



The Effectiveness of an Educational Environment Based on Artificial Intelligence Techniques Using Virtual Classrooms on Training Development

Hala Khairy Abdelghany Elgohary

Asst. Prof., Curriculum and Instruction in Computer and Educational Technology,
Prince Sattam bin Abdulaziz University, Saudi Arabia, h.elgohary@psau.edu.sa

Hla Khalaf Al-Dossary

Lecturer of curricula and methods of teaching mathematics, Prince Sattam bin Abdulaziz
University, Saudi Arabia, mmrcomputer2013@gmail.com

The aim of the current research is to measure the effectiveness of an educational environment based on artificial intelligence techniques using virtual classrooms in developing field training for female student teachers at Prince Sattam University. By researching in previous studies, and the quasi-experimental approach to measure the effectiveness of the independent variable “the learning environment based on artificial intelligence technology and the variables dependent on field training” and the research sample that consisted of (15) students from the field training students, the researcher concluded that there are statistically significant differences between the average scores of the experimental group and the control group in favor of the experimental group on the scale card, which explains that the female students’ teachers’ use of virtual classrooms using artificial intelligence technology helped to develop field training and teaching skills at a semi-high degree (84.40%), and this result indicates a high level in the development of field training skills. The researcher recommended the necessity of employing virtual classrooms in teaching practical education courses, and training student-teachers on how to use electronic media and keeping abreast of recent developments in training and teaching through the use of Blackboard platforms.

Keywords: effectiveness -artificial intelligence technology - virtual classrooms - field training- female teachers

INTRODUCTION

We have come to live in the era of scientific progress and the revolution of information and communication technology, where the exchange of information and experiences has become an essential feature of this age. Therefore, the education in general and higher

Citation: Elgohary, H. K. A., & Al-Dossary, H. K. (2023). The effectiveness of an educational environment based on artificial intelligence techniques using virtual classrooms on training development. *International Journal of Instruction*, 15(4), 1133-1150. <https://doi.org/10.29333/iji.2022.15460a>

education particular according to these rapid and modern changes and developments. So many important technological innovations have appeared that help and keep pace with those developments and contribute to solving many educational, teaching, and training tasks.

Among these technological innovations, there are virtual classrooms with artificial intelligence technology, which provide interactive content based on interactive multimedia, support different learning styles, new channels, and teaching and training methods that contribute to activating and increasing the defensiveness towards learning. Also, they contribute to the richness of the learning environment.

The virtual classrooms with artificial intelligence technology provide educational environments for the learner and the teacher which are providing learning, giving appropriate feedback, and developing learning materials (Almuqayteeb, 2021).

The process of training student teachers is considered a qualification of an accelerated nature in which the student teacher acquires the necessary skills that qualify her to enter the teaching profession, which is the first step in a teacher's career future. It cannot be considered a completed process once it obtains the qualification that allows it to work in the teaching profession, but rather it continuous and renewable process to keep pace with the rapid change in science and technology and its various effects in all aspects of life, and the school work after graduating from the university and the daily problems that female students may face from teachers. During the field training process, (Hafez, 2009) because today's world is rapidly changing due to the successive developments in the field of education, information and communication technology, it is necessary for us as educators to keep pace with these innovations by adapting them to serve the educational process, teaching and training methods are changing to benefit from technological innovations and digital technologies (Khamis, 2003). At the end of 2019 AD, the spread of the coronavirus (COVID-19) was battling around the world, causing more than 2,000 people have died, and several countries have begun to adopt several at the end of 2019 flexible learning strategies to contain this virus like the closure of schools. UNESCO stated that as of March 12, 2020, forty-six countries in five countries have announced in different continents close schools to contain the spread of the virus (COVID-19), Specifically twenty countries fully closed schools, which affected the learning process for about (9.376) million children and youth who were attending school. Usually to schools (facilitating flexible learning when education is in distress, 2020) and this led to a rapid provision of flexible learning strategies, employing different types of learning and digital technologies, and actual access to educational resources e-learning to maintain the continuity of education. And given that e-training is among the strategies that are based on technological innovations such as classes with artificial intelligence technology, which has appeared recently and has proven effective in gaining trainees various knowledge and skills, and this was confirmed by many specialists in the field, where (Abdul Rahman, 2012) said that e-training uses many educational resources in an integrated manner, and that the training and teaching using educational technology is one of the most important requirements of the current era, and virtual classes are distinguished by using artificial intelligence technology, such as: appropriate study times

and flexibility in scheduling, achieving the principle of continuing education, and lack of costs, saving travel time, and providing means of interaction between student and teacher (Zain El-Din, 2007).

Problems Statement

Field training is a condition of graduation, through which the student can transform cognitive theories what you have learned into practical application, just as the student during the training period engages and adapts in the market and tries to apply skills communication and communication with people and administrations, and the place of training may be the student's future workplace as a result of the conditions of the spread of the virus (COVID-19) pandemic and the closure of schools, it was necessary to find an alternative solution and strategy flexible learning using e-learning platforms and technology and the exploitation of various resources for this technology, such as classes using artificial intelligence technology, and employing its tools to facilitate the process of training field training students, during the period of time study suspension.

Hence the problem of this research:

- 1- Reviewing Arab studies and research that dealt with electronic training programs through virtual classes with artificial intelligence technology.
- 2- Reviewing the recommendations and proposals of many studies that focused on designing electronic training programs through virtual classes with artificial intelligence technology provided to field training students.

Through the previous presentation, we found that there is a need to use virtual classes with artificial intelligence technology and revealing its effectiveness in developing field training skills to facilitate the learning process during a period of the education disruption.

Research Questions

In light of the research question was formulated as:

- 1- What is the effectiveness of using virtual classrooms with artificial intelligence technology in developing field training skills female students at Prince Sattam bin Abdulaziz University?

Aim of the research

The objectives of the current research are:

- 1- Preparing a list of the skills to be developed according to the flexible learning strategy of the student teacher during the training period field.
- 2- Studying the effectiveness of using virtual classrooms with artificial intelligence technology in developing the training skills of the student teacher.

- 3- Evaluating the level of effectiveness of field education through the blackboard platform at the College of Education at Prince Sattam University in the light of modern technology innovations.

Importance of the research

The current research derives its importance by contributing to:

- 1 – Used more electronic training programs with artificial intelligence technology to train the student teacher on using different teaching strategies.
- 2- Helping the student teacher to develop and follow with the era of the technological explosion and make training and teaching interesting for the teacher and the learner with NS.
- 3 - Providing solutions to overcome some of the obstacles facing the training of student teachers by employing educational technology and helping them with distance training, especially in times of crises and disasters.
- 4- Providing feedback on field education at Prince Sattam University regarding the level of training of its graduates.
- 5- Providing solutions to those responsible for developing academic programs with regard to field education at the university based on the results of a scientific study.

Limitations

The current search was limited to:

A sample of female student teachers (field training students) at the College of Science and Human Studies – Department of Islamic Studies in Al-Sail Governorate – the second semester of the academic year 2020 / 2021. The reason for choosing the female students is because I teach female students only.

Research background

1- Virtual Classes

There many definitions of virtual classes, according Seymour, 2011 “a system that provides an opportunity for an active interaction between teacher and student via the internet; Where it combines the characteristics of traditional classes and electronic classes, this system is characterized by flexibility and ease; By defining the appropriate times for teachers and students; So that the student can simultaneous communication through the electronic whiteboard, written and audio dialogues; In order to achieve the best level of comprehension and comprehension.”

Al-Sheri, (2009) defines it as “one of the technical education systems that include electronic systems that allow by interaction audio and video with the teacher through a complete presentation of the educational content of the virtual classroom and also through the internet and on the air, which is called synchronous learning and interaction.” The synchronous virtual classes have a set of features that distinguish it,

including the manual for using the education system electronic (Technological Development Center, 2003):

- 1- The availability of all means of direct interaction from the teacher and the learner.
- 2 - The ability of the learner to interact with the teacher on the electronic board.
- 3- The learner interacts with the teacher through discussion, where the student can talk through his computer.
- 4- Enabling the teacher to make a quick survey of the learner's response and interaction with the various lesson points that displayed directly.
- 5- Enabling the teacher to make an immediate assessment of the learners' response.
- 6 - The ability to use participation in the applications within the virtual classroom.
- 7 -The possibility of dividing the learners into small groups in the interactive rooms with audio and video, and empowering the teacher from group discussion and participation. In addition to the ease of communication within the virtual classroom at any time place, and the possibility of carrying out all meetings and workshops, as well as the low cost. Also, as it does not need halls, it does not require transportation, expensive school tools, or cover different geographical areas remote areas especially.

Procedurally, in this research, it is defined as classes that depend on the meeting of the teacher and students via the e-learning site.

(Blackboard) at specific times in the academic schedule and performing homework through a set of tools that includes a board.

Discussion and what follows from sound and image, and the use of the electronic board that enables them to learn direct and interactive.

2- Artificial Intelligence Technology

Ajam, (2018) defines the science of artificial intelligence as a modern cognitive science whose roots go back to the 1950s. Since the science of artificial intelligence is considered a science, there is a dispute between many specialists and researchers in controlling its nature and concept, and the following are the most prominent definitions presented for the term artificial intelligence:

As for Rose, (Rose, 2018) he defined artificial intelligence as a branch of automated computer science that can through it create computer programs that resemble and simulate the style and pattern of human intelligence and design them, so that the computer enables it to perform some tasks and activities instead of the human being, which in turn requires thinking, hearing and understanding movement and speak in an orderly and logical manner.

Sheikh (2018) also defined artificial intelligence as simulating the human brain in carrying out some of its tasks and complex functions of acquiring information from the

environment and then linking it to reach certain conclusions related to a specific matter; it is one of the branches of computer science that where the simulation process is done by computers and various machines, as it is considered a branch it is concerned with creating smart devices and machines.

Through the previous definitions, the researcher reached the procedural definition of artificial intelligence as one of the branches of the "AI" computer science, which is concerned with how machines simulate human behavior. It is the science of creating and building computer programs and capable devices to think the same way the human brain works: it learns as we learn acts as we act, and decides as we decide (Unesco, 2019:20). Therefore, it can be employed in the teaching and training processes for student teachers.

Types of Artificial Intelligence:

Artificial intelligence can be divided into three basic types, ranging from simple reaction to perception and interaction this is as follows (Layla, 2021: 14)

- A. *Narrow Artificial Intelligence:* It is the simplest AI that is programmed to perform certain functions within its environment. Its behavior is considered as a reaction to a specific situation, and it can only act in its environment.
- B. *General or Strong Artificial Intelligence:* It is characterized by the ability to collect and analyze information and accumulate experiences from the attitudes it acquires that qualify it to make independent and subjective decisions.
- C. *Super Artificial Intelligence:* They are models that are still under experiment and seek to simulate human beings and can be distinguished between two different types, the first attempts to understand human thoughts and emotions that affect human behavior, and the second it is a model of the theory of mind.

Artificial intelligence can also be defined as the study of mental abilities that are concerned with simulating human thinking, despite of the multiplicity and diversity of definitions, but the main goal is to simulate human intelligence using advanced software that can be used in solving atypical problems, training to solve them, or making an appropriate decision based on thoughtful logic and alternatives a proposal that requires a human effort to reach it through the average individual with above average intelligence. (Al-Muqayteeb, 2021)

3- Field Training Skills

It is defined by both (cooper: 2010, P5) and, (moor: 1995, p 11) as a set of verbs and teaching behaviors that students/teachers are expected to master during their training during practical application in schools to facilitate their achievement.

4- E-Training

E-training is defined as a process in which an interactive environment rich in technology-based applications is created by the computer and its networks and multimedia, which enable the trainee to achieve the objectives of the training process in

the shortest time possible and the least effort expended, and at the highest levels of quality (Sun & Chen, 2016).

Previous Studies

1- Studies of the Use of Virtual Classrooms in Teaching and Training

Al-Irfan (2018) a study aimed at knowing the effectiveness of a training program based on a virtual classroom in developing the cognitive answers of scientific research skills for postgraduate students, the study sample is from (6) female postgraduate students as one experimental group. The study also adopted the semi-experimental method and used an objective achievement test to measure scientific research skills, and a program based on virtual classes. The results of the study confirmed that there are statistically significant differences between the average scores of the students of the research sample in the application the pre and posttest of the cognitive achievement of scientific research skills is moving towards the post application, the results confirmed the effective impact of virtual classrooms on students' achievement and developing their scientific research skills, and holding training courses University faculty members. To introduce them to how to use virtual classrooms for education or any other technical means it is not technology in itself that succeeds the educational process and achieves the goals, but rather in the way it is designed educationally so that employ the ideal ways to achieve the goals.

Al-Qahtani (2018) dealt with a study aimed at identifying the effectiveness of a proposed classroom-based program in developing educational technology standards for students of Princess Noura University. The study sample consisted of (27) A female student and she used the semi-experimental mental exper-quas method to find out the effectiveness of the independent variable (for grades), hypothetical on the dependent variable (education technology standards), and the research tool was the achievement test, where the achievement test was applied before and after depending on the research sample and the results of the study showed the presence of significant differences. Statistically, at the significance level (51.5) between the pre and posttests in the effectiveness of teaching in favor of the post test, this indicates the effectiveness of teaching in virtual classes in acquiring educational technology standards for university students Princess Noura.

The study of Judah et al (2018) also aimed to identify the effect of the two types of virtual classroom differences (synchronous - asynchronous) supported by e-learning anchors to develop programming skills in basic visual language with female first year secondary school students, and their sample consisted of (30) female students who were divided into two experimental groups. Where the first group was taught by the simultaneous interaction pattern of the virtual classroom using e-learning, and studied the second group has a pattern of asynchronous interaction for the virtual classroom using e-learning, and the study tools were formed from (Testing the cognitive aspect of programming skills) (A note card for the performance aspect of programming skills) and it was applied the tools were used before and after on the two study groups, and the results showed that there were no statistically significant differences between the mean

the scores of the first experimental group (simultaneous class using e-learning) and the second experimental group (Asynchronous class using e-learning) in testing the cognitive aspect of programming skills in his visual basic language, there are statistically significant differences between the mean scores of the first experimental group (the simultaneous class using e-learning) and the second experimental group (asynchronous class using e-learning) in the card the observation was in favor of the first experimental group.

Al-Hassan and Ashabi (2017) explained a study aimed at knowing the reality of using the virtual classroom in distance learning programs from the point of view of faculty members at the Open University of Sudan, and the curriculum used analytical description a questionnaire that designed and distributed on a random sample of (65) respondents representing a community of the study. By following the appropriate statistical methods, they concluded the importance of using virtual classrooms in programs distance learning in Sudanese open universities. There are no statistically significant differences at the level (05.0) between responses of the sample members from the professors of the Sudan Open University about the reality of using virtual classrooms in programs distance learning is due to the variable of experience and specialization, in addition to the difficulties that prevent the use of the classes virtualization in distance learning programs at the Open University of Sudan. In light of this, the study recommended encouraging members teaching staff in Sudanese universities and educating them to benefit from the technology of virtual classrooms in order to facilitate and improve educational practice, especially in the field of distance learning.

In the Al-Omari study (2017) which aimed to know the impact of the use of virtual classrooms in developing dialogue skills, academic achievement and course orientation, among students in the College of Sharia at Qassim University. I used the observation card, and the achievement test in speaking skills, and scale trends, and adopted the quasi-experimental approach, and the experimental design with two groups, control and experimental, was used, with the use of pre and post measurement. The sample of the study was (86) female students. The results of the study concluded that it is effective the use of virtual classrooms in developing dialogue skills, among students of the College of Sharia at Qassim University, and the effectiveness of teaching using virtual classrooms on student achievement, as well as the effectiveness of teaching using virtual classrooms.

Adelima, D. K., Siti, Z., Heru, K. (2020) was conducted a study aimed at knowing the degree of possession of Al-Quds Open University students. for e-learning skills related to models and virtual classes, and to know the degree of differences in possessing skills e-learning related to models and virtual classes according to the variables of gender, specialization, and the study was conducted and (275) female students. The study questionnaire included the following topics on a sample of (473) where (198) were female students study questionnaire included the following topics, a sample of (473) where (198) of them were students; (e-learning skills, model-related skills, and virtual classroom skills). The study concluded that all the questionnaire items formed good

skills for the students of Al-Quds Open University, and the total score came with relative weight and ability (76%, 70%) and they possessed it to a large degree, and their responses were the results of the study also showed that there were statistically significant differences in the degree of possession of Al-Quds Open University students for e-learning skills related to models and virtual classes according to the gender variable in favor of males.

2- Studies that Prove the Effectiveness of Using Artificial Intelligence Technology

The study of Ashraf Abdo (2002), which aimed to use an expert system for the flexible production system, and one of its results develop a quality control system that takes into account the use of modern technologies currently available in production systems especially flexible production systems, in addition to building an information base to analyze quality plans and linking an information base analysis of quality schemes with an expert system to diagnose cases of deviations from the quality level. Another one is the study of (Rosso, 2004), Which aimed to compare traditional methods of aiding decision-making by computer programs based on intelligence on the other hand, the results proved the effectiveness of these programs in making strategic decisions.

The study of Muhammad Musa (2004), which dealt with the effectiveness of teaching programs based on artificial intelligence in developing the skills of using computer technology for the computer teacher's section at the Faculty of Specific Education in Mansoura through a smart training program. This program was prepared to teach the unit of numerical formulas in the Visual Basic language related to the field of the use of computers, and the study concluded that there is an effectiveness of teaching programs based on artificial intelligence as well as the study of Ahmed Salman (2005), Which aimed to study the effectiveness of a program based on smart education systems for the development of the skills of educational video programs and diagnosing video camera malfunctions. This study proved the effectiveness of the program based on systems smart education in developing the cognitive achievement of the fourth year student at the Faculty of Specific Education, Mansoura University, as well as student's tendencies and attitudes, and developing their skills in the production of educational video programmers. Most of these studies have unanimously agreed that the virtual classrooms or the so-called virtual classrooms are technical artificial intelligence for teaching, learning and training processes contributes to facilitating the tasks of teachers and lecturers supervisors. By providing their educational, training and professional materials through those classes, and they are also auxiliary tools learning for students and coaches. There is also a set of studies that dealt with the principles and foundations that has effectuated teaching and effective training and the characteristics of education by study and analysis. Among these studies that have proven the effectiveness of intelligence is the study of Al-Matrafi (2010) which aimed to identify the effectiveness of the training program a proposal based on active learning strategies in developing effective teaching skills for student teachers in a specialty natural Sciences at Umm Al-Qura University. Founding that there are statistically significant differences between the average bikes of each of the control group and the experimental group in the

achievement test and the observation card in the post-application in favor of the experimental group refers to the effect of the proposed training program.

Al-Zahrani (2010) conducted a study aimed at identifying the role of training courses in developing training effective teaching of art education teachers from their point of view at Umm Al-Qura University. Therefore, the results of the study indicated the benefit of art education teachers are among the training courses to a large extent in most training and teaching skills, and there are four obstacles that limit art education teachers from benefiting from these courses to a large extent, most notably: the absence of financial incentives and morale, the short duration of the sessions, the reliance on the delivery method in most of the sessions, and the predominance of the side theoretical on the scientific side. Also, the study of Olayan (2010), which aimed to evaluate the performance of mathematics teachers in the primary stage the University of Riyadh, in the light of the necessary teaching skills, led to a number of results, which are: The same level of performance the study in the main teaching skills tends to the average performance, and also found a positive statistically significant relationship that shows the performance of the study sample in the axes of lesson planning and lesson presentation. Also, the study of Olayan (2010), which aimed to evaluate the performance of mathematics teachers in the primary stage the University of Riyadh, in the light of the necessary teaching skills, led to a number of results, which are: The same level of performance the study in the main teaching skills tends to the average performance, and also found a positive statistically significant relationship that shows the performance of the study sample in the axes of lesson planning and lesson presentation.

METHOD

The current research uses the descriptive and quasi-experimental approach, which aims to study the effect of an independent variable (virtual classes with artificial intelligence technology) on the dependent variable (field education skills) on two groups (experimental / officer), where the research sample was selected through an exploratory study that was applied to a group of The students who were supervised by the college, then 15 students were selected from the field education students. They are an intentional sample, and they were chosen based on their desire at the College of Science and Human Studies in Al-Silil Governorate.

Experimental Design for Research

Pre-test, posttest with control group design this design is based on the use of two groups of female teachers, a control group and an experimental group (classes) and (virtual), while the control group is trained in the traditional (usual) method and then applied to both groups remote search tools.

Participants

Female student teachers registered for the field education course, Department of Islamic Studies (Educational Track) at the Faculty of science and Human Studies in Al-Sulayl Governorate, who received training through virtual classes using blackboard, the reason for choosing the female students is because I'm teach female students only.

Research design

- 1- A review of previous studies and the theoretical framework related to educational technology, curricula and teaching methods, or the illusion of training field in teacher preparation programmers.
- 2- Reviewing the follow-up studies and literature, in order to derive the paragraphs of the note card.
- 3- Prepare the note card.
- 4- Preparing a set of electronic presentations to explain the teaching and training skills through the virtual classroom inside the blackboard platform used with artificial intelligence technology.
- 5- Dividing training and teaching skills into three sections:
 - a) Theoretical works related to how to prepare daily and quarterly plans, and how to deal with quarterly problems and administrative and solving them using the steps of scientific research.
 - b) Micro-teaching by giving a class situation inside the virtual classrooms with artificial intelligence technology via blackboard platform.
 - c) Attending a class session for the student teacher, by communicating with the student via the blackboard platform and opening the class performance, observing its performance, and providing immediate feedback.
- 6- Conducting three introductory sessions through the blackboard platform to explain the mechanism of dealing with the virtual classroom with technology artificial intelligence.
- 7- The application of training for student teachers on the skills of field training and teaching through the virtual classroom with technology artificial intelligence, for a full semester, which takes place in a (13) class meeting from the blackboard platform.

Instruments

To answer the research question, the researcher prepared a note card, while using the virtual classrooms using the intelligence technology the artificial intelligence, where the card consisted of (30) paragraphs, distributed over six axes, which is the quality of the virtual classes using artificial intelligence technology and the content presented to it. (5) paragraphs, clarity of training (5) paragraphs a panel discussion and dialogue (5) paragraphs providing feedback (5) paragraphs following up on tasks and duties (5) paragraphs, strategies and electronic evaluation tools used (5) paragraphs.

Preparing the Note Card through

- A- An initial copy of the note card, after reviewing the literature and previous studies, such study as (Samour's, 2011), and the study of (Abdel-Aty, 2009)

b- Measuring the validity of the observation card and then presenting it in its initial form to a group of specialists in curricula and methods teaching and educational technology, with the aim of expressing an opinion on any amendments to the note card, and the extent of clarity the paragraphs and their validity in terms of their linguistic formulation. The atmosphere of the amendments was made in light of what the specialists referred to. The scale ended with (30) items, evaluation strategies and tools, provided feedback. As done verifying the validity of the observation card by applying it to an exploratory sample consisting of (15) students from outside the actual research sample, and the internal consistency coefficient was calculated by calculating the Pearson correlation coefficient between the axes of the scale, as well as each axis and the total degree of the scale, which are as follows:

Table 1

The internal consistency validity equations between the scale axes and the total score

The hub	Calendar strategies and tools	Follow up on duties and tasks	Feedback provided	Dialogue and discussion	Clarity of training	Educational software used	Total marks
Calendar strategies and tools	1	.75	.78	.89	.92	.75	.83
Follow up on duties and tasks		1	.89	.75	.89	.87	.85
Feedback provided			1	.84	.087	.75	.86
Dialogue and discussion				1	.83	.92	.82
Clarity of training					1	.83	.81
Educational software used						1	.89

Function at the level of significance ($01.0 = q$)

It is clear from Table (1) that the calculated correlation coefficients between all dimensions are statistically significant.

It ranged (75.0 - 92.0) and these values are considered acceptable for research purposes.

C- Measuring the Stability of the Note Card: This is done by using the Faker and Nachs equation (q) for internal consistency, as shown in the following table:

Table 2
Stability coefficients for the note card

the hub	Calendar strategies and tools	Follow up on duties and tasks	Feedback provided	Dialogue and discussion	Clarity of training	Educational software used
stability coefficient	.92	.87	.86	.88	.85	.88

It was noted that the calculated stability equations have high values, where the total stability equation reached (88.0), which is the accepted value in the search.

D. The Note Card in its Final Form: The scale was developed in its final form, which consisted of (30) items, distributed over six axes using the five-point gradient (Likert), the answer was given: Very Agree (5) (5 marks), Agree (4) (4 Marks), Neutral (2) (degrees), Opposition (2) (degree), and Very Opposition (1) (degree); and vice versa in the case of the opposite items.

Thus, the great value of the scale is (150), and the scale was divided into three levels, the high level (79-100) and the medium level (40-78) the reduced level (25-30)

FINDINGS AND DISCUSSION

The results of the research using the statistical method SPSS reached to answer the research question: What is the effectiveness of using virtual classrooms with artificial intelligence technology in developing field training and teaching skills for female student teachers? The researcher used the arithmetic averages and standard deviations for each field of the observation card used, and Table No. (3) Shows the following:

Table 3
Arithmetic averages and standard deviations

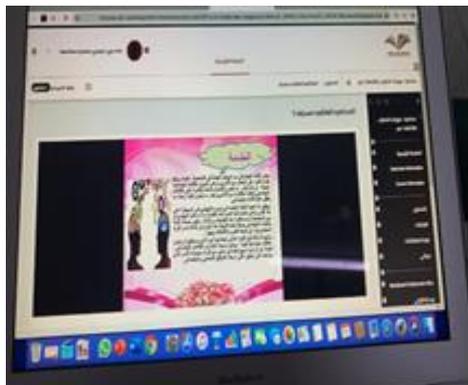
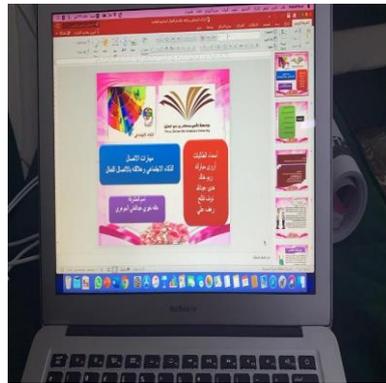
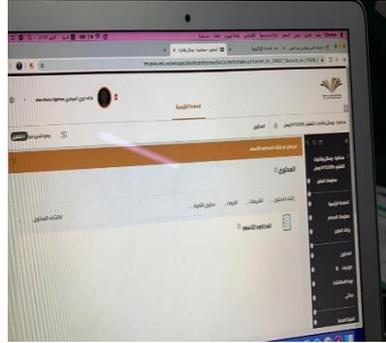
The field	Average arithmetic	Skew normative	The ratio centennial	Rank
Calendar strategies and tools	4.51	.68	% 91.00	1
Follow up on duties and tasks	4.26	.83	% 86.32	2
Feedback provided	4.37	.81	% 85.50	3
Use dialogue and discussion	4.22	.91	% 83.16	4
Clarity of training	4.15	.92	% 82.15	5
Educational software used	4.11	.86	% 81.32	6
Total marks	4.26	.62	% 84.40	

It is noted from Table (3) that there are statistically significant differences between the mean scores of the experimental group and the control group in favor of the experimental group on the scale card, and this explains that the female students used the parameters for virtual classrooms using artificial intelligence technology, it helped to develop field training and teaching skills to a similar degree high (40.84,%) and the fields found a descending rank as follows: evaluation strategies and tools (5.91,%) follow-up duties and tasks (32.86)%, provide feedback technology (50.85), use the

discussion board (% 81,32) user learning programs (82,15 %), training clarity (83,16%).

This result indicates a high level of developing field training skills through the use of classrooms virtual Artificial Intelligence Technology represented in Teaching Skills (Planning - Implementation - Evaluation), Where many academics unanimously agreed that the application of the artificial intelligence strategy would revolutionize the educational path and break with it the traditional templates that depend on indoctrination, change and development from the role of the teacher and move him from the role of the employee to the role of the expert, and the future of the educational process is clear according to artificial intelligence technology with the emergence of what It is known as a teacher robot that will help students and teachers alike in receiving the information necessary for learning, especially with the spread of virtual classes in various educational platforms in various academic and academic fields, the most important features of virtual classrooms is the approximation of space and time and saving time and effort, especially during a period of time suspension of studies during the Corona pandemic and the transformation of regular classes into digital electronic classes with intelligence technology. The researcher noticed during the application of the program via the blackboard platform in the education and training of female training student's field; the students' eagerness to use the virtual classroom and the demand for it while teaching the skills of field training increased the interest of female students and teachers. By using the discussion board for communication and dialogue, and to provide experiences, especially the field training requires writing and displaying electronic slides, modern electronic educational means employing e-learning and electronic whiteboard, and useful tools and websites, such as the Ministry of Education website and the platform my school, so this agrees with the result of the study that he presented (Al-Irfan 2018; and Al-Qahtani, 2018; and my age 2017; and Black and the Board, 2016; and Abdulaziz 2015; and Hanawy, 2015; And Suhour, 2011) in the aftermath using virtual classrooms to develop effective training and teaching skills for pre-service teachers.

Pictures of practical application:



RECOMMENDATIONS

The researcher recommends the following:

1. The necessity of employing virtual classrooms in teaching practical education courses, and training student teachers on how to using electronic media and

keeping abreast of recent developments in training and teaching through the use of platforms the blackboard and its use in developing planning, implementation, and evaluation skills.

2. Applying the use of virtual classrooms using artificial intelligence technology to university students in other disciplines, and the different academic levels.
3. Artificial intelligence techniques using virtual classrooms in education is an educational model that can help students improve their creative thinking skills as well as motivate them to learn. As a result, it can be used as an instructional model in online learning or e-learning by focusing on certain attempts, such as making observations during the learning process, asynchronously pre-arranged presentation of speech and tasks, and synchronously conducting discussions. (Yustina et al, 2022)

ACKNOWLEDGMENT

We thank Sattam University for supporting this research by number (2019/02/10842)

REFERENCES

- Abdel-Aty, M., & Abdel-Aty, H. (2009). The effectiveness of a proposed training program in developing some of the skills of managing electronic content using the "Moodle" system among undergraduate students' professionalism and their attitudes towards it. *Journal of the Faculty of Education - Alexandria University*, 19(3), 313-315.
- Adelima, D. K., Siti, Z., Heru, K. (2020). Pengembangan Modul Biologi Berbasis Problem Based Learning Siswa SMK Pertanian pada Materi Pewarisan Sifat. *Jurnal Pendidikan*, 5(6), 860-869.
- Al-Ajami, M. (2003). Attitudes of the female students of the College of Education for Girls in Al-Hasa towards the teaching profession, magazine Faculty of Education, *Ain Shams University*, 8(2), 123-127
- Al-Arafat, A., & Al-Jarbawi, S. (2018). The effectiveness of a training program based on a virtual classroom in developing scientific research skills among postgraduate students at the College of the Arab East, *The Arab Journal of Education*, (4), 690-693.
- Al-Aswad, F., & Al-Louh, E. (2016). The degree of possession of Al-Quds Open University students for e-learning skills related to modules and virtual classes, *Al-Quds Open University Journal for educational and psychological research and studies*, 4(14), 367- 402.
- Al-Atab, N. (2004). The effectiveness of an educational program for practical education in the student teacher's performance of skills the teaching staff and its attitudes towards the teaching profession, the sixteenth scientific conference "Teacher Training", guest house, Ain Shams University, July 21-22, 2004.
- Al-Deeb, M. (2007). Principles and skills of effective teaching. Gaza (Palestine): Dar Afaq for Publishing and Distribution

- Al-Hassan, E., & Ashabi, H. (2017). The reality of using the virtual classroom in distance learning programs from the point of view of the faculty members at the Open University of Sudan as a model, *The Journal of the Union of Universities Arabic for Education and Psychology*, 15(1), 1-6.
- Al-Muqayteeb, T. (2021). Preservice Teachers Perceptions Of Using Case Study As A Teaching Method In Educational Technology Course In Saudi Arabia, *International Journal Of Instruction*, October 2021, Vol(14), No(4)
- Al-Mutref, G. (2010). "The effectiveness of a proposed training program based on active learning strategies in developing effective teaching skills among student teachers majoring in natural sciences at Umm Al-Qura University Scientific, 13(1), 119-122
- Al-Olayan, F. (2020) "Evaluating the performance of mathematics teachers at the upper primary stage in the city of Riyadh." the Light of Necessary Teaching Skills, *Journal of Reading and Knowledge*, 182-190
- Al-Qahtani, A. (2018). The effectiveness of a virtual classroom-based program in developing technology standards education among Noura University Students, *Journal of Educational and Psychological Studies*, 380.
- Al-Sheri, A. (2009). The extent to which Islamic education teachers use computers. in teaching jurisprudence in scientific institutes, an unpublished master's thesis. Umm Al-Qura University – College Education.
- Al-Tanawi, E. (2009) *Effective Teaching: Planning, Skills, Strategies, and Evaluation*, Amman: Dar Al-Masirah for publication and distribution.
- Al-Zahrani, B. (2010) training courses in developing effective teaching skills for education teachers' art from their point of view, an unpublished master's thesis, College of Education - Umm Al-Qura University.
- Atiyah, M. (2008) *Modern Strategies in Effective Teaching*. Amman: Safaa Publishing House and distribution.
- Cooper, J. M. (2010). *Classroom Teaching Skills What's New in Education*, Cengage Learning, ISBN. 0495812439, <https://Zoom.us/9780495812432>
- Gabriel, Laila. (2021 AD). *Artificial intelligence and its applications: Dar Al-Fikr for printing, publishing and distribution*
- Hennawi, M. (2015). Improving students' benefit from virtual classrooms at Al-Quds Open University in Palestine, *Al-Quds Open Journal for Educational and Psychological Research and Studies*, 11(8), 3-6
- Joudeh, E., & Ammar, H., & Sabri, M. (2017). (The effect of two types of virtual classes). sync hronous - asynchronous" support with e-learning anchors on developing students' programming skills the first secondary grade, an Arab research magazine in the fields of specific education, 8, 13, 60
- Lim, J. (2004). *Student Achievement, Satisfaction and Instructional*

- Matar, M. (2010). The level of student teacher performance in grammar teaching skills, Faculty of Education, University of Al-Aqsa Mosque in Gaza and its relationship to some variables. *Reading and Knowledge Magazine*, 104, 324-327.
- Moore, K. (1995). *Classroom Teaching Skills.*, Miami: USA. NJ.: Mc Garaw- Hill.
- Omari, H. (2017). The effect of using virtual classrooms on developing dialogue and achievement skills academic and course attitude among students of the Faculty of Sharia at Qassim University, Al-Quds Open University. *Journal for educational and psychological research and studies*, 19(6). 41 - 44
- Richards. F, (2005). The Impact of the Virtual classroom ON teaching and Learning in Education as perceived by Teacher, Library Media Specialalists and students ERIC Documents
- Sun, A., & Chen, X. (2016). Online education and its effective practice: A research review. *Journal of Information Technology Education: Research*, 15, 157-190. <https://doi.org/10.28945/3502>
- Technological, D. C. (2003). A guide to using the e-learning system. Setting up the development center technological Mubarak City for Education, Ministry of Education.
- The Arab Organization for Education, Culture and Science "UNESCO" (2019). Artificial intelligence in education, p.20
- Yustina et al. (2022)The Effect of E-Learning Based on the Problem-Based Learning Model on Students' Creative Thinking Skills During the Covid-19 Pandemic *International Journal of Instruction*, 15(2).
- Zain El-Din, M. (2007). *E-Learning Competencies*. Jeddah: Khwarizmi Scientific Publishing House.