

Technologically Competences, Physical Education Textbooks, Jordanian Secondary Schools

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Abstract

The study aimed to develop a list of Technologically Competences which needs to teach Physical Education textbooks, at the Jordanian secondary schools. The sample of the study consisted of (62) teachers of the Physical Education in Irbid Governorate in the academic year 2018/2018, chosen randomly. To achieve the aim of the study, a questioner of three domains: Teachers, Student, and Instructional Environment Competence, consisted of 46 competences was developed. The results indicated a very high level of teachers' rating of all Technologically Competences. The results also revealed statistically significant differences in Teachers rating of Technologically Competences in both domains (Teacher, and Students), due to the variable of (gender) in favor of males, and differences in the variable of (experience) at both domains also, in favor of level of (5-10) years in Teacher domain, and the level of (less than 5 years) in Students domain. And no differences have appeared in the domain of Study level.

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1. Introduction

Technology is an essential part of the education process, as it does not really mean the use of advanced devices and tools, but rather a way of thinking to develop an educational system, that is, it depends on following a method and method of work in which all the capabilities provided by modern technology are used according to the theories of teaching and learning by providing an educational environment in which the learner builds his educational experience using all sources of knowledge, in order to access the information by himself, not just technological dazzling using modern machines and equipment.

Since the teacher represents one of the main pillars of the educational process, activating his role from a new perspective while preserving the originality of that role contributes to enabling the educational institution to fulfill its mission within the framework of the concept of authenticity and contemporary (Banyhamdan et al., 2020). Because the teacher has the necessary roles that enable him to create the leading minds in societies, the research in preparing the teacher from a standpoint enables him to deal efficiently with the developments that represent a strong challenge to the role he plays (Alsafadi et al., 2020). It is considered a fundamental pillar for the success of the educational process, and the teacher is the cornerstone of the educational process. He is responsible for preparing a generation capable of using modern technology and dealing with it (Bourini et al., 2020). Therefore, the teacher is required to exercise many modern roles to improve the educational process as a whole (Al Sharia, 2005).

The education movement based on educational competencies is one of the educational trends that its application in the field of teacher preparation has resulted in improving the quality of the teacher, in addition to having positive effects on the competencies of the learner, one of the most important of which is that it provoked a dispute between those working in the field of education (Alshare et al., 2020). which led to doubling efforts in research. And experimentation, as it required the necessity of defining a set of things, including, for example, effective learning standards, achievement standards, and evaluation methods, and also aimed at identifying the special capabilities that should be available to teachers to improve their teaching performance and moving from an interest in curriculum content in preparing and training teachers to emphasize on the skills, or competencies that the teacher should acquire, and the actual practice of them with a high degree of competence and proficiency (Bilal, 2010).

The subject of teaching teacher competencies is one of the essential topics in the contemporary educational process. In being a guide and guide for the teacher, which affects his performance of his work and his professional growth, and helps him to achieve his goals that lead to directing the educational process to achieve its desired goals (Alwagfi et al., 2020). Thus, there has become an urgent need for attention to teaching competencies in order to raise the level of professional performance of teachers (Eid, 2004).

The term competencies are a modern term in education, used by scholars to focus on: personal qualities, knowledge, and the ability to define behavior and performance styles at work (Al-Da'abseh, et al., 2018). Competencies are defined as "capacity, capacity, ability, capabilities, and skills, and it is the best level an individual is likely to reach if he obtains the most appropriate training or education, and it can be observed and measured and makes him able to achieve his goals as best as possible (Khazali and Momani, 2010: 560).

It is also defined as "the teacher's ability to perform educational behavior with a certain level of mastery, with minimal effort and in the shortest possible time, through the sum of knowledge, skills, and attitudes that he acquired within the framework of the preparation processes programmed for him" (Al-Shayeb and Zahi, 2011: 21). Researchers define it as "abilities, skills, or capabilities that the teacher must master to do a job with precision and mastery with the least time and effort."

As a result of the knowledge explosion, the population explosion, the information and communication revolution, the technological revolution, and the consequent speed of knowledge transfer, the educational process faced many pressures and challenges during the second half of the twentieth century that resulted in great pressures on educational institutions for more effectiveness, creation, and innovation to cope with these changes, and as a result, Therefore, many countries have resorted to using technology to varying degrees to face these challenges (Shama and Ismail, 2008).

The introduction of technology education into the educational learning process is an important axis of educational renewal, whether in developing countries or developed countries and in all types of formal and informal education and within The school or outside it, which led to the scientific and technological application and the use of computers in education at all educational levels, due to the great importance enjoyed by educational technology (Saadeh and Al-Sartawi, 2001).

The researchers believe that technology is no longer a luxury or entertainment in the education process but rather has become an essential part of this process. Where the time of traditional education that prevailed before the invention of technology and its entry into the world of education has passed, in which the learner was merely a tool to record what comes out of the teacher's mouth from the words he memorized by heart and memorized only when needed

It was natural for these developments to affect every element of the educational process in general, and on teaching and learning methods in particular, and as a result of all this, new types of teaching and learning appeared under different theories, slogans, and labels such as e-learning and distance learning. Learning), open universities, and virtual classes (virtual classrooms) (Al-Omari, et al., 2018). From this standpoint, he urged educational scholars to take advantage of these developments in the teaching and learning processes by exploiting the tremendous potential of these developments, which greatly help in raising the level of education and works on Solve the problems encountered in this process (Al-Omari and Al-Momani, 2011).

There is no doubt that the educational system has an impact on all groups of societies, and it is capable of activating the role of the human element and developing its capabilities to face these developments and changes and prepare them to coexist with it. The teacher has a leadership role in the e-learning process and is one of the most important basic pillars of the educational process, and here comes his role and importance in leading this method of modern methods, which cannot be dispensed with, so the teacher is required to practice many modern roles to improve the educational process as a whole and needs e-learning To the teacher who reaches the required level, and this can only be achieved through hard work, continuous effort and constant awareness (Al - Toudary, 2006; Mutawa, 2002).

E-learning is defined as "providing training and educational programs through a variety of electronic media, including disks and the Internet, in a synchronized or asynchronous manner, and by adopting the principle of self-learning" (Fayyad, Kathem, and Abboud, 2009: 273). It is also defined as a method of education using modern communication mechanisms such as computers, networks, and multimedia in order to deliver information to learners in a faster time and less costly and in a way that enables the management of the educational process and measuring and evaluating learners' performance (Abdul Majeed and Al-Anani, 2015: 18).

It is defined as an activity supported by the use of information and communication technologies such as computers and its accessories, electronic means of presentation, satellites, Internet networks, and electronic librariesto deliver education more efficiently and with less effort (Sambrook, 2003: 507).

(Al-Sheikh, 2009: 8) defines it as "teaching using digital electronic information with computer and internet tools, whether in the classroom or remotely." Researchers define it as the use of digital media such as computers, mobile devices, and digital aids in presenting educational material to learners.

Because of the importance of technology, it has entered most aspects of our lives, and that is why countries have been keen to adopt technology and introduce it into the educational field, as the learner has become in dire need of new methods and means derived from technology to help them increase knowledge in various fields of learning. It is noted that technology has not been fully integrated into the field of teaching, as it faces many problems and challenges, such as defects in how to use technology tools, or the presence of some beliefs of

some educators and learners that conflict with the effectiveness of this technology and its effect on the learner (Al-Omari, 2015).

As a result, it has become very important to prepare the teacher in the Faculties of Physical Education through specialized curricula, and therefore the study plans must be presented to him, including experiences and methods to gain him the required technological competencies, as it is noticed that there is an increasing shortcoming period after another between the reality of existing education and the use of technology in education and that the program Preparing the student teacher on the competencies makes the standards clear for the application and is by defining the competencies that the student teacher should acquire, and educational technology competencies are important competencies in the era of technological progress and the era of the future school of physical education (Zaghloul, 2004). In order for the teacher to achieve his goals, his teaching competencies must be improved. Among these competencies is the ability to carefully plan lessons, to organize experimental work of all kinds, and to evaluate student learning in all aspects, and competencies. Related to the use of means: audio, visual, and scientific devices, and to employ the potentials of the environment (Beni Domi, 2010).

Hence, educators, economists and policymakers agreed that traditional methods are no longer feasible in providing learners with the necessary and sufficient experiences required by the twenty-first century. Those experiences that require intensive use of the largest possible number of available means and resources in order to improve the level of performance and achieve the educational goals set (Abdel Halim and others, 2011).

All this has led educational institutions to reconsider preparing the teacher and providing him with educational competencies to match the spirit of scientific and technological changes so that the teacher becomes the master of the situation, undertakes the process of designing education and producing various educational materials and programs, following up on innovations in education, and adopting them, whether they are educational methods, strategies or Software or hardware, or anything deemed to have a benefit that can be used in the service of the educational learning process, in addition to other competencies that did not exist before, represented in the management of educational projects and the management of educational devices used in the teaching and learning process, and the management of the educational situation in its various aspects, In addition to conducting various evaluation methods (Al-Helah, 2003).

As a result, interest in the issue of integrating technology into the educational learning process has clearly emerged in the recent period, and the need to adopt educational technology models, such as computers and its applications in education, learning resource centers, satellite TV education, distance education, e-learning, and others. Numerous studies have indicated the effective role of these models and their support for the teaching process (Al-Jamlan, 2004; Hirumi& Grau, 1996).

The reason for educators' interest in technology may be due to the fact that it allows students to increase their knowledge in various fields of learning in less time, and that it helps them learn about global learning environments, in addition, it can be an effective educational learning tool if learners are involved in the education process (Almekhlafi, 2006).

The modern concept of technological sufficiency is the ability of the teacher to carry out the process of producing and using various educational devices, materials, and software, and this new role of the teacher contributes to achieving meaningful education for the learner and increases the efficiency of the educational position, as they represent more suitable environmental conditions for learners at different levels, and raise the level of Achievement, enhance class interaction, and shorten the class time (El-Toudary, 2003).

Technological competence is defined as "the set of capabilities, skills, and trends that a teacher possesses and is proficient in practicing in the various fields of educational technology, especially in the field of design, production, use, and evaluation of educational materials and in the field of operating various educational devices (Bani Domi, 2010: 254).

These are the capabilities that teachers possess, in the technological field, that enable them to use devices and tools to display and produce multimedia with a satisfactory degree of perfection in order to provide an element of interaction in the educational situation, which helps to achieve educational goals (Bakhathlaq, 2010: 11).

It is also the sum of the abilities - which represent the minimum - of knowledge, skills, and trends that teachers should possess in the field of educational technology and their ability to employ them in all fields (Al-Qarni, 2017: 113).The researchers define it as "the knowledge, skills, abilities, and experiences related to the use of technology from devices, equipment, strategies, and teaching methods in the educational process to achieve goals with the least amount of effort and time with a certain level of mastery. "In order for teachers to be able to integrate technology into their training, they must be trained in several processes, including the entry stage and the creativity stage, in which the tool is flexible, and the teaching in it becomes cooperative and leads to good educational practices. The use of modern educational technologies (Zaghoul et al. 2009; Sandholtz& Reilly, 2004).

Many studies and research have emphasized the importance of training teachers on the use of modern technologies and how to employ them in their educational materials, to advance the development of learners' performance by providing them with skills that are integrated within the framework of the development of

learning methods with the developments of the technological age, as they provide an interactive educational environment, and provide an advanced technology entrance that uses In various school subjects and their learning, and it has become an enhanced and useful method in the field of teaching and learning and more effective as it makes the learner in a permanent and continuous activity during the teaching process, as well as its ability to directly enhance learning and display the educational material in a controlled logical sequence, and there is no doubt that technological developments have occurred. Helped to improve the learning and teaching process, due to its ability to communicate the idea to the learner through the great capabilities it has in terms of sound, image, and video, and its ability to save time and effort, which gives the teacher sufficient time to make the learner practice what he learned in theory. Practical practice, which establishes his experience or skill, and thus remain in his mind for a longer period of time, and where he needs it, he can do it properly (Al-Sarayreh and others, 2012; Al-Omari and Al-Momani, 2011; Salem, 2004).

Therefore, defining educational competencies has become a very important matter because carefully identifying these competencies makes it possible to evaluate teachers' capabilities and performance, and thus must be the main pillar in preparation programs, as a preparation on this basis makes education and training more efficient and effective, and from this standpoint, one of the most important of these Competencies at the present time Technological teacher preparation competencies (Osman, 2015).

All this has led educational institutions to reconsider the teacher's numbers and provide him with educational competencies to match the spirit of scientific and technological changes, so that the teacher becomes the master of the situation, undertakes the process of designing education, producing various educational materials and programs, following up on innovations in education, and adopting them, whether they are educational methods, strategies or Software or hardware, or anything that is seen as having an educational learning benefit, that can be used in the service of the educational learning process, in addition to other competencies that did not exist before, represented in managing educational projects, managing educational devices used in the teaching and learning process, and managing the educational situation. In its various aspects, in addition to conducting different evaluation methods (Al-Helah, 2003).

The importance of this study stems from the fact that it coincides with calls for curriculum development and updating. And computerizing them in a way that leads to achieving educational goals with less time and effort while trying to reach a high degree of perfection. This study seeks to provide a list of technological competencies that are expected to benefit educational institutions that prepare teachers in the field of teaching physical education investigations by focusing on providing the teacher with the necessary competencies to teach using the latest technological methods to achieve this, in line with international standards.

Many studies, such as the study (Al-Mahya, 2008; Al-Khawalda, 2004; Al-Omari, 2015) and (Bjekic, & Milosevic, 2010; Hammoud, 2006, Yang. & Heh, 2007) have emphasized the need to prepare the teacher for e-learning, and to integrate technology into Education, which calls for the necessity of reviewing the current teacher preparation and qualification programs to determine the competencies of using e-learning in teaching. The field of infrastructure or in building special programs, setting standards, building electronic curricula, preparing the scientific environment, training teachers on this type of education, and providing them with special technological competencies, as well as preparing students.

2. Literature Review

By referring to the various data sources such as refereed journals, periodicals, scientific letters, and databases, the researchers found a set of studies related to the current study; they were used in preparing the list of competencies and in discussing the results. They are arranged from oldest to newest, as follows: Al-Qathami (2001) conducted a study aimed at finding out the extent to which faculty members in Teachers Colleges in Saudi Arabia possess the necessary educational competencies from their point of view. The study sample consisted of (873) faculty members, and the researcher prepared a study tool consisting of (56) educational competencies. It falls under five main areas: education, education development, education implementation, education management, and education evaluation. The study found that the faculty members possess (38) educational competence to a large degree and (17) sufficiency of a medium degree and one adequacy with a weak degree. People with more than five years of experience.

Gabbayne (2004) conducted a study aimed at identifying the training needs of technology teachers in the higher basic education stage and building a training program for these teachers. An intentional sample of the school teachers of the Ministry of Education and the International Relief Agency was identified in Gaza Governorate. The study sample consisted of (119) male and female teachers, and a questionnaire was used that included a number of teachers' technological training needs. The study found the importance of having training needs for teachers, and the majority of these needs are in the field of technical, skillful, and scientific competencies. The study came out with a list of the necessary technical training needs for teachers.

Hou (2004) conducted a study aimed at identifying the most important educational technological competencies needed by secondary school teachers to effectively practice the teaching profession, and the extent to which they should practice them. The study sample consisted of (200) high school teachers in Korea. The researcher used a questionnaire of 49 () Adequacy of educational technology required for stage teachers. The study found that

teachers possess 80% of the technological competencies needed to teach and that these competencies are highly rated. The study also found that there were no statistically significant differences in the extent to which teachers employ those competencies due to the gender variable.

Al-Sharif (2005) conducted a study aimed at revealing the degree to which middle school teachers and female teachers in Madinah possessed technological competencies and the degree of their practice of them in light of gender variables and years of the educational experience. The sample of the study consisted of (315) middle school teachers in Madinah, who numbered (1785). The researcher prepared a list of technological competencies consisting of (40) adequacy that fall into five areas: education design, production, use, management, and evaluation. The results of the study indicated that teachers possess these competencies to a very high degree. The results of the study also indicated that there were no statistically significant differences in the degree of teachers' possession of technological competencies due to the variables of gender and teaching experience, while there were statistically significant differences attributed to the training course variable in favor of individuals who attended training courses.

Al-Omari (2005) conducted a study aimed at knowing the necessary educational competencies for high school computer teachers and the extent of their practice of them from the teachers' own point of view. The sample of the study consisted of (120) male and female teachers of computer subjects at the secondary stage in the directorates of education in the city of Irbid. The researcher used a questionnaire to determine the necessary educational competencies and their degree. Their practice consists of (50) items divided into two areas: general competencies and specialization competencies. General competencies have been divided into pre-teaching competencies, teaching competencies, and post-teaching competencies. The results of the study showed that the teachers' ratings of the importance of the specialized competencies were high, and the general competencies were moderate. And that there are statistically significant differences in the extent of the necessity of educational competencies due to the variable of the study, scientific qualification, in favor of holders of a bachelor's degree, in return for holding a diploma in community colleges.

The study of Coop (2006) aimed at preparing a list of basic teaching competencies for teachers and knowing their importance to them from the point of view of educational specialists in the United States of America. To achieve this goal, the researcher conducted interviews with a sample of (289) specialist educators and educational experts in middle schools. The interviews included open questions from five basic axes: teaching planning, implementation, evaluation, teaching aids, and devices, and the results showed that through the answers of the study sample individuals, an adequate conclusion (83) was necessary. The results also showed that there were no significant differences. A statistic regarding the importance of educational competencies from the point of view of specialists due to the gender variable in all study axes except for the axis of educational tools and aids and for the benefit of females.

The study of Bani Domi (2010) aimed at identifying the degree of appreciation of science teachers for the importance of educational technological competencies in light of some variables of gender, scientific qualification, and years of experience, scientific specialization, and the impact of studying a course in educational communication methods. The sample of the study consisted of (95) science teachers in Governmental schools affiliated to the Education Directorates in Karak Governorate. In order to achieve the objectives of the study, the researcher prepared a questionnaire consisting of (116) competencies distributed into seven fields. The study concluded that teachers' opinions about the importance of competencies came to a large extent and that there were no statistically significant differences in the sample's assessment of the importance of educational technological competencies due to the scientific qualification variable, specialization, and the study of a course in educational means of communication. And the presence of statistically significant differences in the sample's assessment of the importance of educational technological competencies attributed to gender in favor of females, and to years of experience in favor of those with longer As for the study of Yong & Youjin, (2013), it aimed to uncover pre-service teachers' perceptions of technology competencies in creating and using e-books in their classrooms, the study sample amounted to (114) of pre-service teachers at Midwestern University in the United States. A questionnaire was developed and distributed by researchers through the Internet. The questionnaire consisted of three parts about the views of those teachers on the use of technology, their awareness of technology competencies in teaching, and their convictions about it. The findings of the study were that teaching using picture electronic books helped teachers and increased their awareness about the necessity of using technological materials, and supported their convictions about the importance of technological competencies in education.

Othman (2015) conducted a study aimed at knowing the information technology competencies of students in the Faculties of Physical Education, and in order to achieve the objectives of the study, the researcher used a questionnaire consisting of (54) adequacy distributed on four axes, the requirements of knowledge and technological culture, the effective use and maintenance of educational equipment, the design of teaching and the selection of materials. Educational and evaluation, the study population consisted of faculty members in the Faculties of Physical Education in Egypt, and the study sample consisted of (65) members. The study concluded that the relative importance of technological competencies according to the responses of the respondents of the

study sample was high (80% - 94%) and that their importance was ranked in order: the field of knowledge requirements and technological culture, the field of the adequacy of the effective use and maintenance of educational devices, the field of teaching design and the selection of educational materials, Field calendar.

In the study of Keser, Gizem, Yılmaz& Yılmaz, 2015), which aimed to compare the competencies of technological knowledge in educational content (TAPAK- technological pedagogical content knowledge) for pre-service teachers with their perception of self-efficacy towards technology integration, based on different variables; The relationship between competencies (TPAC) and perceptions of self-efficacy towards technology integration was examined. The sample of the study included (713) students studying in different departments at the Ankara University College of Educational Sciences, and the data collection tools used in this study were the Personal Information Model, Techno Pedagogical, and Self-Integration Technology on the Effectiveness Scale at the end Study, and their perceptions of self-efficacy towards technology integration are revealed; And the relationship of these competencies to the variables of gender, degree, and specialization. The study concluded that there are no statistically significant differences between the competencies of pre-service teachers and the levels of perception of self-efficacy towards technology integration on the basis of gender and that there are differences in the grades variable in favor of students of higher years.

The study of construction (2017) aimed to build a scale of contemporary professional standards required for teachers of physical education at Soran University, to determine the extent of these standards, and to identify the effect of time experience on their availability. The researcher used the descriptive-analytical method. The study sample consisted of (40) teachers of physical education at Soran University, and the researcher used a scale with contemporary professional standards consisting of (33) items divided into ten main criteria. The results of the study reached a high degree of teachers' ratings for the availability of the main criteria (the teacher analyzes the learning environment into its components and uses these components during teaching - the teacher plays creative roles during - the teacher enriches his lesson in smart and active ways - the teacher uses modern teaching approaches in his lesson - the ethics that must be available in a teacher. physical education). The results also showed a decrease in the degree of the main criteria (the teacher is interested in creative teaching activities during his study - the teacher interacts with students during his study in a variety of effective ways - the teacher is keen on the continuity of professional growth throughout the year) among the teachers. It was also found that the availability of professional standards is not affected by the time experience possessed by physical education teachers at the university.

Al-Ananaba (2018) conducted a study aimed at identifying the competencies that should be available to teachers of education from their point of view. The researcher used the descriptive survey approach through a questionnaire distributed to a sample of (96) teachers from the study community in the Jordanian governorate of Ajloun. The results showed that the teaching competencies that should be met were of a high degree, and also showed that there were no significant differences in the responses of teachers according to the gender variable, and the presence of differences indicative of the experience variable in favor of the group (5-10) years, and the educational qualification variable in favor of the bachelor's holders.

It is noted through reviewing previous studies that most of these studies dealt with the disclosure of the teaching technological competencies needed for the teacher as a study (Ananaba, 2018; Othman, 2015; Al-Omari, 2005; Ghabayn, 2004; Qathami, 2001; Yong, 2013). However, these studies It has taken place in non-Jordanian societies, and it is also noted that some studies have dealt with the detection of the effectiveness of competencies in the education process as a study (Keser, Gizem, Yılmaz&Yılmaz, 2015; Hou, 2004), and others have sought to reveal the degree of teacher appreciation of these competencies Or about their level of awareness of its importance in teaching as a study (Bani Domi, 2010), and that some of them have dealt with a university academic community as a study (Al-Banna, 2017). The researcher benefited from some of these studies, which contained lists of educational technological competencies, such as a study (Bani Domi, 2010; Al-Sharif, 2005; Al-Omari, 2005; Al-Quthami, 2001; Coop, 2006; Hou, 2004). However, this study was distinguished from the rest of the studies in that it examined the technological competencies needed for a physical education teacher in particular, and some of them were conducted on university students or in different specializations, or in a society different from the societies in which the previous studies were conducted.

The study Problem: Calls to integrate technology into education have increased in recent times; As it enhances and expands learning opportunities, improves educational outcomes, achieves equality and leads to inclusiveness of education, and gains student's skills to deal with various devices and electronic programs, as many studies have been conducted in this aspect (Abuhmaid, 2009; Hggins, 2012; Al-Omari, 2015). From this standpoint, technology, with its characteristics and advantages, makes it capable of achieving many goals related to individualizing education and helping the learner to interact actively and positively with the learning material (Clinics, 2004).

Given that information and communication technology imposes new roles on the teacher, educational conferences came out with recommendations stipulating the need to focus on research on the topic of teachers' competencies in the field of technology employment in education. One of the recommendations of the third educational conference was "Towards a better preparation for future teachers" held at Sultan University Qaboos

in (2004), and the 36th conference of the Kuwaiti Teachers Association "E-learning, prospects and challenges" held in the State of Kuwait in (2007); Supporting the belief in the importance of science and technology for teachers and the necessity of possessing their skills and the elements for dealing with them, and the necessity of providing appropriate educational opportunities that enable the teacher to possess competencies and employ them effectively in the context of his dealing with modern developments in the digital world (Issa, 2007; Madkour, 2004).

From this standpoint and through the researchers' conviction of the importance of teachers in general and physical education teachers in particular possessing the technological competencies necessary to teach the subjects of this subject, which depend mainly on the practical side; Which is the real learning for the physical education teacher, and to avoid randomness in choosing these competencies, the researchers found that it is important to conduct such a study that could provide teachers with such competencies. To achieve this, the following two questions had to be answered:

3. Methodology

The study population is made up of all teachers of physical education in the state secondary schools in the Directorate of Education in Irbid for the academic year 2017/2018, and their number was (172) by (100) male teachers and (72) female teachers, and the sample of the study consisted of (29) male teachers (33) female teachers, a total of (62) teachers, and a sample of these teachers was selected in a random manner.

Table 1. The distribution of study sample members according to the study variables.

Variable	Iteration	Percentage
Gender		
Male	33	53.23
Female	29	46.77
Total	62	100.00
Qualification		
Bachelor	45	72.58
PhD	17	27.42
Total	62	100.00
Experience		
Less than five years	15	24.19
5 to 10 years	18	29.03
More than 10 years	29	46.77
Total	62	100.00

For purposes of achieving the aims of the study; the researchers developed the study tool after reviewing the educational literature and previous studies. Such as the study (Gabbayn, 2004, Othman, 2015, Coop, 2006; Hou, 2004; Keser, et al., 2015;) related to employing technological competencies in teaching, as the study tool consisted in its initial form of (46) competencies distributed on three axes; The first includes the technological competencies required to be available in the physical education teacher and includes (19) sufficiency, the second includes the technological competencies required for the learner to use e-learning and includes (14) sufficiency, and the third includes the technological competencies required to be available in the educational environment for the use of e-learning and includes (13) sufficiency.

With a view to verifying the apparent validity of the study tool; It was presented in its initial form to a group of experienced and specialized arbitrators, numbering (10) of experienced and competent arbitrators at Yarmouk University and in the Directorate of Education in the Qasaba of Irbid, in order to express their opinion on the clarity of the phrases, the accuracy of the linguistic wording, the appropriateness of the Items of the tool, and to ensure Of inclusiveness; The validity and appropriateness of the information contained therein for the reality of use, and are there any suggestions that can be used about the Items. Emphasis was placed on the arbitrators to see if the articles of the tool reflect the technological competencies that must be provided. The observations and proposals on the Items and their axes were taken, as seven Items were linguistically modified in light of the opinions of the arbitrators.

The study tool was applied to an exploratory sample consisting of 20 male and female teachers from outside the target study sample. This is to calculate the Corrected item-total correlation with the tool's axes. As in Table 2.

Table 2: Values of the correlation coefficients between Items

Item	domains and dimensions	Item		
		For a while	PainToured	PainMeasure
The technological competences needed in the sports teacher to use e-learning				
The technological and cognitive skills needed to be available in the sports education teacher				
1	He has knowledge of the computer system and its accessories.	0.58	0.52	0.43
2	Possesses knowledge of using applied software such	0.73	0.71	0.63

asProgrammed

3	He can use e-mail to complete education activitiesSports	0.52	0.48	0.47
4	Improves the creation of educational websites and blogsSports	0.40	0.35	0.34
5	He has the simple knowledge to solve computer problems.	0.51	0.50	0.44
6	Master the creation of interactive computerized lessons related to educationSports	0.56	0.55	0.54
7	Interested in stirring up creative thinking in sports education	0.58	0.48	0.43
8	Owns knowledge of copyright, documentation and quotation in the subject of educationSports	0.49	0.45	0.39
9	Ethical when using the Internet and the mediaE-mail	0.31	0.28	0.23
10	Has knowledge of security and safety rules when using devices Electronic Sports	0.53	0.51	0.49

Applied technological efficiency Needed availability in the sports education teacher

11	Has the ability to provide e-learning media for teaching pedagogicalSports	0.70	0.63	0.58
12	Has the ability to employ interactive education with learners to serve a subjectThe government's support for the government	0.64	0.59	0.52
13	Stimulates positive learners' attitudes towards e-learning	0.66	0.59	0.59
14	Selects the right electronic content to achieve the objectives of sports education	0.44	0.40	0.36
15	Provides online guidance and guidance to learners on an ongoing basis	0.58	0.57	0.50
16	Simplifies the mechanism of handling computerized mathematical material	0.51	0.44	0.44
17	Encourages learners to deal with the e-learning system for being moreThe effectiveness of regular education	0.56	0.53	0.45
18	Interested in employing scientific projects in the field of e-learning related to the subjectSports Education ^s	0.46	0.45	0.42
19	∩ E-learning system will be used (Emmys-EMIS)	0.37	0.36	0.34

The technological competences required in the learner to use e-learning in the subject of sports education
For the technological and cognitive skills needed to be available in the learner in the subject of sports education^s

1	J You have knowledge of the computer system and accessories ^a	0.69	0.66	0.60
2	He has knowledge of using applied software such as: word-power point-Paint) Master editing	0.63	0.62	0.58
3		0.54	0.53	0.47
4	Improves the use of electronic search engines in enriching informationThe government's support for the government	0.63	0.62	0.49
5	He has the simple knowledge to solve some computer problems.	0.64	0.62	0.49
6	Has knowledge of security and safety rules when using electronic devices Sports	0.55	0.55	0.52
7	Improves time management when dealing with e-applications of education Sports	0.56	0.50	0.49

Applied technological skills needed in the learner in the subject of sports education

8	Improves the use of social media channels and chat programs with his teacher And the others.	0.44	0.41	0.41
9	Knows a course in e-learning	0.52	0.50	0.43
10	He is keen to use e-learning activities according to the needs of the subject of education Sports	0.40	0.39	0.38

11	He's good at using the E-Learning System (EAIS)EMIS)	0.63	0.52	0.46
12	He's good at training and exercise equipment.⁵	0.45	0.44	0.38

The technological competences needed in the educational environment to use e-learning in the teaching of sports education

1	Design the content of the subject of physical education appropriately for e-learning		0.55	0.49
2	Providing a school website that serves e-learning		0.66	0.62
3	Download the subject of physical education on the school's website		0.71	0.63
4	A wealth of rich and diverse electronic resources to support the subject of sports education		0.59	0.48
5	Providing attractive laboratories/rooms with a variety of mediaTo use e-learning		0.79	0.61
6	Providing fast internet connectivity		0.63	0.52
7	The presence of technical support values/supervisor/technician in the school Providing technical courses suitable for teachers of		0.65	0.55
8	sports education to work on the production of And the designLessons Interactive and electronic⁵		0.70	0.48
9	Provide regulations and regulations on e-learning		0.76	0.55
10	Provide secure website addresses to understand and interpret sports education topics		0.79	0.61
11	Providing an e-guide to sports education		0.73	0.48
12	Provide a file of electronic duties and activities that serve the subject of educationSports		0.77	0.61
13	Suitable computerized material tools and programs for the pedagogical curriculum with allAspects¹		0.68	0.50

It is noted from Table 2 that the values of the correlation coefficients for the Items of the technological competencies axis that are required in the physical education teacher with their dimensions are between (0.31-0.73), and (0.28-0.71) with their field, and between (0.23-0.63) with the scale. The values of the correlation coefficients for the Items of the axis of applied technological competencies that are required for the teacher in physical education with its two dimensions ranged between (0.40-0.69), and with its range (0.39-0.66), and with the scale (0.38-0.60). Finally, the values of the correlation coefficients for the Items of the axis of technological competencies required to be available in the educational environment with their scope ranged between (0.55-0.79), and with the scale (0.48-0.63).

Based on the above; Pearson correlation coefficients were calculated for the tool axes, in addition to calculating the inter-correlation of Pearson correlation coefficients for the relationship of the tool domains with each other, as in Table 3.

Table 3. Pearson correlation transaction values for the relationship of the study tool axes

Relationship		statistic.	For technological efficiency							
			1	2	3	4	5	6	7	
Technologica I	Application requiredIn the physical education teacher	ρ	0.66							
	Necessary availability in the education teacher	ρ	0.92	0.90						
	Mathematical use of e-learning		0.00	0.00						
	The knowledge required for it	ρ	0.65	0.66	0.72					
	The learner in physical education subject		0.00	0.00	0.00					
	Applications required in the learner in physical education subject	ρ	0.52	0.48	0.55	0.67				
	Required for the learner to use	ρ	0.65	0.64	0.71	0.95	0.86			
	E-learning in physical education subject		0.00	0.00	0.00	0.00	0.00			
	Required in the educational environment to useE-learning in teaching physical education subject	ρ	0.40	0.42	0.45	0.35	0.46	0.42		
	Total scale	ρ	0.81	0.80	0.88	0.78	0.72	0.82	0.78	

0.00 0.00 0.00 0.00 0.00 0.00 0.00

For purposes of verifying the consistency of the internal consistency of a Scale the study and its discussions; the reliability was calculated using the Cronbach's α on the available data from the first application of the pilot sample and for the purposes of verifying the stability of the return. It was re-applied to the aforementioned pilot sample by test-retest two weeks after the first two applications, and it was calculated using the Pearson correlation coefficient, as in Table 4.

Table 4. The values of the internal consistency parameters of the study tool

Axis	Stability coefficients		Number
	Internal consistency	Replay	
Needed to be available in the sports education teacher to use e-learning	0.88	0.84	19
The learner needs to use e-learning in sports education	0.87	0.86	12
Need to be available in the educational environment to use e-learning in the teaching of sports education	0.93	0.85	13
Total For the scale	0.94	0.80	44

It is evident from Table 4 that the stability of the internal consistency of the study tool reached (0.94), and its dimensions reached (87-93), while the stability of repetition for the study scale reached (0.44) and for its dimensions (0.84-0.86).

To achieve the objectives of the study, the questionnaire was distributed among the individuals of the study sample, and their number was (65) teachers, and after collecting the questionnaires, (3) were excluded from them due to incomplete answers, and thus the number of questionnaires included in the analysis was (62), and the statistical packages program was used. For Social Sciences (SPSS) to analyze the data collected.

To answer the two study questions, it used frequencies, percentages, arithmetic means, standard deviations, triple variance test (non-reactive), (T) test for independent samples, and (Games-Howell) test for dimensional comparisons.

4. Results

The following are the results of the study according to its two questions: The first question: "What are the technological competencies needed to teach physical education subjects using the e-learning system in Jordanian secondary schools?" To answer this question, the arithmetic mean and standard deviations of the technical competencies required for a physical education teacher and their dimensions were calculated, arranged in descending order according to their arithmetic mean, as in Table 5.

Table 5. the arithmetic mean and standard deviations of teachers' views of the necessary technical competencies of the teacher

field	Rank	Rank	Scale and domains	medium	Deviation Normative	Class
3	1		Technological efficiencies needed in the educational environment ^s	4.184	0.615	High.
2	2		The technological competences needed to be provided in the learner in a subjectEducationSports	4.181	0.455	High
	1	1	Knowledge technological efficiency	4.187	0.532	High
	2	2	Applied technological efficiency	4.174	0.440	High
1	3		For the technological competences needed to be provided in the education teacherSports	4.064	0.453	High
	1	1	Knowledge technological efficiency	4.123	0.497	High
	2	2	Applied technological efficiency	3.998	0.498	High
Total scale				4.131	0.415	High

It is noticed from Table 5 that the total arithmetic means of the scale reached (4.131) with a great degree of appreciation, as well as on all areas and dimensions, which means that these competencies are very important and necessary for either the teacher, the learner, or the educational environment. It is also noted that in the ranking of the fields, the order of the field of "technological competencies required to be available in the educational environment for the subject of physical education" came first, with a rating of (4.184) and with a high degree of appreciation, and then the field of "technological competencies required to be available in the physical education learner" came in the rank. The second with an arithmetic mean of (4,181) and with a high

degree of appreciation, followed by the field of "technological competencies required to be available in the physical education teacher" in the third place with an arithmetic mean of (4,064) and with a large degree of appreciation as well.

Based on these results, it is evident the importance of these competencies, as they all received a high degree of appreciation, and this means that these competencies have become important for teaching physical education investigations. This result is consistent with the results of a study (Bani Domi, 2010; Othman, 2015; Al-Omari, 2005; Ananaba, 2018; Al-Binaa, 2017; Coop, 2006; Hou, 2004; Yong & Youjin, 2013).

10.2 The second question: "Are there statistically significant differences at the level of significance ($\alpha = 0.05$) between the averages of teachers' responses to the technological competencies required for a computer teacher that are attributable to the study variables (gender, academic qualification, and years of experience). To answer this question, the arithmetic mean and standard deviations of the technological competencies needed to teach physical education investigations using the e-learning system in Jordanian secondary schools were extracted from the teachers' and female teachers' point of view according to the study variables and their related dimensions, as shown in Table 6.

Table 6. The arithmetic mean and the standard deviations of the technological competencies needed to teach the subjects of physical

Scale and domains And child dimensions her and the statistician	Gender		qualification		Years of experience		
	male	Female	Bachelor	Studies High	Less than Five years	5to 10years	More than 10years
The technological and cognitive skills needed to be available in the sports education teacher							
Q	4.26	3.97	4.10	4.19	4.19	4.30	3.98
P	0.40	0.56	0.53	0.41	0.55	0.40	0.50
Applied technological skills needed in the sports education teacher							
Q	4.09	3.89	3.97	4.07	4.12	4.09	3.88
P	0.48	0.51	0.54	0.37	0.53	0.41	0.52
The technological competences needed in the sports teacher to use e-learning							
Q	4.18	3.93	4.04	4.13	4.15	4.20	3.93
P	0.40	0.48	0.48	0.38	0.47	0.37	0.47
The technological and cognitive skills needed to be available in the learner in the subject of sports education							
Q	4.28	4.08	4.18	4.19	4.34	4.34	4.01
P	0.46	0.60	0.52	0.57	0.44	0.50	0.55
Applied technological skills needed in the learner in the subject of sports education							
Q	4.23	4.11	4.18	4.16	4.31	4.30	4.03
P	0.46	0.41	0.44	0.46	0.45	0.48	0.37
The technological competences required in the learner to use e-learning in the subject of sports education							
Q	4.26	4.09	4.18	4.18	4.33	4.32	4.02
P	0.42	0.48	0.44	0.50	0.41	0.47	0.42
The technological competences needed in the educational environment to use e-learning in the teaching of sports education							
Q	4.21	4.16	4.16	4.24	4.48	4.20	4.02
P	0.46	0.76	0.62	0.62	0.50	0.55	0.66
Total scale							
Q	4.21	4.04	4.11	4.18	4.30	4.23	3.98
P	0.36	0.46	0.44	0.35	0.38	0.39	0.41

It is evident from Table 6 that there are apparent differences between the arithmetic means among the study sample individuals due to the variables. To find out the significance of the differences between the arithmetic media, the triple variance analysis (non-interaction) was used, as shown in Table 7.

Table 7: Analysis of the triangular (non-reactive) variation of the areas according to the variables of the study

Source of variance	The dependent variable: the technological efficiency required in:	T	Degree of freedom	Total squares	F	P
gender	Sports education teacher to use e-learning	1.18	1	1.18	6.65	0.01
	Learner to use e-learning in sports education	0.71	1	0.71	3.90	0.05
	Educational environment for the use of e-learning in sports education	0.12	1	0.12	0.33	0.57
Scientific	Sports education teacher to use e-learning	0.11	1	0.11	0.65	0.42

qualification	Learner to use e-learning in sports education	0.01	1	0.01	0.08	0.78
	Educational environment for the use of e-learning in sports education	0.26	1	0.26	0.73	0.40
experience	Sports education teacher to use e-learning	1.45	2	0.73	4.10	0.02
	Learner to use e-learning in sports education	1.80	2	0.90	4.94	0.01
	Educational environment for the use of e-learning in sports education	2.41	2	1.21	3.34	0.04
Error	Sports education teacher to use e-learning	10.08	57	0.18		
	Learner to use e-learning in sports education	10.35	57	0.18		
	For the learning environment to use e-learning in educationSports	20.56	57	0.36		
Total	Sports education teacher to use e-learning	12.53	61			
	Learner to use e-learning in sports education	12.60	61			
	Educational environment to use e-learning in educationSports	23.06	61			

It is noticed from Table 7 that there are no statistically significant differences at the level of significance ($\alpha = 0.05$) for arithmetic means due to the variable (scientific qualification), and the reason for this may be that the absence of differences is not the result of the low level of teachers who have a bachelor's or master's degree. Rather, because the teachers are all the same in their educational qualification, as the educational courses that the student studies at the bachelor's or master's level are almost the same, and the difference between them in the study of specialization courses, and where there is a scarcity in the educational technology courses offered by the colleges, and this may also be due to the fact that all Teachers, whether with a bachelor's or master's degree, view these competencies as important to the physical education teacher, as they teach the same classes and also use the same subjects, so they have agreed on the importance of these competencies with the same degree of appreciation. The result of this study is consistent with the result of the study (Beni Domi, 2010), whose results showed that there are no differences in the variable of academic qualification, while this result differed with the result of a study (Al-Omari, 2005; Ananaba, 2018) that showed differences in favor of bachelor's holders.

It is also noticed from Table (6) that there are apparent differences in the arithmetic circles attributed to the variable (gender), and in favor of males, on the two domains (teacher and learner), while no differences appeared on the field of (educational environment). Returning to the table, it was found that the arithmetic meanings of all fields and the dimensions related to it were higher among the male study sample members, and in the two domains of the teacher and the learner, and no differences appeared in the field of the educational environment. For students of the College of Education and Physical Education; That there is a competition between the sexes over who is most interested in looking at competencies and their importance, in addition to the fact that male teachers are more involved in sporting activities than females as the field is open for them to practice sports at any time and place, in contrast to the females who are involved More in domestic affairs and social relations, teachers are more interested in teaching and educational aids than teachers who have many social and life interests, and the result of this study agreed with the result of a study (Bani Domi, 2010; Qathami, 2001; Coop, 2006) that also showed the existence of related differences. Statistical significance of the gender variable in estimating the importance of technological competencies, and it differed with the result of a study (Al-Sharif, 2005; Ananaba, 2018; Coop, 2006; Hou, 2004; Keser, et al., 2015) that showed no differences on the gender variable. On the other hand, which is the field of an educational environment, no differences were found. This is because creating the educational environment is the prerogative of the Ministry of Education and not of the teacher. This means that the educational environment is almost the same among all schools.

It is also noticed from Table 7 that there are differences in a statistical function at the level of significance ($\alpha = 0.05$) on the variable (experience). To determine for any of the three levels of experience (less than 5 years, 5-10 years, and more than 10 years); to reveal these differences, Scheffe's test was used for the dimensional comparisons, as shown in Table 8.

Table 8. Scheffe test for dimensional comparisons of technological competencies required for teaching physical education investigations.

The necessary technological efficiency	Years of experience		More than 10 years	Less than five years
	Scheffe	Arithmetic medium		
Availability in the education teacher			3.93	4.15
Sports to use E-learning	Less than five years	4.15	0.22	
	5 to 10 years	4.20	0.27	0.05
The necessary technological	Years of experience		More than 10	5to 10 years

		Years		
efficiency				
availability in the learner to use	Scheffe	Arithmetic medium	4.02	4.32
E-learning in a subject	5 to 10 years	4.32	0.31	
The government's support for the government	Less than five years	4.33	0.31	0.00
The necessary technological efficiency	Years of experience		More than 10 Years	5to 10 years
Availability in the educational environment	Scheffe	Arithmetic medium	4.02	4.20
To use e-learning	5 to 10 years	4.20	0.17	
In the teaching of sports education	Less than five years	4.48	0.45	0.28

It is noticed from Table (8) that there is a statistically significant difference at the level of significance ($\alpha = 0.05$) between the arithmetic means of the technical competencies required for teaching physical education investigations on the field of competencies required for the teacher. Attributed to a variable experience; For the benefit of the level (from 5 to 10 years) compared to the answers of their colleagues at the level (more than ten years). This can be attributed to the fact that teachers with less teaching experience are more recent graduates than their more experienced colleagues, which shows that they have kept pace with the latest technological innovations and developments from their colleagues who graduated before them, which makes them pay more attention to these competencies than their older graduates. This result was in agreement with the result of a study (Ananaba, 2018), which showed that the differences were also in favor of holders of a bachelor's degree, while it contradicted the results of a study (Al-Banna'a, 2017; Bani Domi, 2010; Al-Sharif, 2005) which showed that there were no differences indicating the variable Teaching experience.

It is noticed from the table that there is a statistically significant difference at the level of significance ($\alpha = 0.05$) between the arithmetic means of the technological competencies necessary for teaching physical education investigations on the field of competencies needed for the learner. Attributed to a variable (experience); In favor of the level (less than five years) compared to the answers of their colleagues at the level (from 5 to 10 years), and the presence of a statistically significant difference at the level of significance ($\alpha = 0.05$) between the arithmetic media of the technical competencies required to teach the Physical Education investigations on the area of competencies required to be available in the environment Educational; Attributed to a variable (experience); In favor of the level (less than five years) compared to the answers of their colleagues in the level (more than ten years). The researchers attribute this also to the previous explanation, which is a novelty that graduates people of the lower level and their motivation and enthusiasm that did not reach the stage of gradual extinction as a result of teaching for many years.

5. Recommendations

Based on the results of this study, the researchers suggest the following: Increasing attention and focus on educational technological competencies and enriching teacher training programs in the Faculties of Physical Education by teaching these competencies. Encouraging teachers to use modern technology in teaching the subject of physical education, especially in the practical (applied) aspects. Conducting other studies on technological competencies in terms of the extent to which teachers own them, and studies on the degree of their use in teaching.

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