The effect of using synchronous and asynchronous e-learning on the development of some teaching skills of the student teacher at the Faculty of Physical Education

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Abstract :-

The aim of the study was to illustrate the importance of using synchronous and asynchronous e-learning to develop some teaching skills of the student teacher in the second year of the Faculty of Physical Education. The researcher chose (80) students of the second year at the Faculty of Physical Education in Sadat - Sadat City University for the year 2018/2019. The students were divided into two groups, one of them is control and the other is experimental. Each of them consisted of (40) forty students, and (10) students were chosen to be the survey study. Method: the researcher used the experimental method due to its relevance to the nature of the research. Result : The researcher found out that E-learning has a positive effect in, developing the teaching skills under study for student teachers, especially the skills of (lesson procedure - teaching methods - lesson evaluation), than the traditional method.

Keywords: synchronous and asynchronous, e-learning, teaching skills of the student teacher .

Introduction and research problem:-

Nowadays, the educational system goes through many and varied changes and challenges as a result of the rapid progress in communication and information technology. This imposed on educational institutions the need to absorb this technology, be aware of its positives and negatives, and prepare plans and programs aimed at developing employees' awareness of it and restructuring educational systems to cope with the requirements of employing this technology, current and expected. **(8:55)**

Therefore, educational institutions seek to achieve the goal of the educational process with a high degree of efficiency and proficiency, and attention to the learner and his needs, and the way to that is the development of teaching methods and methods in order to enrich this process. **(23:3)**

E-learning technology is one of the applications of communication and information technology in the field of education, which has led to the emergence of new concepts in the educational field, such as e-learning of its various types, e-teacher, e-course, future school, e-library, distance learning, virtual university, and others concepts. Thus, it was necessary to prepare educational systems to respond to these concepts and to provide learners with new knowledge and skills that would enable them to use these technologies and deal with them effectively.

Blended education is one of the forms of teaching or learning in which

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e-learning merges with traditional classroom education in one framework, where the teacher meets with students face to face most of the time. **(17:23)**

E-learning has tools and methods, and it is not random education, but rather based on foundations and principles. It needs an integrated environment in which digital communication channels and interaction between students and teachers are available through the exchange of educational experiences, opinions, and discussions aimed to exchange opinions using various communication channels such as e-mail and chatting, and one of its most important features is that it is available at any time according to the learner's ability . **(3:17)**

The researcher believes that e-learning is that type of education based on the introduction of high technology based on the use of interactive electronic methods between the teacher and the learner and between the learners each other. Examples of these methods are: interactive video, video conferences, video conferences and this type of Education may not be determined by a specific time or place.

The preparation of teachers is in itself a strategy through which the education crisis can be reduced and confronted in our contemporary world, and that "educational systems will not keep pace with the times until the teacher is prepared and trained to become intellectually fruitful and more challenging and expand and extend beyond training before joining the service to become a system of continuous professional renewal And

to develop the professional life of teachers . **(42: 231)**

All modern educational systems give noticeable attention to the issue of teacher preparation and training on the grounds that it represents a basic and important pillar in the educational process . **(1: 21)**

The field training is one of the most important teacher preparation courses, and it is the final culmination of all the theoretical and applied academic efforts that the student teacher received during his studies in order to qualify and graduate him as a teacher. If field training is an important aspect in the educational and technical preparation courses for teachers of different subjects, it is of great importance in the field of physical education . **(8: 51)**

Because it aims to prepare the student teacher professionally by developing his professional behavior by acquiring initial experiences of the educational process through developing his professional skills and the normal trends and behavioral patterns necessary to raise his efficiency. Thus, it is considered the backbone of teacher preparation and rehabilitation programs for physical education, and then field training is the most important aspect in the field of those interested in teaching and its effectiveness in helping these students move from theory to practice.(34: 171)

One of the most distinguished observations on field training in the field of physical education is that the student teacher has to make different efforts to adapt to the new school atmosphere, establish personal

relationships with faculty members and participate in other school work routine. He is also faced with the lack of playgrounds and equipment in most schools. He has to identify the characteristics of each student so that he can take into account the individual differences between them. He may teach for more than one class. All this distracts his efforts to focus on mastering the skills of teaching physical education, in addition to the complexity of teaching skills. **(48:30)**

The researcher noticed, while going through the field training period within the College of Physical Education, that the student teacher teaches only and due to the large number of students in the lecture with the lack of lecture time, which reflects a kind of difficulty in delivering performance and information to all students at the same time and with the same efficiency and thus negatively affects the students' performance. So, the researcher thought about applying one of the modern scientific methods that depend on the use of synchronous and asynchronous e-learning to develop some teaching skills of the student teacher at the Faculty of Physical Education.

search objective:

The research aims to develop a proposed educational program using synchronous and asynchronous e-learning to develop some teaching skills of the student teacher in the second year of the Faculty of Physical Education, Sadat City University.

Research hypotheses:

1- There are statistically significant differences between the mean of the pre and post measurements of the experimental group in the level of teaching skills for the post measurement.

2- There are statistically significant differences between the mean of the pre and post measurements of the control group in the level of teaching skills for the post measurement.

3-There are statistically significant differences between the mean of the two post measurements of the control and experimental group in the level of teaching skills for the post measurement of the experimental group.

Search terms:

1- Electronic Learning :

Providing educational content (electronic) through computer-based media and its networks to the learner in a way that allows him to interact actively with this content, the teacher and his peers, whether synchronously or asynchronously, as well as completing this learning in a time and place and at a speed that suits his circumstances and abilities, as well as the possibility of managing this learning also through those media . **(8:29)**

2- Synchronous Learning :

The type of education in which the teacher and his students interact at the same time but in different places by the web discussing about the course, and Synchronous e-learning can include multimedia components such as group chats, online seminars, video conferencing, etc.

3- Asynchronous Learning :

A student-centered learning method using online educational resources that

facilitate access to information without the time and space constraints imposed by classroom studies, and based on the interaction of learners among themselves, which combines self-learning and asynchronous interaction that develops learning. This method can be used in learning traditional classroom or in distance learning programs and continuous learning systems. (2) Procedural definition of the researcher.

4- Field Training:
It is the practical practice of the teaching profession in the schools where the student teacher will teach under the supervision and guidance of specialists and those who have experience in this field . (4: 5)

5- Student teacher:
A student under preparation and is expected to graduate and acquire some teaching skills under the guidance and supervision of the college administration and external supervisors . (4: 70)

6- Teaching skills:
Types of knowledge, skills and abilities that the student obtains through preparing him as a teacher and being able to apply them in an educational way that achieves growth for students in the mental, emotional and kinetics aspects . **(83: 21)**

Search procedures:
First: Research Methodology:
The researcher used the experimental method due to its relevance to the nature of the research using the experimental design of two groups, one experimental and the other control.

Second: Research community and sample:
The research community, (231) students, is represented by the students of the second year at the Faculty of Physical Education in Sadat - Sadat City University for the year 2018/2019. The research sample was chosen in an intentional way from these students, and it consisted of (80) eighty students who were divided into two groups, one of them is control and the other is experimental. Each of them consisted of (40) forty students, and (10) students were chosen to be the survey study.

Research sample homogeneity:

Table (1)
Homogeneity of the research sample members (basic-exploratory) in some selected variables n = 110

variables	measruing unit	Measures of Central Tendency			standard deviation	Distribution metrics	
		mean	median	mode		torsion	Kurtosis
Height	centimeter	163.82	164	158	6.79	2.101	8.115
Weight	kilogram	61.77	61	60	7.24	0.279	0.509 -
Age	year	20.74	21	21	0.44	10111-	0.791 -
intelligence	degree	86.85	88	86	7.82	0.582 -	0.297 -
Cognitive	degree	18.95	19	21	3.34	0.448	0.171

Table (1) reveals that the torsion coefficient of the variables "height - weight - age - intelligence coefficient - cognitive test" of the research sample members was limited to (±3)

Table (2)
Significance of differences between the experimental and control groups in measuring age, intelligence, teaching skills (n = 80)

Variables	experimental group		control group		(T) Value
Degree (lesson objective)	6ر15	0ر44	6ر08	0ر44	0ر70
Degree(lesson planning)	5ر86	0ر45	5ر92	0ر75	0ر43
Degree (lesson Procedure)	17ر11	0ر58	17ر24	0ر58	0ر98
Degree (teaching methods)	11ر86	0ر43	11ر81	0ر47	0ر49
Evaluation	5ر89	0ر44	5ر78	0ر38	1ر18
Degree (Total)	46ر86	4ر82	46ر11	3ر34	0ر70

Tabular value (T) at the level of 0.05 = 1.97

The previous table shows that there are no statistically significant differences between the experimental and control groups in the variables of age, intelligence and teaching skills, which indicates the equivalent of the research group before the experiment was carried out.

Data collection methods:
To collect the research data, the researcher used the following:
Firstly, the tools:
- Data registration form containing the initial personal data: name, age - data registration form for the tribal and dimensional measurements of the variables under investigation.
Secondly, the tests:
IQ test:
The researcher reviewed the scientific references **(2,3,4,11,12,22,25)** to determine a test to measure intelligence for the individuals of this age group under study. The researcher chose the "**Katel**" test of intelligence, which took its Arabic form by , Ahmed Abdel Aziz Salama, Abdel Salam Abdel Ghaffar and put it in the original **"Remon Katel, B".**

Validity of the test:
Ahmed Abdel Aziz and Abdel Salam Abdel Ghaffar calculated the validity of the test in the Egyptian environment by using two approaches:
The first: the comparison between the results obtained through this test and the results obtained from using another pictorial intelligence test, which amounted to (0.44)
The second: by finding the correlation coefficient between the test result and the degree of academic achievement.
Scientific transactions:
First: the scientific transactions of the intelligence test "Cattle"
Validity of the test:
To calculate the validity of the test, the researcher used the differentiation validity by applying the test to a sample of (20) twenty students from the same research community and from outside the original sample. Finding the significance of the differences between the two groups Table (3) shows the result.

Table (3)
The significance of the differences between high and low students in the intelligence test (n = 20)

The test	High Level		Low Level		(T) value
	X^1	Y^1	X^2	Y^2	
IQ Test	70.71	5.68	44.05	3.91	16.58

Tabular value (T) at the level of 0.05 = 2.1

From the previous table, it is clear that there are statistically significant differences between the high-level group and the low-level group in intelligence, and this indicates the ability of this test to distinguish between the distinct and non-distinguished groups, and this confirms the validity of the test under discussion.

Test stability:
To calculate the stability of the test, the researcher used the method of applying the test and then reapplying it on a sample of (10) ten students from the same research community and outside the original sample. Then the test was re-applied again after fifteen (15) days from the first application.

Table (4)
Correlation coefficient between the first and second applications (n = 10)

The test	First application		Second application		(T) value
	N	4	N	4	
IQ Test	46.91	0.32	47.12	0.31	0.896

The value (t) at the level of 0.05 = 0.576
From the previous table, it is clear that the value of the correlation coefficient for the intelligence test is greater than the tabular value (t), which indicates the stability of the test used under research.

Note card to assess teaching skills:
The researcher chose the card test that was designed by **Abu Al-Naga Ahmed Ezz Al-Din (1998) (4)** to measure the efficiency of the student teacher's teaching. The number of phrases was (40). The researcher chose this card for the following reasons:
1- The objectives of the card are in line with the nature of this research, as it measures the skills of teaching student-teachers through the period of field training in government schools.
2- Availability of the opportunity to contact the card owner to inquire about the conditions of applying the card in his research , as well as the form and how to use it.
3- The balance of the contents of the card with the current research environment in terms of the available possibilities and the student-teacher abilities to perform the teaching skills.
Transactions made by the card designer.
Honesty:

Table (5)
Correlation coefficient between the scores of each axis and the total score of the card (n = 20)

N	Axes	Number of Phrases	(T) value
1	Lesson Objectives	5	0.639
2	Lesson Planning	5	0.796
3	Lesson Procedure	15	0.867
4	Teaching Methods	10	0.657
5	Lesson Evaluation	5	0.691

The value (t) at the significance level of 0.05 = 0.444

From Table No. (4) it is clear that there is a statistically significant correlation between the scores of the axes.

Card stability:

Table (6)
The percentage of agreement and disagreement between the test author and the assistant

student teacher	Number of teaching situations	Agreement	Disagreement	Agreement Percentage
1	10	8	2	80%
2	10	7	3	70%
3	10	9	1	90%
4	10	8	2	80%
5	10	8	2	80%

From the previous table, it is clear that there is an agreement percentage between the first and second notes. The highest percentage of agreement reached 90%, the lowest percentage was 70%, and the average agreement reached 80%, which indicates a high stability coefficient.

A tripartite scale has been developed using the (Likert) method, so that the degree is estimated as follows:
- Available in a large degree (3 degrees).
- Available in a medium degree (2 degrees) .
- Available in a degree below average (1 degree) .

Scientific coefficients of the note card in the current research:

To calculate the scientific coefficients of the note card in the current research, the researcher did the following:

A- Honesty:

The researcher calculated the validity of the card by calculating (discrimination validity) and the observation card was applied to a random sample of (10) students from the research community and outside the original sample, then divided them into two equal groups, a group with a high level in the card scores and a group with a low level In the card scores, then the significance of the differences between the two groups was calculated as shown in Table (7).

Table (7)
Significance of differences between high-level students and the low ones in the card score (n = 10)

Card Dimensions	High Level		Low Level		difference between the two averages	(T) value
	X	y	X	y		
Lesson objectives	11.71	6.46	5.71	3.13	16.00	2.51
Lesson planning	13.31	6.74	5.11	2.41	8.21	3.45
Lesson procedure	4.31	23.88	16.71	8.11	26.31	8.35
Teaching methods	27.71	6.41	11.00	5.31	16.71	6.03
Lesson evaluation	13.31	7.31	5.71	2.71	7.61	3.28
Total degree	109.91	41.47	34.33	24.61	66.57	4.12

(T) tabular value at significance level 0.50 = 2.26

It is clear from the previous table that there are statistically significant differences between the high and low level group in favor of the high level group, which indicates the ability of the card axes to distinguish between students in this research.

b- Stability:

The researcher found the stability coefficient of the card by applying the card and reapplying it to a sample similar to the research sample and other than the original sample. It consisted of (10) students with a two-week difference, then he calculated the correlation coefficient between the first and second application (Table 8):

Table (8)
Correlation coefficient between the first and second application of the note card for teaching skills (n = 10)

Card Dimensions	First application		Second application		correlation coefficient
	x	Y	x	Y	
Lesson objectives	5.81	0.63	5.91	0.74	0.91
Lesson planning	5.71	0.17	5.81	0.79	0.92
Lesson procedure	17.21	0.63	17.41	0.71	0.81
Teaching methods	11.71	0.48	11.81	0.42	0.94
Lesson evaluation	6.61	0.97	6.71	0.95	0.85
Total degree	47.11	0.32	47.21	0.63	0.89

The value of (t) tabular at the level of significance 0.005 = 0.58

It is clear from the previous table that there is a statistically significant correlation between the first and second application of the dimensions of the card, as the correlation coefficient ranged between 0.81, 0.94, which indicates the stability of the card.

C- Presentation to experts in the field of sports:

The observation card was presented to (11) experts in the field of curricula and teaching methods who have experience of not less than ten years in the field, to survey their opinion and determine the appropriateness and suitability of this card for teaching

skills and the sample under study, who reported on the appropriate of this card for skills and sample under investigation (Appendix I).

Fifthly: the educational program

The first stage: (preparation)

The researcher developed the synchronous and asynchronous electronic educational program to develop some teaching skills of the student teacher at the Faculty of Physical Education. The researcher developed the program on the following foundations and steps.

General objectives of the educational program:

The program aims to improve and enhance the prescribed teaching skills by designing a synchronous and asynchronous e-learning program to develop some teaching skills of the student teacher at the Faculty of Physical Education "under research".

Skill goals (Psychomotor).

Improving and enhancing the teaching skills of second year students at the Faculty of Physical Education in Sadat - Menoufia University, which are represented in:

1- Lesson objectives.
2- Lesson planning.

3- Lesson procedure.
4- Teaching methods.
5- Lesson evaluation.

Organizing the content of the educational program:

The researcher coordinated with the technician specialized in displaying and coordinating the contents of the educational program before starting the design as follows:

1- Introduction

It is the page that is displayed when the program starts on the computer screen, which includes (the title of the research - the names of the supervisors - the name of the researcher - an icon to enter and start the program - an icon for the home page - and an icon to exit the program).

2- Educational content of the program:

The educational content of the selected skills "under research" includes the educational units, which include:

1- Lesson objectives.
2- Lesson planning.
3- Lesson procedure.
4- Teaching methods.
5- Lesson evaluation.

3- Time distribution of the proposed program.

Table (9)
Time distribution of the proposed program using multimedia

N	Content	Time distribution
1	Number of weeks	6
2	Number of educational units per week	2
3	The number of educational units as a whole	12
4	Application time per unit	90 m
5	Total program time	1080 m

Sixthly: Survey Studies.

1- The first exploratory study:

The preliminary survey was conducted on 6, 7/3/2017, and the aim of this study was to identify:

- The validity of the tools and devices used in the tests and the selection of assistants.

- The validity of the place designated for conducting the tests.

The results of the survey revealed:

- Validity of tools and devices used in the tests.

- The assistants were assimilated to how to conduct the tests and the conditions for their application, and were trained to record data in the forms.

2-The second exploratory study:

The second exploratory study was conducted on Tuesday and Wednesday on 13 and 14/3/2017 on a sample of (10) students from the second year students from the same research community and from outside the sample of the basic research, in order to calculate the validity of the tests, the intelligence test and the cognitive achievement test. The aim of this study was:

a) Calculating scientific coefficients (validity and reliability) for the tests used in the research.

b) Identifying the possible errors that may appear during the conduct of the tests to avoid them in the basic study.

c) Testing some software modules.

The results of the survey revealed:

- Verify the validity of the tests used in the research.

- Availability of computers, data-show device, and a display screen for the application in question.

- The researcher noticed the joy and happiness during learning with the new method on the students' faces.

Tribal measurement:

The tribal measurement was carried out on the sample under research, which consisted of (80) eighty students, and the sample was divided into two groups (experimental and control) (40) students per group and that was from 19/3/2017 until 26/3/2017 by applying the observation card with 16 different teaching situations for each student so that the student teacher's teaching skills could be measured.

Executing the experiment:

The researcher collected the student-teachers (the experimental group) and determined how to implement e-learning for them. He also answered all inquiries.

After explaining and responding to the student-teacher inquiries, the researcher distributed the worksheets to the students. Then , the student-teachers were divided into pairs at the beginning of the first lesson.

The students were divided into two groups. Each group of students is supervised by (2) student teachers, one of those teaches the education class (the applied student), while his colleague compares his performance with what is recorded in the worksheets (the observing student). Students and teachers were alerted to the necessity of adhering to the contents of the worksheet and comparing it with the performance of the colleague who teaches and who corrects the errors after the end of the class.

At the end of the class, a discussion takes place between the observing student, the performing student, and the supervisor about the mistakes that occurred during the class. Then the next class begins for the student performing and the observing student to exchange work.

How to perform the control group :

The control group followed the traditional method of implementing field training, whereby the students were divided into groups, and each group went to one of the schools in which the group of student teachers taught. The field training supervisor (a faculty member) goes to schools to evaluate the performance of student teachers in teaching physical education classes, as well as reviewing and evaluating the preparation book for each student.

Post measurement:

After the completion of the experiment and then the dimensional measurements of the two groups (experimental and control) from Saturday, 22/4/2017 to Thursday, 27/4/2017. By applying the observation card for the efficiency of teaching physical education by (3) three experts in the field of curricula, teaching methods and field training in physical education, with an experience of not less than ten years.

Statistical method used:

To achieve the objectives of the research and to test its hypotheses, the researcher used the following statistical treatments:
- SMA- Test (t)
- correlation coefficient.- The rate of improvement

First, show the results

To achieve the objectives of the research and to test its hypotheses, the researcher will review the research results in the following order:

Table (10)
The significance of the differences between the mean of the pre and post measurements in teaching skill (control group) (n = 40)

Variables	Pre measurement		Post measurement		difference between the two means	(T) value
	x	y	X	y		
Lesson objectives	6.08	0.44	8.51	0.54	2.43	21.70
Lesson planning	5.92	0.75	7.61	0.61	1.69	10.90
Lesson procedure	17.24	0.58	19.81	2.31	2.57	6.76
Teaching methods	11.81	0.47	13.61	1.03	1.79	9.94
Lesson evaluation	5.78	0.38	7.45	0.37	1.67	20.88
Total degree	46.11	3.34	56.71	1.01	10.60	18.93

Tabular value (T) at the level 05, = 0.22

It is clear from the previous table that there are statistically significant differences at the (0.05) level between the mean scores of the pre and post measurements of the control group in favor of the post measurement in the teaching skills under study.

Table (11)

The significance of the differences between the mean scores of the pre and post measurements teaching skills. (Experimental group) (n = 40)

Variables	Pre measurement		Post measurement		difference between the two means	(T) value
	X	y	X	y		
Lesson objectives	6.15	0.44	12.10	0.47	5.95	59.50
Lesson planning	5.86	0.45	12.42	0.39	6.56	65.60
Lesson procedure	17.11	0.58	30.17	0.66	13.06	93.28
Teaching methods	11.86	0.43	21.25	0.87	9.39	58.69
Lesson evaluation	5.89	0.44	12.31	0.50	6.42	58.36
Total degree	46.86	4.82	88.02	2.83	41.16	51.45

Tabular value (T) at the level 05, = 0.22

It is clear from the previous table that there are statistically significant differences at level (05) between the mean scores of the pre and post measurements of the experimental group in favor of the post measurement in the teaching skills under study.

Table (12)

The significance of the differences between the means of the two post measurements of the experimental and control groups in teaching skills (n = 80)

Variables	Experimental group		control group		difference between the two means	(T) value
	X	Y	X	y		
Lesson objectives	12.10	0.47	8.51	0.54	3.59	32.64
Lesson planning	12.42	0.39	7.61	0.61	4.81	43.73
Lesson procedure	30.17	0.66	19.81	2.31	10.36	27.26
Teaching methods	21.25	0.87	13.61	1.03	7.64	36.38
Lesson evaluation	12.31	0.50	7.45	0.37	4.86	48.60
Total degree	88.02	2.83	56.71	1.01	31.31	65.23

The value of (T) tabular at the significance level 0.50 = 1.99

It is clear from the previous table that there are statistically significant differences at level (05) between the experimental group and the control group in the post measurement in the teaching skills under study in favor of the experimental group.

Table (13)

The difference in the percentage improvement between the two measurements pre and post for each of the experimental and control groups of teaching skills (n = 80)

Variables	experimental group				control group			
	pre	post	differences	improvement%	pre	post	Differences	improvement%
Lesson objectives	6.15	12.10	5.95	49.17	6.08	8.51	2.43	28.55
Lesson planning	5.86	12.42	6.56	52.82	5.92	7.61	1.69	22.21

Follow Table (13)

The difference in the percentage improvement between the two measurements pre and post for each of the experimental and control groups of teaching skills (n = 80)

Variables	experimental group				control group			
	pre	post	differences	improvement%	pre	post	Differences	improvement%
Lesson procedure	17.11	30.17	13.61	43.29	17.24	19.81	2.57	12.97
Teaching methods	11.86	21.25	9.39	44.19	11.81	13.61	1.79	13.15
Lesson evaluation	5.89	12.31	6.42	52.18	5.78	7.45	1.67	22.42
Total degree	46.86	88.02	41.16	46.76	46.11	56.71	10.60	18.69

It is clear from the previous table that there is a difference in the percentage of improvement between the pre and post measurements of the two experimental and control groups in the teaching skills under study separately and in the total degree of skills in favor of the experimental group.

Second: Interpretation and discussion of the results:

Table (10) shows that there are statistically significant differences between the mean of the pre and post measurements of the control group in the teaching skills under study in favor of the post measurement at the level of significance (0.05). This result agrees with **"Safwat Muhammad Yusuf" (1983) (28), "Zakia Ibrahim" (1988) (18), "Abu al-Naga Ahmed Izz al-Din (1988) (3) and "Khalid Hassan Tawfiq" (1993) (13).) and Salah al-Din Muhammad (1995) (22)**.

Thus, the first hypothesis has been fulfilled, which states that "there are statistically significant differences between the mean of the pre and post measurements in the teaching skills under research for the control group and in favor of the post measurement".

Table (10) shows that there are statistically significant differences between the mean of the pre and post measurements of the experimental group in the teaching skills under research in favor of the post measurement at the level of significance (0.05) ,which indicates that e-learning has a positive impact on the teaching skills under study for student teachers. These results are consistent with the results of the study of **Ali Mahmoud Al-Reedy (1986) (46), (1987) (47), Khaled Hassan (1993) (11), Mahmoud Ragai (1996) (58), Abul-Naga Ahmed (1997) (3), (1998) (4).**

Thus, the second hypothesis has been fulfilled, which states that "there are statistically significant differences between the mean of the pre and post measurements in the teaching skills under research for the experimental group and in favor of the post measurement".

It is also evident from Table (12) that there are statistically significant differences between the mean of the two dimensional measurements of the experimental and control groups in the teaching skills under study in favor of

the experimental group at a significance level of (0.05), which means that e-learning has provided more effectiveness for practical performance and actual practice in teaching education sports compared to the traditional method. This is in agreement with what was indicated by **Attia Hussein (1984) (38), Ahmed Mahdi (1986) (6), Ali Al-Raidi (1987) (47) Khaled Hassan (1993) (13) and Tariq Muhammad (1996) (28).), Abu Al-Naga Ahmed (1997) (3), (1998) (4).**

Thus, the third hypothesis, which states that "there are statistically significant differences in the dimensional measurement between the experimental and control groups, in the teaching skills under study, is achieved in favor of the experimental group".

In Table (13) we find that the percentages of improvement between the pre and post measurements of the experimental and control groups in the teaching skills under research in favor of the experimental group, which used e-learning in developing the teaching skills of the student teacher. The experimental group, while the percentage of improvement in the teaching skills under study for the control group ranged between **(12.97% to 28.55**). These results agree with what was indicated by **Attia Hussein (1984) (38), Afaf Abdel Karim (1990) (40), and Abul-Naga Ahmed (4) (1998) , (3) (1997) Mohsen Ramadan (1998) (47) Salah Anas, Al-Sayyid Muhammad (1999) (23)**

Thus, the fourth hypothesis has been fulfilled, which states that "the percentage of improvement in the

teaching skills under study in the experimental group is higher than the control group."

Conclusions and recommendations
First, the conclusions

Within the objectives and hypotheses of the research and the results reached the following can be extracted:

1- The traditional method of teaching has little effect on the teaching skills under study for student teachers.

2- E-learning has a strong positive impact on the development of the teaching skills under study for student teachers, especially the skills of (lesson procedure - teaching methods - lesson evaluation).

3- E-learning in teaching has a better effect than the traditional method of teaching on developing the teaching skills under study for student teachers.

4- The use of (worksheets) in the application of e-learning led to the provision of information and feedback on performance, which helped in setting goals and good planning for the lesson and the ability to discover and correct errors, which led to the development of the teaching skills in question for the student teacher.

Second: recommendations

Within what has been extracted, the researcher recommends the following:

1- The necessity of using e-learning in teaching student teachers at the Faculty of Physical Education during the field training period.

2- Conducting similar studies to prove the effectiveness of using e-learning in teaching and modern learning methods in preparing student teachers in the

faculties of physical education using samples and other teaching skills.

3- It is important for faculties of physical education to introduce modern teaching methods into their student-teacher preparation programmers.

4- The necessity of cooperation between the faculties of physical education and the competent authorities to provide training courses for school teachers to train on the use of modern teaching methods and how to apply them to develop and develop their teaching skill.

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