# The Extent of Using E-Learning Among Teachers of Higher Basic Stage in Jordan

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#### **ABSTRACT**

This study aimed at exploring the extent of using e-learning among teachers of higher basic stages in one of the southern governorates in Jordan. The researchers used the descriptive approach to collect, analyze the data, and to interpret the results. The study sample consisted of 365 male and female teachers, and it was selected by using the stratified random sampling method. A questionnaire was developed to collect the data, and its validity and reliability were checked. The study results showed that the teachers were using e-learning moderately. In addition, there were no statistically significant differences due to the variables of gender and specialization. However, there were statistically significant differences due to the experience variable. In light of the study results, teachers should use e-learning strategy in their teaching process regardless the subject of the course content. In addition, teachers who have five years and more in teaching experiences should obtain training that focus on the updated use of technology tools.

#### **KEYWORDS**

E-Learning, Higher Basic Stage, Jordan, Teachers, Using E-Learning in Teaching

## INTRODUCTION

The technological revolution of the twenty-first century has speedy developments that affect various aspects such as the economic and social fields. In addition, the field of education has been affected by technological changes and the information revolution. In this specific field, the most prominent changes is the need to integrate computers and information and communication technologies (ICTs) in teaching and learning processes to create active educational environments and to achieve desired learning objectives. In order to keep abreast of these developments and changes in the field of education, teachers reviewed and reflected on their previous teaching practices. As a result, they started changing their traditional teaching practices that focused on teacher-centered education that may ignore student's role as an active learner. Therefore, teachers should employ new teaching strategies that keep well-informed modern developments and rely on the use of educational computer, and activate the use of e-learning in their teaching practices (Obydat & Abo Sameed, 2015).

## **E-Learning Definition**

According to Malah (2010) e-learning is one of the most important ICT applications in the field of education. E-learning has witnessed a huge and rapid development. This specific application relies on the availability of ICT tools such as computer and Internet. Dumos (2008) demonstrated that e-learning is the use of modern technologies associated with computers and Internet; to achieve

DOI: 10.4018/IJICTE.2020070105

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learning objectives in less time and effort and to gain greater benefits. Further, Radi (2010) pointed out that e-learning is the use of ICTs to build, enhance, and facilitate learning process anywhere, and at any time. With same sense, Saeed (2008) considered e-learning as a term that combines aspects of learning, Internet, web-based training, and teaching with technology. Omari (2009) added that e-learning is a technical education system that stimulates and motivates the learner. According to Salem (2014) e-learning is a modern educational system that offers academic courses, educational and training programs by modern ICT tools, to individuals in their places and at any time. In sum, the researchers consider e-learning as a modern educational tool that enables and motivates learners, under teacher's supervision, to acquire knowledge, and to transfer what has been learned to other educational events. Using such a tool can exceed the limits of time and space, through the use of modern ICT related applications.

## **E-Learning Forms**

E-learning has many forms such as synchronous learning (direct) and asynchronous learning (indirect). The term of synchronous learning is used to illustrate teaching and learning processes that occur at the same time, but in different places. During applying this form, teacher and students should use ICTs to conduct a discussion, conversation, and dialogue in the chat rooms between teacher and students and between students themselves (Awawdah, 2012). That is, teacher and students should have several technological skills that enable them to use modern technologies such as whiteboards, chat rooms, and audio and video conferences (Saeed, 2008). However, the asynchronous learning does not require the presence of learners and teacher at the same time or in the same place, but it is done through using ICT tools such as e-mail, where teacher and students can exchange information and knowledge between them at different times and from different places (Hawamdeh, 2011).

## **E-Learning Objectives**

Shunnaq and Banidomi (2010) demonstrated that e-learning aims at reducing the shortage of academic and qualified staff in some educational sectors by providing virtual classes and creating an interactive environment that includes ICTs. In addition, it attempts to encourage students to be active learners and interact efficiently with the elements of educational process. Mahdi (2018) pointed out that e-learning aims to develop the role of the teacher in the educational process to become a facilitator who can: 1) keep abreast of successive scientific and technological developments, 2) provide appropriate education for different age groups, 3) respond positively to individual differences of students, and 4) overcome obstacles of space and time by providing learning through utilizing several educational methods, strategies, and ICTs that make learning more interesting and enjoyable, with higher efficiency and less effort and time.

## Roles of Teachers and Learners in E-learning

In the era of ICT, the role of teachers has changed fundamentally. Their role has been shifted from being a source of knowledge to become motivators and facilitators to acquiring it (Eyadat, 2014). That is, using e-learning does not mean withdrawing the role of the teacher in the classroom. It means that the teachers' role would be more important and complex. According to Eyadat (2014) teachers in the ICT age should be well qualified in three types of knowledge: content, pedagogical and technological aspects. Teachers should have several characteristics such as flexibility, efficiency, innovation, creativity, ability to plan, design, and manage teaching and learning processes, and openness to new ICTs that serve the achievement of learning objectives. Hawamdah (2011) and Dumos (2009) demonstrated that role of the teacher in e-learning includes: 1) preparing and programming educational content that is easily accessible at any time, 2) choosing effective and appropriate teaching methods to present the educational content to students, and 3) using appropriate assessment methods to identify the strengths and weaknesses of students, and then determining the appropriate enrichment or therapeutic programs.

The role of the teacher in the context of e-learning is not only confined to focus on the planning and preparation of the educational process, but also to create the educational programs necessary for students' learning. That is, teacher is called upon to: 1) encourage students to learn how to use technology, 2) provide them with the appropriate climate to participate effectively in the educational process, 3) enable them to be self-reliant and acquire research and communication skills, and 4) integrate them into classroom and out-classroom educational activities to expose their talents and develop their abilities (Shunnaq & Banidomi, 2010). Consequently, teacher's role in e-learning is linked to several areas such as designing teaching and learning processes, employing e-learning techniques to encourage positive interaction among students and developing self-learning.

In addition to the new role of teachers, the student also has a new active role in e-learning environment. Instead of being a passive recipient, as in traditional education patterns, the student has become active in the learning process. Therefore, student in the light of e-learning can learn based on his/ her abilities and needs (Turki, 2010). Awawdah (2012) and Baniyassin and Melhem (2011) added that learner in e-learning should participate in implementation of learning, prepare learning environment, and interact electronically with colleagues in different parts of the world. In the environment of e-learning, all students can have access to learning according to their abilities with offering them endless educational opportunities regardless their race, gender, or language (Awawdah, 2012). According to Turki (2010) e-learning can provide access to students who cannot go to school due to living in remote areas. In addition, it allows students with special needs to have access to educational opportunities in their place.

## **E-Learning Features**

Dumos (2008) addressed that e-learning has many benefits such as: 1) increasing communication opportunities and enabling students to discuss ideas and engage in dialogue, 2) allowing every student to speak at any time without embarrassment or fear, 3) providing easy access to the teacher as quickly as possible and sending assignments at any time, even outside the working hours. Obydat and Abo Sameed (2015) demonstrated that e-learning contributes to the development of conversation by giving the students the opportunity for exchanging their views on subjects that are available for negotiation. Such opportunity would help them to create a strong basis to access knowledge and skills through dialogue. Awawdah (2012) and Saeed (2008) emphasized that one of the most important benefits of e-learning is the continuity of access to knowledge resources at any time and place. This kind of access makes the student comfortable. That is, the application of e-learning can also help teacher to invest time by sending what student needs online. Further, it has the ability to accommodate large groups of students; where there is no limited number of seats. Furthermore, it increases the effectiveness of students in the classroom because its application is aligned with many modern educational methods.

Ani and Aboud (2009) asserted that e-learning has a great role in bridging the digital divide by increasing students' technological culture. Further, it develops critical thinking skills and creativity among students. Furthermore, it provides educational courses in synchronous or asynchronous ways. Finally, it offers immediate and appropriate feedback based on students' needs. Turki (2010) clarified that e-learning seeks to provide the learner with an active environment. In this environment the student can choose appropriate educational activities that addressed his/her needs. In addition, educational content in e-learning environment could be presented by using several tools and methods that are appropriate for students. In sum, all e-learning benefits, that were discussed, assert that individual differences among students are considered and learning process should be transformed from group-based learning to the individual preference.

#### E-Learning in Jordan

After the National Conference for Educational Development in Amman in 1987, the Jordanian experiment in integrating computer devices into teaching and learning processes has initiated. The Ministry of Education in Jordan (MoEJ) tried to employ the latest teaching and learning methods

by using emerging technological tools to create active learning environment (Dumos, 2008). MoEJ had been implementing a comprehensive plan for the development of the educational system through conducting e-portal agreement that encourages integrating technologies into education. This comprehensive plan seeks to link education to "knowledge economy". The plan requires several steps such as computing curricula electronically, and developing the content of textbooks by include the newest scientific knowledge. The new content attempts to help the students to acquire adequate knowledge and skills that are necessary for life-long learning (Shurman, 2013).

In 2000, MoEJ distributed computers to various schools in the country. It started training twenty thousand teachers in all disciplines on the use of computers and their applications to ensure that teachers are familiar with the basic concepts of information technology and able to use the computer and its general applications efficiently (Eyadat, 2014). MoEJ hopes to introduce series of changes in teaching and learning methods as a response to the global trends and the recommendations of the National Conference for Educational Development (Abdelaziz, 2013). Currently, MoEJ uses appropriate software to produce electronic textbooks to enable curriculum's development committee members to modify and develop the curricula directly, and to disseminate the new knowledge to students through multiple methods such as electronic websites and storage tools (Eyadat, 2014). Further, MoEJ tries to invest in the abilities of Internet to connect teachers and students with endless resources of knowledge around the world. Such resources would help both of them to review several websites that contain related knowledge and educational tools to be used in promoting teaching and learning processes (Zoubi, 2008).

## **Study Problem**

MoEJ has a clear vision in bridging the digital divide between Jordanian students by trying to achieve the principle of equal opportunities, regardless students' places. This can be achieved by integrating ICT into their learning practices. However, based on the researchers' experiences, as workers in the field of education in Tafila governorate, they found that teachers' practices, regarding using ICT, are not compatible with the vision of MoEJ and the educational initiative calling to spread the computer culture and to employ e-learning in education. In addition, they noticed that some teachers are still using traditional teaching methods that do not commensurate with modern scientific and technological development. There are many studies supported the researchers' experiences such as Hamadnah and Sarhan (2013), Awamlah (2013), and Murad (2011) indicated that the degree of using ICT among teachers in some districts in north of Jordan ranged from medium to low. Those studies encouraged researchers to conduct this research study that focuses on the use of ICT in the southern governorates in Jordan. Consequently, this research study came to explore the extent of the use of e-learning among teachers in one of the southern governorates in Jordan.

Identifying teachers' practices, regarding the use of e-learning, would help to address positive and negative aspects in order to promote the positive, and challenge the negative. In addition, conducting such research, especially in one of the southern governorates in Jordan, would raise the level of awareness regarding the importance of exploring the use of e-learning in disadvantaged governorate.

## **Study Questions**

This study was conducted to explore the degree of using e-learning among teachers of higher basic stage in Tafila governorate as one of the southern technologically disadvantaged governorates in Jordan. Specifically, this study came to answer the following questions:

- 1. To what extent do teachers of higher basic stage, in one of the southern governorates in Jordan, use e-learning?
- 2. Are there statistically significant differences ( $\alpha = 0.05$ ) between means responses of higher basic stage's teachers regarding using e-learning attributed to the teachers' gender, experience, and specialization?

## **Study Importance**

The importance of this study stems from the necessity of integrating ICT into teaching and learning that would assist improving and developing the quality of education (Gulbahar & Guven, 2008). Further, this study could provide the decision-makers and curricula developers in the MoEJ with feedback regarding how Jordanian teachers use e-learning in their teaching practices. That is, this research could identify strengths and weaknesses of teachers' practices in e-learning in order to reinforce strengths and address weaknesses to improve teaching and learning processes according to the 21st century requirements. Furthermore, this study is important because it explores teachers' practices in one of the southern remote governorates in Jordan. This would help decision-makers to identify the needs and requirements of the application and use of e-learning in the schools of governorates that suffer from lack of services and development.

## **Study Limitations**

The study population in this research was administered solely on teachers of higher basic stage in Tafila governorate. In addition, the study results are determined by the psychometric characteristics of the study instrument and the objectivity of the participants' who responded to this instrument.

### **Terms and Definitions**

*E-learning in education*: A pattern of modern educational strategy that enables a learner acquiring knowledge and information he/she wants at anytime and anywhere, through the use of modern ICT (Saeed, 2008).

Use of e-learning: for the purposes of this study the use of e-learning is defined as a teaching strategy in which a teacher can plan, implement, manage, and evaluate his/her teaching practices by using modern ICTs. In addition, it included the teacher's instructions for students to use ICTs to achieve the learning objectives. The degree of using e-learning is measured by the degree that the participants received after responding to the study instrument.

### **PREVIOUS STUDIES**

The researchers examined several previous studies that are related to the research subject in order to provide information and background on the subject of the study. The study of Hamadnah and Sarhan (2013) aimed to identify the degree of using Internet in teaching among Arabic language teachers in Mafraq governorate/Jordan and their attitudes towards it in the light of some variables. The study sample consisted of 160 teachers, and it used a questionnaire to collect the data. The results of the study indicated that the degree of using Internet among teachers was medium, while the attitudes towards the use were high. In addition, there were statistically significant differences in the degree of Internet use due to the effect of the academic qualification variable and in favor of master's degree, while there were no significant differences due to the impact of gender and experience variables. However, the study of Abed-alkareem (2008) was designed to identify the reality of using e-learning in the private schools in Riyadh. It used a questionnaire to collect data from the sample consisted of 297 teachers. The study findings showed that there were statistically significant differences in the use of e-learning methods in the schools and in favor of females, while there were no statistically significant differences according to the variables of specialization, academic qualification, experience, and number of training courses.

The results of Sawai (2010) agree with Hamadnah and Sarhan (2013) findings. The study of Sawai (2010) was designed to identify the degree of using educational portals among teachers in Muscat governorate, and the difficulties they face in using them. In order to achieve the objectives of the study, a questionnaire was developed to be applied on the study sample consisted of 365 teachers. The study results showed that the degree of using e-learning was medium. In addition, they showed

that the main difficulties facing teachers in using the e-learning were the lack of services provided by the e-learning portal and the lack of qualified IT staff provided by the Ministry of Education.

The study of Awamlah (2013) aimed at identifying the reality of computer use in teaching in secondary schools in Balqa governorate/ Jordan. In addition, it aimed to identify the adequacy of computers and peripherals, and to identify the main obstacles facing teachers in using and employing computers in teaching. To achieve these aims, a questionnaire was developed to collect the data from the study sample consisted of 400 principals, teachers, and students from secondary schools in Balqa governorate. The results of the study indicated the lack of using computers and applications in teaching and learning processes. With same sense, Murad's study (2011) aimed to identify the extent to which the teachers of the Directorate of Education in Shoubak/Jordan know the basic applications and software of ICTs and how they use and employ them in the subject matters they teach. To answer the study questions, the researcher designed a questionnaire that was applied to a sample of 101 teachers. The results of the study showed that the majority of respondents use the various ICT applications and software, but their use and employment for teaching purposes was low.

The study findings of Dohoon's (2008) agreed with the study of Awamlah (2013) and Murad (2011). Aldohoon's study aimed at investigating the reality of using e-learning system from the teachers' viewpoints in Irbid governorate/Jordan. To achieve the study aim, the researcher constructed a questionnaire distributed among 545 teachers in the public schools. The results showed the availability of e-learning tools such as computers, printers, speakers, and data projector, but the use of these tools in teaching practices was low. Further, there were statistically significant differences due to the effect of gender on the degree of use of e-learning in favor of males, while no significant differences were found due to the rest of the study variables.

In sum, previous studies focused on the use of e-learning and the main challenges in teaching and learning processes, as indicated in the study of Hamadnah and Sarhan (2013), Dohoon (2008), Awamlah (2013), Murad (2011), Sawai (2010), and Abed-alkareem (2008). However, this study is considered as the first study that examined the extent of using e-learning among teachers of higher basic stage in Tafila governorate/Jordan.

#### RESEARCH METHODOLOGY

In this study, the researchers used the descriptive research approach to collect, analyze, and interpret the data in order to answer the research questions. According to Al-Manizel and Al-Atoum (2010) descriptive research studies aim to investigate "what is" by applying survey methods which are frequently used to collect descriptive data.

## Study Population and Sample:

The study population consists of all female and male teachers of higher basic stage in Tafila governorate in the second semester of the academic year 2015/2016. The study population consisted of 1215 teachers, according to the statistics of the Planning Department in the Educational Directorate in Tafila governorate. However, the study sample was 365 teachers: 217 of them were female teachers and 148 male teachers, who were selected randomly by the stratified method.

## Study Instrument

To answer research questions, the researchers developed an instrument (questionnaire) that consisted of two parts. The first discussed demographic information related to the study participants such as gender, specialization, and years of experience. The second part included 30 items that measure the extent to which teachers, of higher basic stage in Tafila governorate/Jordan, use e-learning. Previous and related studies such as Dohoon (2008), Murad (2011), and Omari (2009) were reviewed to develop the instrument of this study. The responses of study sample on the questionnaire items were according to Likert scale (5-point scale: Always = 5, Often = 4, Occasionally = 3, Rarely = 2, and Never = 1).

## **Validity**

After developing the questionnaire in its preliminary form, it was presented to a group of 14 arbitrators who include: 1) faculty members with instructional technology specialization, 2) specialists in the field of psychology, measurement, and evaluation, and 3) a group of schoolteachers. Arbitrators provided number of notes and suggestions related to wording, readability of items, and belonging to the main domain. By considering their suggestions, the questionnaire was amended based on the estimations of the majority of the arbitrators.

## Reliability

To check the reliability of the study instrument, the questionnaire was applied on 25 teachers from the study population and outside the study sample. After three weeks from the first application, the same questionnaire was re-applied on the same sample. The Pearson Correlation Coefficient then calculated the correlation coefficient and it was (0.93). This result directed the researchers to pursue conducting the study.

## **Study Variables**

The study included two types of variables. First, independent variables which included gender (male and female), experience (less than five years, five years to less than ten years, ten years and more), and specialization (scientific, human). Second, dependent variable that included the extent to which teachers, of higher basic stage in Tafila governorate/Jordan, use e-learning.

#### **Statistical Treatments**

The researchers used the Statistical Package for Social Sciences (SPSS) software to analyze data and perform several statistical treatments. First, Pearson Correlation Coefficient was calculated to check the reliability of the study instrument. Second, Means and Standard Deviations were calculated to find the extent to which teachers, of higher basic stage in Tafila governorate/Jordan, use e-learning, and to find the differences of statistical significance for the levels of gender and specialization variables. Third, Schiffe test was calculated to find Post Hoc of the experience variable. Fourth, Three-Way ANOVA test was calculated to determine statistically significant differences between means responses of higher basic stage's teachers, in one of the southern governorates/Jordan, regarding using e-learning attributed to the teachers' gender, experience, and specialization. Fifth, the interval estimations (1–2.33= low, 2.33<–3.67= medium, and 3.67<–5= high) were determined to judge means values of the study sample responses.

#### **RESULTS AND DISCUSSION**

The First Question is: "To what extent do teachers of higher basic stage, in one of the southern governorates in Jordan, use e-learning"? To answer this question, means and standard deviations were calculated. The mean value of the total score was (3.20) and the standard deviation was (0.689). This mean indicated that the degree of using e-learning among teachers of higher basic stage during their educational practices was medium. That is, teachers are using e-learning moderately. This result could be due to the preference of some teachers to practice old traditional teaching methods, because they are accustomed to them and feel the difficulty of change. In addition, this finding could be due to the possibility of facing some of the obstacles that prevent teachers from using e-learning steadily.

The results of first question showed that the items which obtained a high degree of use (3.74-4.38) focused on the use of the Eduwave system (Learning Managing System created by MoEJ), Microsoft Office Excel and Access, and Internet. This result could be due to the training that was held by MoEJ to empower teachers to use such application and software in recording and organizing students' grades. However, the items focused on the use of e-learning applications and software such

as electronic games, smart board, scanner, e-portfolio, and e-mail obtained a medium degree of use (2.46-3.67). Finally, the item focused on the use of the applications that focus on direct communication such as Skype to communicate with students obtained a low degree of use (2.09). This result is due to the fact that teachers may be satisfied with communicating with students just inside the classrooms, and there is no need to communicate through modern electronic applications. The results of this study disagreed with Murad's (2011) study, which indicated that the majority of study participants used different ICT applications and software; but their employment for teaching purposes was low. In addition, the results of this study disagreed with the study of Dohoon (2008), which revealed that the degree of using e-learning system among teachers was low. However, the results of this study agreed with the results of Hamadnah and Sarhan's (2013) study, which indicated that the degree of using some e-learning applications was medium.

The Second Question is: "Are there statistically significant differences ( $\alpha = 0.05$ ) between means responses of higher basic stage's teachers regarding using e-learning attributed to the teachers' gender, experience, and specialization?" To answer this question, means and standard deviations were calculated, and table (1) shows the results.

Table 1. Means and standard deviations for study sample estimates according to gender, experience, and specialization
variables

Variable	Variable level	Mean	Std. D.	Degree of Use
Gender	Male	3.11	0.725	Medium
	Female	3.13	0.624	Medium
Specialization	Scientific	3.15	0.639	Medium
	Human	3.24	0.720	Medium
Experience	Less than five years	3.357	0.714	Medium
	Five years to less than ten years	3.351	0.692	Medium
	Ten years and more	3.016	0.629	Medium

Table (1) showed that there are apparent differences between means according to gender, experience, and specialization variables. To determine the statistical significance of these differences, a Three-Way ANOVA test was calculated, as shown in Table (2).

Table (2) indicated that there are no statistically significant differences in the extent of using e-learning among teachers of higher basic stage in Tafila governorate/Jordan due to gender (F= 1.91) and specialization (F= 0.54) variables. This finding could be due to the fact that both female and male, regardless the specialization, have similar educational experiences in using e-learning. With respect to the gender variable, this finding disagrees with the study of Dohoon (2008) that showed statistically significant differences due to the impact of gender in the field of infrastructure and basic equipment in favor of males. However, this study agrees with the study of Hamadnah and Sarhan (2013) that showed that there were no significant differences due to the impact of gender variable. This study finding, regarding to the specialization variable, agrees with the study of Abed-alkareem (2008) that indicated that there were no significant differences due to the impact of specialization variable. In addition, this study results revealed that there were no interactions between gender\*specialization, specialization\*experience, and gender\* experience.

Further, table (2) showed that there were statistically significant differences due to the experience variable (F= 14.09). The Schiffe test was used to determine these significant differences. Table (3) illustrates these results.

Table 2. The results of Three-Way ANOVA test according to gender, experience, and specialization variables

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	26.234	11	2.385	5.735	0.00
Intercept	3355.39	1	3355.39	8.069	0.00
Gender	0.797	1	0.797	1.91	0.167
Specialization	0.225	1	0.225	0.541	0.463
Experience	11.723	2	5.862	14.09	0.00*
Gender* Specialization	1.054	1	1.054	2.53	0.112
Gender* Experience	2.421	2	1.211	2.91	0.056
Specialization* Experience	0.446	2	0.223	0.536	0.586
Gender* Specialization* Experience	8.388	2	4.194	10.08	0.00*
Error	146.787	353	0.416		
Total	3922.578	365			
Corrected Total	173.022	364			

<sup>\*</sup> Statistically significant at the level of significance ( $\alpha$  =0.05)

Table (3) showed that there were statistically significant differences due to the experience variable in favor of less than five years and five years to less than ten years. This result could be due to the fact that these teachers have received more training than their colleagues with more than ten years of experience through university courses. In addition, those teachers studied computer courses when they were students from 7th-12th grades comparing with their colleagues who have more than ten years of experience. This result disagrees with the study of Abed-alkareem (2008) that indicated that there were no significant differences due to the impact of experience variable.

Furthermore, table (2) as indicated above showed that there was an interaction between the variables of gender\*specialization\*experience (F=10.08). In order to identify the nature of the interaction between these variables, means were represented graphically as shown in Figures (1) and (2).

Figure (1) indicated that female teachers with scientific specialization and experience from five years to less than ten years use e-learning in their educational practices more than those with a scientific specialization and experience from ten years and up. In addition, figure (2) revealed that

Table 3. The results of the Schiffe test regarding experience variable

Experience (I)	Experience (J)	Mean Difference (I-J)	Sig.
Less than five years	Five years to less than ten years	.0062	.998
	Ten years and more	.3414	.000*
Five years to less than ten years	Less than five years	0062	.998
	Ten years and more	.3352	.000*
Ten years and more	Less than five years	3414	.000*
	Five years to less than ten years	3352	.000*

<sup>\*</sup>Statistically significant at the level of significance ( $\alpha = 0.05$ )

Figure 1. Interaction of specialization/scientific variable with both gender and experience variables

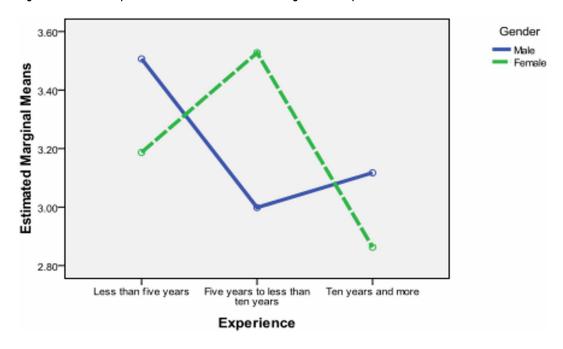


Figure 2. Interaction of the specialization/human variable with both gender and experience variables



male teachers with a human specialization and experience from five years to less than ten years use e-learning in their teaching practices more than teachers with a human specialization and experience from ten years and up.

#### CONCLUSION

This study aimed to learn more about the extent of using e-learning among teachers of higher basic stage in one of the southern governorates in Jordan. The results showed that the teachers were using e-learning moderately. In addition, there were no statistically significant differences attributed to the variables of gender and specialization. However, there were statistically significant differences attributed to the experience variable. In light of the study results, the researchers recommend: 1) disseminating the importance of using e-learning applications in the learning and teaching processes regardless subject matters to encourage teachers to increase their use of e-learning, 2) establishing educational websites to keep teachers in contact with the most important developments in the field of e-learning in the educational field and new implemented technology tools, 3) conducting more workshops to train teachers how to use ICT in their teaching practices, especially teachers who have more than ten years of experience, 4) providing computer technical staff to help teachers use e-learning applications, prepare educational software, maintain equipment in schools, and avoid technical issues, 5) providing teachers with free e-learning applications to encourage them to use such applications without additional financial burdens, and 6) conducting further research studies to investigate the extent of using e-learning among teachers of other educational stages such as lower basic stage and high school in Tafila governorate and other remote areas in Jordan.

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

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#### International Journal of Information and Communication Technology Education

Volume 16 • Issue 3 • July-September 2020

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