statements of study field which touches upon the role of the digital technologies in developing the accounting scientific research.

In addition, arithmetic mean of the statements and theoretical mean have been compared and tested; and one sample test shows the results of analysis as stated in table 8.

Table 8. Arithmetic Means, Standard Deviations and T-test of Statements which has formed the third hypothesis in comparison with Standard Mark 2

The role of the digital technologies in developing accounting scientific research	Arithmetic Mean	Standard Deviation	T-Value	Freedom Degree	Statistical Significance
	3.83	1.273	3.012	18	000.

Table 8 indicates that there are statistical differences at ($\alpha=0.05$) between arithmetic mean and standard mark 2. Thus, this hypothesis stipulating that there are statistically significant role of the digital technologies at a level of significance ($\alpha\leq 0.05$) in developing the accounting scientific research, has been accepted.

Fourth field discusses the obstacles of the use of the digital technologies in accounting scientific research.

Table 9 illustrates the results of the responses of the respondents related to the obstacles of the use of the digital technologies in accounting scientific research.

Fourth Field of Study

Table 9. Arithmetic means and standard deviations of performing of study's sample regarding the obstacles of the use of the digital technologies in accounting scientific research.

Statements	Arithmetic mean	Standard deviation	Response orientation	
There are obstacles of the use of the digital technologies in accounting scientific research as follows:				
1	Identifying the accuracy of the information found	3.62	1.238	High

	in internet is difficult before it is approved.			
2	High cost of subscription of the specialized research sites	3.70	1.300	High
3	A scarcity of activating the texts of property related to the informatics	3.70	1.300	High
4	A scarcity of the specialized institutes of designing scientific research sites on the internet	3.70	1.300	High
5	A lack of Arabic search engine similar to Google specialized in scientific research	3.62	1.238	High
6	Constant updating of some research sites and loss of some information	3.62	1.238	High
7	A lack of subscriptions of scientific journals and sites through the universities; and limited access to these sites through university network in some case	3.71	1.300	High
8	Weakness of the skills of using the internet for the purposes of scientific research	3.70	1.300	High
9	A scarcity of availability Arabic and local libraries' catalogue on the internet	3.71	1.300	High
10	The difficulty of viewing new topics published in English language	3.70	1.300	High
11	Lots of sites which ask the researcher a fee paid for register	3.70	1.300	High
12	An absence of network connection between the universities and Arabic and local libraries	3.70	1.300	High
13	A lack of digital and virtual libraries in Arabic language and disapproval of a huge part of available libraries	3.68	1.300	High
14	A lack of correct documentation of information available through the digital technologies	3.69	1.300	High
15	A lack of possibility of trust in the digital journals and to which extent they are authentic	3.67	1.300	High
16	Loss of copyrights on the internet	3.52	1.244	High
17	Easiness of information theft	3.68	1.273	High
18	A lack of content of scientific methodology	3.60	1.244	High
19	A difficulty of the used technology	3.68	1.273	High
	Total	3.67	١,٢٦	High

Table 9 shows arithmetic means and standard deviations of fields of the obstacles of the use of the digital technologies in the accounting scientific research. According to table 9, Sample study's responses agree highly that there are obstacles which face the researcher when using the digital technologies in the accounting scientific research; the researcher may face a difficulty of using the technologies; he/she may be afraid of using the digital technologies and may not trust in these technologies; in addition, there is a cost of

subscription of some websites and knowledge repositories. Total arithmetic mean has reached 3.76. Thus, the responses of respondents approve highly the statements of study field which touches upon the obstacles of the use of the digital technologies in the accounting scientific research. In addition, arithmetic mean of the statements and theoretical mean have been compared and tested; and one sample test shows the results of analysis as stated in table 10.

Table 10. Arithmetic Means, Standard Deviations and T-test of Statements which has formed the fourth hypothesis in comparison with Standard Mark 2

The obstacles which limit the use of the digital technologies in accounting scientific research	Arithmetic Mean	Standard Deviation	T-Value	Freedom Degree	Statistical Significance
	3.67	1.26	3.012	18	.007

Table 10 indicates that there are statistical differences at ($\alpha=0.05$) between arithmetic mean and standard mark 2. Thus, this hypothesis stipulating that there are statistically significant obstacles at a level of significance ($(\alpha\leq 0.05)$ which limit the use of the digital technologies in accounting scientific research, has been accepted.

5 Conclusion

5.1 Results

The study has aimed at identifying the role of the digital technologies in the accounting scientific research in the light of the Corona pandemic; the study has reached a set of the results as follows:

- Digital technologies have contributed to the continuity of the accounting scientific research in the light of the Corona pandemic; and the researchers have paid attention to the advantages of using these technologies in order to obtain and exchange the information;
- There are statistically significant justifications or reasons at a level of significance ($(\alpha\leq 0.05)$ which encourage the use of the digital technologies in accounting scientific research; the digital technologies have provided the researchers with the recent studies and contributed to the reduction of time and cost required;
- There are statistically significant aspects of the use of the digital technologies at a level of significance ($(\alpha\leq 0.05)$ in accounting scientific research; the researcher has illustrated a set of the means of the digital technologies which the researchers can use such as search engines, virtual libraries, university websites, and forums establishing for discussing the research and distributing the questionnaires;
- There are statistically significant role of the digital technologies at a level of significance ($(\alpha\leq 0.05)$ in developing the accounting scientific research; the digital technologies have enabled the researcher to obtain the recent studies and references; using the digital technologies have also enabled the researcher to study the cases and send the questionnaires to remote areas in

addition to conduct remote interviews through technical means without a need for travelling. Consequently, the studies and interviews have diversified and developed; and

- There are statistically significant obstacles at a level of significance ($(\alpha\leq 0.05)$ which limit the use of the digital technologies in accounting scientific research; despite of the advantages achieved by the digital technologies, the researcher may face a set of challenges including a lack of knowledge of the use of the digital technologies in the scientific research and the cost of subscription of some scientific websites.

5.2 Recommendations

The study has reached a set of recommendations as follows:

- Study plans of scientific research methods course in the universities shall be developed in order to be compatible with the development of the methods; in addition, the students shall be trained to use these technologies in completing their study and research;
- Training programs of the use of the digital technologies in the scientific research shall be established for faculty members in order to be able to use positively these technologies in the accounting scientific research;
- Infrastructure and technological structure in the universities shall be developed in a manner that enable the researchers to take advantage of the use of the digital technologies in the accounting scientific research;
- Electronic or printed guides shall be provided and distributed to the researchers; they shall include websites, digital libraries and websites of abstracts of scientific theses and research;
- A support team shall be provided in order to answer the queries of master students or faculty members; a support team also help the students and research obtain the information available on various websites; and
- Internet costs shall be reduced and communication companies shall encourage the researchers through offers of the hours and packages for the purposes of the scientific research; this is considered one of the processes

of supporting scientific research activity in the world.

References:

- [1] Al-Sharhan, Gamal Abdel Aziz, 'The global information network, the Internet and its role in enhancing scientific research among students of King Saud University in Riyadh', *Teachers Colleges Journal*, Volume 3, Issue 1, 2002.
- [2] Sultan, Balghith, 'The Reality of the use of Internet in Scientific Research in the University', www.alnoor.se18/6/2021, Tebessa, Jam, 2010.
- [3] Al-Khatib, Lutfi, 'The Use of Internet in Academic Activities From Viewpoint of Students of Faculty of Medicine in Jordan University of Science and Technology and the Difficulties Related to This Use', *Journal of Educational and Psychological Sciences*, Volume 2, Issue 2, 2011.
- [4] Abu nair, Natheer Sihan Mohammad and Sakarneh Mohammad Abd Ramadan, 'Attitudes of Faculty Member at Al-Balqa Applied University Towards the Use of Internet At Education', *International Specialized Educational Journal*, Volume 3, Issue 8, Cairo, 2014.
- [5] Abu-Baker, Mustafa Mahmud, 'Scientific Research Methods', El Dar El Gamaya Printing and Publishing House, Alexandria, 2002.
- [6] Abu Shanab, Gamal, 'Origins of Thought and Scientific Research', Dar Al- Maarefa El-Gameaia Printing and Publishing house, Cairo, 2002.
- [7] Ahmad, Aqeel Hassan and Al-Buloshi, Fatima Mohammed, 'Using Information Technology at University of Bahrain and its Effects in Teaching and Learning from Faculties View Point', *Journal of Education and Psychological Sciences*, University of Bahrain, Volume 10, Issue 3, 2002.
- [8] Al-Batran, Muwaffaq Abdullah, 'The Reality of Internet Use in Private Jordanian Universities In Northern Jordan From Student Perspectives', Unpublished Master Thesis, Yarmouk University, Irbid, Jordan, 2003.
- [9] Barakat, Ziad, 'The Reality of The Use of Internet among Faculty Members In Palestinian Universities In Scientific Research', A scientific Paper Presented to the Fourth International Cairo University Conference on the Occasion of Its Centenary, Cairo University, 2002.
- [10] Al-Hazmi, Al-Buraq, 'The Reality of the Use of Scientific Network of Information and The Internet Among Faculty Members and Students of Teacher Colleges in Makkah Al-Mukarramah', Unpublished Master Thesis, Umm Al-Qura University, 2005.
- [11] Al-Hamdan, Jassm and Al-Khazi, Fahed Abdullah, 'The Reality of The Use of Internet Applications among the Heads of Departments of Faculties of Kuwait University, The Educational Journal, Kuwait University, Volume 22, Issue 26, pp. 9-62, 2002.
- [12] Ahmad Moh'd Mansour, 'Internal Marketing and Service Quality in Jordanian Hotels', *WSEAS Transactions on Environment and Development*, Volume 16, pp. 831-843, 2020.
- [13] Aleksey Mints, Evelina Kamyshnykova, Dmytro Zherlitsyn, Katerina Bukrina, Anna Bessonova, 'Corporate Social Responsibility Impact on Financial Performance: a Case for the Metallurgical Industry', *WSEAS Transactions on Environment and Development*, vol. 17, pp. 398-409, 2021
- [14] Nawal Bahtiti, Ahmad Abu Rayyan, Tala Sasa, Waed Alahmad, 'Survey of Jordanian Awareness about Hazardous Symbols of Chemicals', *WSEAS Transactions on Environment and Development*, vol. 17, pp. 1030-1038, 2021
- [15] Nawal H. Bahtiti, Ibrahim Abdel-Rahaman, 'Anti-Corrosive Effect of Jordanian-Bay-Leaves Aqueous Extract on Mild Steel in 1.0 M Hydrochloric Acid Solution', *WSEAS Transactions on Environment and Development*, vol. 17, pp. 614-618, 2021
- [16] Mohammadnour Aljarrah, 'The Impact of Enterprise Resource Planning System of Human Resources on the Employees' Performance Appraisal in Jordan', *WSEAS Transactions on Environment and Development*, vol. 17, pp. 351-359, 2021
- [17] Gunarto, Hardi Warsono, Kismartini, Retno Sunu Astuti, 'Policy Implementation of the Elimination on Child Labor: Could Indonesia Be Achieve of Free Child Labor in 2022?', *WSEAS Transactions on Environment and Development*, vol. 17, pp. 410-417, 2021
- [18] Ilona Dumanska, Lesya Hrytsyna, Olena Kharun, Olha Matviiets, 'E-commerce and M-commerce as Global Trends of International Trade Caused by the Covid-19 Pandemic', *WSEAS Transactions on Environment and Development*, vol. 17, pp. 386-397, 2021.

Contribution of Individual Authors to the Creation of a Scientific Article (Ghostwriting Policy)

The researcher contributed in providing a framework for digital scientific research and the importance of benefiting from digital technologies in the development of scientific research in general and accounting in particular, in expanding the base of scientific research and making comparisons between countries and cooperation between researchers of different nationalities and countries to advance scientific research and benefit from it in the fields of different life

Sources of Funding for Research Presented in a Scientific Article or Scientific Article Itself

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