ISSN: 0974-5823 Vol. 7 No. 4 April, 2022

International Journal of Mechanical Engineering

Employing Virtual Learning Environments (VLE) in Teaching Art Education Courses in Saudi Arabia

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Abstract

The creation of virtual classes to teach the courses of the Department of Art Education is one of the most effective ways to deal with the huge explosion of knowledge. Due to the existence of many spatial, social, economic and health problems during the global pandemics, virtual learning environments were the most suitable method. The aim of the current study is to investigate students' satisfaction toward employing virtual learning environments in teaching art education courses. The study used a descriptive and analytical approach and semi-experimental research. Cognitive Test and Questionnaire were used for the data collection phase. Results showed that there was a statistically significant difference in the cognitive aspects for the favor of experimental group's students. In addition, there was a high satisfaction among students toward employing virtual learning environments using Blackboard platform in the teaching process. The study concluded with several recommendations and future research.

Keywords : Virtual Learning Environments (VLE) ; Teaching Art Education ; The arts of civilizations

1. Introduction

In response to the emergence of the digital community, the growing role of the internet and the accompanying spurt in modern communication technologies, new educational systems appeared. Terms and methods that were not previously familiar, including Borderless Higher Education, Electronic or Virtual Campus, Virtual University, and Online University, were developed that depend on internet technology and web applications to provide educational services through receiving, sending and representing reality to other activities of the educational process. Societies' need for this type of education has increased in order to provide classrooms that meet the needs of those wishing to learn continuously through life-long education, giving them the opportunity to acquire new knowledge and skills. The creation of virtual classes to teach the courses of the Department of Art Education is one of the important ways to deal with the tremendous knowledge spurt and the amount and speed of information that is being developed in scientific environments. The existence of spatial, social, economic, and health difficulties and obstacles, in addition to the pandemics and disturbances that may periodically paralyze the world, have made distance education through virtual learning environments the only means available during the quarantine (Al-Zahrani, Sawsan Dhaif Allah Yahya 2020). This type of classroom has become one of the most important ways to overcome these difficulties, not only with regard to technical education courses but also in all sectors of education around the world. This is consistent with the E-Learning Deanship initiative to implement e-learning in the regular courses according to King Faisal University's strategic plan (https://n9.cl/wbtsz), which is in line with the Kingdom's 2030 Vision that supports distance education and activation of electronic platforms (https://n9.cl/yvq4 m). As this trend is one of the most successful means to overcome the obstacles and difficulties that prevent those wishing to enroll in studies from anywhere and under any circumstances, it is important to confirm that the necessary administrative and technical requirements are provided. There are many software platforms that support virtual learning environments, the most important of which include Blackboard system software. Blackboard is used by the Deanship of E-Learning at King Faisal University due to its high-level specifications and features that facilitate building curriculum content and presenting it in a virtual learning environment .

2. The Research problem

Many research studies and various conferences have shown the importance of switching to an electronic system in education. Additionally, the existence of the spatial, social, economic and health problems and obstacles during the global pandemic made virtual learning environments the only available method, confirmed by the results of the exploratory study conducted by the two researchers. Accordingly, we can define the study problem by answering the following questions:

- Is there a statistically significant difference at the level of ($\alpha \leq 0.05$) in the cognitive aspects related to the elementary arts and civilizations arts courses for students between the pre- and posttests?
- What is the extent of students' satisfaction with employing virtual learning environments using the Blackboard system in teaching art education courses?
- What is the proposed vision for taking advantage of virtual learning environments in teaching art education courses?

2.1 Study Hypothesis

- There is a statistically significant difference at the level of $\alpha \leq 0.05$ in the cognitive aspects related to the elementary arts and civilization arts course in the experimental group through the posttest.
- There is a high level of student satisfaction with employing virtual learning environments using the Blackboard system in teaching art education courses.
- It is possible to design a scenario that takes advantage of virtual learning environments in teaching art education courses.

2.2 Objectives of the Study

- Identifying the problems faced in the teaching of art education courses in the Blackboard learning management system.
- Knowing how to take advantage of virtual learning environments in teaching art education courses.
- Designing a proposed model for teaching art education courses remotely using the Blackboard learning management system to overcome the challenges related to teaching art education courses using the regular system.

3. Literature review

A study by Al-Mubarak, Reem Abdelrahman (2018) aims to present the results of 2 types of digital education—training (e-learning blended) and corroborative (e-learning supportive)—through data gathering of education technology content and to show female students' trend toward using the Blackboard education management system. The study was conducted on a sample consisting of thirty-eight female students from an e-learning blended cluster and forty-one from an e-learning supportive cluster. Each of the experimental methodologies and descriptive analytical methodologies were used. The results terminated when there were no statistically important variations on the extent 0.05. The common female marks were the supported instructional-tutorial-academic cluster by victimization, the e-learning blended sort and the e-learning supportive cluster, by examining the data for the syllabus of the training technologies when learning by the Blackboard educational management system. The results of the trend toward the Blackboard victimization system showed the following: 1) there were statistically important area unit variations to a certain extent. The common area of the female marks within the instructional cluster was based mostly on victimization of the e-learning blended sort within the trend toward the Blackboard instructional management system before and during learning. 2) There are no statistically important variations on the extent 0.05. The common of the female marks within the instructional cluster was based mostly on victimization of the e-learning supportive sort within the trend toward the Blackboard instructional management system before and during learning.

A study of Hameed, Abdelrahman Ahmed Salem, and Saleh, Maysoon Adel (2019): The analysis aimed toward discovering the impact of infographic patterns (fixed, mobile, interactive) in line with IP theory on developing action, performance skills, and continuing education. Multiple patterns of infographics are taken into account, one in all the acceptable style variables for IP theory and patterns of sensory memory (long and short term) throughout displaying, storing, and retrieving them to be told to retain learners. The analysis tools consisted of associate action checks, associate observation lists, and associated action checks to survive the educational impact. The descriptive survey methodology and the scientific method were used in the sample analysis that consisted of 3 experimental teams of education students in the faculty of Education at Qassim University. The results of the analysis found that the cluster that used the interactive infographic pattern has a good ability to develop the talent to exploit the chalkboard learning management system, thanks to the characteristics of the interactive infographic pattern within the fragmentation of data in line with the speculation of data process. Therefore, the organization of the content and the design criteria were followed by the researchers throughout the design and production of infographic patterns.

A study of Al Geraewi, Seham Salman (2019): The current study intends to spot the effectiveness of mistreatment sheet collaborative tools, such as wikis, panel discussions and virtual schoolrooms, in promoting practical skills among female students during the inspiration year of the e-learning course. The study sample consisted of 50 female students registered within the foundation year of the school of education at the aristocratic Nourah Bint Abdulrahman University, Asian country, for the tutorial year (2016–2017). The results showed that there were statistically vital variations at the level of 0.01 between the mean of the participants of the pre and post measurements for the practical skills among the sheet of e-collaborative learning in favor of the post measurement; in line with the black equation, an effectiveness rate over 1.2 was achieved

A study of Badawi (2010): This study aimed to determine the effectiveness of teaching a proposed unit through e-learning in developing skills using content management programs and modifying patterns of cognitive preference among students of the educational program and their attitudes toward it. Among the students of the educational program in the College of Education, the researcher used the experimental approach to understand the effect of the independent experimental variable (the proposed unit) on the dependent variables, which are represented in the skills related to using the Blackboard program and the cognitive patterns associated with the unit. The researcher found that there are statistically significant differences at the level of significance (a = 0.05) in favor of the post application in teachers 'attitudes toward the use of e-learning, and this difference confirms that there is a significant impact of the Blackboard program, where the value of eta square is (n2), which is (0094) and is equal to the integer of one.

A study of Mkhlas (2015): The study aimed to identify the state of the e-learning management system in Egyptian universities and the most important problems it faces so as to develop e-learning management capabilities in Egyptian universities with the use of

the Blackboard system. The study used the descriptive and analytical approach in collecting, analyzing and interpreting data to reach an understanding. A proposal was made to develop the Blackboard system in Egyptian universities, and the study recommended the necessity of providing the technological and technical equipment and technical support necessary to shift toward using this system.

A study Al-Aqali (2018): The study focused on identifying the obstacles to employing virtual reality technology in teaching mathematics from the point of view of mathematics teachers in Jeddah. The researcher applied the questionnaire to the community, and the study sample consisted of 93 mathematics teachers in Jeddah. The researcher concluded that there were no statistically significant differences at the level of significance (a = 0.05) among the sample response averages, and the study recommended the necessity of providing advanced equipment for teaching mathematics through virtual reality technology.

A study of Alquatean, Atallah Muhammad (2018): The study aimed to identify the effectiveness of teaching the entrepreneurship course electronically using Blackboard in the development of academic achievement and the trend toward e-learning among students of the Preparatory Year Deanship at the University of Hail. The study sample consisted of 54 students from the Preparatory Year Deanship at the University of Hail who were enrolled in the in the first semester of the entrepreneurship course in the 2018–2019academic year. The researcher indicated that he chose the study sample by the random cluster method, and he divided the study sample into two groups: an experimental group of 28 students who studied two units of the entrepreneurship course electronically using Blackboard and a control group of 26 students who studied using the traditional method. He applied the study tools represented in the course achievement test and the trend measure toward e-learning, and he verified their validity and reliability by appropriate methods. The researcher found that there were statistically significant differences in the post measurement academic achievement between the experimental and control groups and a trend toward e-learning in favor of the experimental group.

A study of Scurry, Menna Mostafa Abdo (2018): The study aimed to identify the effectiveness of a health-sports program using the Blackboard method at the level of health awareness and some elements of physical fitness. The two researchers used the experimental approach to suit the nature of the study with a sample of 260 students from the College of Applied Studies and Community Service at the University of Dammam. The sample was divided into two groups equally. The two researchers also designed a health-sports program on the Blackboard platform, then measured the level of health awareness and conducted tests for some elements of physical fitness for male and female students. After conducting a statistical treatment of the data, the study concluded that the health program using Blackboard had a positive effect on the level of health awareness for disease prevention, proper nutrition and first aid for injuries among male and female students.

A study of Abbasi (2020): The study was about understanding the impact of the current challenges on the quality of virtual higher education in times of crisis: “Virtual higher education in Algeria at the time of the Corona pandemic - a model.” Through the study of the Algerian experience, she identified the need to adopt solutions through which problems and obstacles that prevent the success of higher education can be addressed, especially with regard to the synchronization component, which is a basic pillar for measuring quality, by relying on a review of the technical, human and even organizational aspects associated with hypothetical higher education patterns.

A study of Hamid, Abdulrahman Ahmed Salem Salem (2020): The study aimed at improving students' achievement and skill performance at Qassim University by developing suggested patterns for advice and guidance in the electronic courses provided through the Blackboard learning management system. The research sample consisted of 80 students from the College of Education, First Level, Division No. (9223) and Division No. (9224), in the first semester of the academic year 1439-1440 AH, corresponding to the 2017-2018 AD academic year, in the course presented in the computer, Code "101 Aal". At the headquarters in Mulayda, the research sample was divided into four experimental groups of 20 students each, and the researcher used a pre opinion survey to identify the students ’opinions about the types of advice and counseling and applied the achievement test to measure the cognitive aspect of the skills targeted for the students of the research sample, using the skill performance observation card. The researcher discussed in detail the statistically significant differences reached by the study at the significance level (0.05) between the four experimental groups.

4. Research Methodology

The descriptive and analytical approach aims to collect, review, analyze and interpret data and then draw conclusions from it. The semi-experimental curriculum depends on building a course in the Blackboard system and applying it to the sample and then measuring the cognitive aspects related to academic achievement through the test.

Virtual learning environments: The concept of virtualization is the existence of a complete entity on the network that exists with all the roles and tasks required in the real environment, but this presence is only on the Worldwide Web (the internet). This term was referred to in the Virtualization Conference in Europe organized by the European Academy in London in 2000 AD and was defined as "an alternative artificial world that is not based on the surrounding physical aspects as much as it is based on the exchange of information and knowledge through various communication tools." **https://cutt.us/tQjE3**

Procedural definition: This is the environment that teaches the primitive arts course through the Blackboard system.

The Blackboard system is an information system for managing education, following up on students and monitoring the efficiency of the educational process in the educational institution. The system provides great opportunities for students to communicate with the course outside the lecture hall anywhere and at any time through this electronic system that provides them with various tools to view the scientific material of the course and interact with it in an easy way. Furthermore, they can communicate with the course professor and the other students registered in the same course by a variety of electronic means. As this helps students take lessons

without going to the university, the assignment and exam are on the internet, and they may go to the college or university for the final exams. https://cutt.us/uIywT.

Procedural definition: This is the learning management system that the two researchers used to deliver information and implement applications according to King Faisal University's systems.

Art Education Courses: Art education is the process of cultivating the behavior of individuals through the practice and understanding of artistic works and through the practice of various artistic activities (Atoum, 2006: 11).

Art education has several fields, including educational fields, cultural fields and academic fields. These fields are covered by a number of courses, including introduction to art education, criticism and taste, primitive arts and civilization arts, origins of art education, curricula and methods of teaching art education, painting, photography, ceramics, metalworking, weaving, and artistic works.

Procedural Definition: These are the decisions regarding the art education program plan, including the elementary arts course, through which it will be applied to a group of students taking this course.

5. Research Analysis

The procedures were carried out by answering the following study questions: The answer to the first question: Are there statistically significant differences at the level of ($\alpha \leq 0.05$) in the cognitive aspects related to the primitive arts and civilizations arts course of the experimental group through the posttest? A test was designed by the two researchers and presented to a group of arbitrators to demonstrate validity and reliability. The final version of the test was reached, and a pilot experiment was conducted. The test was applied to a population and sample of the study by conducting a pre- and post analysis. Then, the data were unloaded, and a statistical analysis of the results was performed. The answer to the second question: What is the extent of students' satisfaction with employing virtual learning environments using the Blackboard system in teaching art education courses? The two researchers prepared a questionnaire to identify the extent of students' satisfaction with employing virtual learning environments using the Blackboard system in teaching art education courses. The questionnaire was presented in its initial form to the arbitrators with expertise and experience to ensure its validity and reliability. Accordingly, the required amendments were made and the questionnaire was finalized. It was then applied to the study sample of students in the Department of Art Education, College of Education, King Faisal University. Then, the questionnaire was emptied, and a statistical analysis was performed to measure the results and determine the nature of the problems. The answer to the third question: What is the proposed vision for utilizing virtual learning environments in teaching art education courses? The two researchers reviewed the educational literature, studies and scientific research conducted in this field and based on the results and tools of the study, they developed the proposed scenario.

5.1 Study results and discussion

The results of the first hypothesis, which states "There is a statistically significant difference at the level ($\alpha \leq 0.05$) in the cognitive aspects related to the primitive arts and civilizations arts course in the experimental group between the pre- and posttest", were used to verify its validity. The two researchers used the (T) Payroll Samples T test, and the results are shown in Table (1).

Table. The results of the first hypothesis

	Mean	**N**	**Std. Deviation**	**T**	**DF**	**p value**
before	19.1	20	3.21	-12.69	19	0.0001
after	31.3	20	4.46			

Table (1) shows that there was a significant difference in the mean score for the cognitive test before and after training; the mean score before was 19.1 and after it was 31.3 (t= 12.69, p= 0.0001). This result is consistent with the study of Saleem, Ibrahim Abdullah Muhammad (2017), which confirmed the existence of statistically significant differences at the level of 0.05 in the post application of the achievement test. However, it differs from the study of Al-Dhalei, Zubaida Abdullah Ali Saleh (2018), which revealed significant obstacles in applying e-learning, and statistically significant differences were not found after using Blackboard.

5.2 Second, the results of the second hypothesis

It states, "There is high satisfaction among students toward employing virtual learning environments using the Blackboard system in teaching art education courses." To verify the validity of this hypothesis, the two researchers applied a questionnaire to the study sample to measure the extent of student satisfaction with virtual learning environments using the Blackboard system in teaching art education courses. Table (2) shows the results of this hypothesis.

Table. The results of the second hypothesis

	item	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	average	SD	degree	rank
No.		**n**	**n**	**n**	**n**	**n**				
1	Ease of using the Blackboard system in studying the primitive arts and ancient civilizations arts course.	7	9	3	1	0	4.1	0.85	agree	7
2	Diversity of educational resources for the course on the Blackboard system, such as presentations, videos, pictures and documents.	9	5	6	0	0	4.15	0.88	agree	5
3	The simultaneous interactive lectures provided more opportunities for discussion with the course professor and students in the virtual classroom.	9	8	2	1	0	4.25	0.85	strongly agree	3
4	The Blackboard system allowed more channels to communicate with the course professor at any time through university mail, face-to-face lectures and blogs.	7	3	6	2	2	3.55	1.36	agree	8
5	The effectiveness of delivering and receiving the assignments and duties of the course required by the course professor.	8	9	3	0	0	4.25	0.72	strongly agree	4
6	It is easy to access grades, presentations and the course professor’s notes on the Blackboard system.	15	3	2	0	0	4.65	0.67	strongly agree	2
7	It is easy to access the lecture sessions recorded on the Blackboard system when needed	16	4	0	0	0	4.8	0.41	strongly agree	1
8	The guides available on the university's website helped me to easily and conveniently interact with the Blackboard system.	5	3	10	2	0	3.55	1.00	agree	9
9	The difficulties that I faced were overcome by contacting technical support of the Deanship	2	5	6	4	3	2.95	1.23	neutral	10

	of E-Learning and Distance Education.									
10	By studying the course on primitive arts and the arts of ancient civilizations on the Blackboard system, many of the obstacles associated with teaching the course in the traditional system have been overcome, such as health, economic and spatial obstacles.	7	10	2	1	0	4.15	0.81	agree	6
	total	85	59	40	11	5	4.04	0.88	agree	

The top items are as follows: Item No. (7), “It is easy to access the lecture sessions recorded on the Blackboard system when needed” where the arithmetic mean was 4.8 with a standard deviation of 0.41; item no. (6), “It is easy to access grades, presentations and the course professor’s notes on the Blackboard system” where the arithmetic mean was 4.65 with a standard deviation of 0.67; item no. (3), "The simultaneous interactive lectures provided more opportunities for discussion with the course professor and students in the virtual classroom", where the arithmetic mean was 4.25 with a standard deviation of 0.58; and the last item No. (9), "The difficulties that I faced were overcome by contacting technical support of the Deanship of E-Learning and Distance Education” where the arithmetic mean was 2.95 with a standard deviation of 1.23. The general satisfaction level was 81%, which is a high percentage. Thus, the previous result indicates that students have a high level of satisfaction with employing virtual learning environments using the Blackboard system in teaching art education courses, as it enables students to easily access lecture sessions recorded on the Blackboard system when needed, it has helped them overcome any of the obstacles that may prevent them from attending the lecture simultaneously at the time of its presentation by the course professor. Additionally, students' can access the grading center and the course professor’s notes in the Blackboard system easily, which has contributed to the success of the continuous evaluation process. the system has greatly helped students overcome the barrier of fear and anxiety and to interact positively with the course professor and students in the virtual classroom. The two researchers attribute the result of the ninth item to the basic problem facing students in the college, that is, the difficulty of communicating with the Deanship of Information Technology regarding solving technical problems that they may face while dealing with the Blackboard system. There is no clear mechanism announced by the Deanship to overcome these urgent problems.

5.3 Testing Analysis Method

5.3.1 First, Cognitive Test

This test aims to measure students’ achievement of the content of the proposed perception, in the dimensions of remembering, understanding, application, analysis and evaluation, according to Bloom's classification in the cognitive domain, before and after teaching the proposed concept to measure the impact of the knowledge contained in the proposal on the students. The test was based on a review of the educational literature, and included 20 questions distributed as follows: 5 multiple-choice questions, 5 questions of a more complete type, and 5 questions of the true and false type (for example: It was realistic in the new kingdom to portray the king in a dynastic situation with the rest of his family: true or false), and 5 questions about stating (for example: The number of the most important civilizations of the ancient world that appeared in the Middle East). When developing the questions for the cognitive test, consideration was given to the accuracy, objectivity, and division of questions on the dimensions of the cognitive goals.

A-Validity of the test

The test was presented to a group of arbitrators specializing in teaching techniques and technical education, and some modifications were made to the test questions according to the opinions of the judges. After making the amendments, the arbitrators’ agreement reached 91% on the availability of the previous items in the test.

B-Test Stability

The test stability coefficient was calculated by retaking the test, as it was executed on an exploratory sample of 5 students enrolled in the course, and the results were collected. Then, the test was retaken on the original sample with a two-week time difference, as it does not allow any other factors to affect the individuals in the sample, so they would not be able to remember their first test and use it to their advantage. Then, the stability coefficient was collected and measured by the two researchers, which reached 87%; this is a high value that assures the stability of the test.

C- Test Correction

The cognitive test items were corrected by specialized arbitrators through the correction key set by the researcher for the students' responses so that the correct answer received two grades and the wrong answer received zero; thus, the score for this test was (40).

5.3.2 Second, the Questionnaire

A questionnaire was developed to identify the extent of students' satisfaction with employing virtual learning environments using the Blackboard system in teaching art education courses based on the theoretical framework and literature related to this topic. The researchers approved a set of studies related to the subject of the study, including (Al-Randi, 2016) and sought help from the opinions of some specialists in the fields of art education and educational technology. The questionnaire included 10 items to be answered through a five-point scale (strongly agree, which gives five points; agree, which gives four points; neutral, which gives three points; disagree, which gives two points; and strongly disagree, which gives one point).

A-The validity of the tool

The validity of the content of the questionnaire was achieved by presenting it to a group of arbitrators specializing in art education and teaching techniques to get their opinions about the clarity of the phrases, the accuracy of the linguistic wording, the appropriateness of the tool's paragraphs, and to ensure their comprehensiveness of aspects of its use and its fields. The percentage of agreement was 91%.

B- Stability of the tool

The reliability coefficient of the tool was calculated by reapplying the questionnaire to a sample of 5 students. The reliability coefficient for the tool as a whole reached 83%, which is appropriate for the objectives and nature of the research.

C- Correcting the questionnaire

The options of students studying the elementary arts course were determined by dividing each behavioral component into five levels (1–5) according to the five-point hierarchy of the Likert scale. The levels were separated into high, medium and weak as follows: High level = (3.68–5), medium level = (2.34–3.67), and weak level = (1–2.33).

5.3. 3 Third: Steps for preparing the proposed educational suggestion

After reviewing the educational literature and previous studies, where many studies, including Morsi and Abdel Rahman (2014), Muhammad, Yusri and Al-Anani (2006), Al-Sharif (2006), Al Soud, Khaled mohammed and Soudi Amira (2019), emphasized the importance of designing and teaching educational units to provide students with knowledge and skills. In addition to these studies, according to the results of the test and the questionnaire, the two researchers designed a proposed concept for teaching the primitive arts and civilization arts course in the Blackboard learning management system in accordance with the methodical steps, and the lesson plan was also submitted to the Course Syllabus in the link designated for that purpose in the system after its completion. The following are the contents of the proposal:

5.4 Building and preparation of the suggestion

The content of the proposal has been prepared according to the knowledge required to familiarize students with the basic knowledge of the history of primitive arts and the arts of ancient civilizations. The proposal takes into account the diversity of educational aids, teaching methods and methods appropriate for the content, including speech, discussion, demonstration, presentations and video presentations, which are available mechanisms on the Blackboard system.

5.5 Objectives of the suggestion

The general objectives of the proposal were set and divided into more detailed procedural, cognitive, emotional and skill objectives. The suggestion focused on the concept of primitive arts, the arts of ancient civilizations, and areas of those arts, studying the different conditions in which they were produced and realizing the features that they specialize in.

5.6 Cognitive objectives

The general objectives were determined by referring to the description of the course of primitive arts and the arts of ancient civilizations. It includes the cognitive goals required to be achieved at the end of the unit and a description of the type of learning to be achieved, then formulates the objectives in a procedural manner in order to facilitate the selection of the appropriate content. The group of objectives was presented to specialists to get their opinions and to verify the validity of the objectives. The final list of the objectives were as follows:

A- Cognitive objectives

- Realize the distinctive aesthetic values of primitive arts.
- Learn about the civilizations (e.g., ancient Egypt, Mesopotamia, Greek and Roman civilizations).
- Select of primitive artistic models and ancient civilizations to be artistically analyzed.

B- Skill goals

- Realize the distinctive aesthetic values of primitive arts.
- Read and analyze examples of primitive art and ancient civilizations.
- Write the research report in an artistic way.

C- Sentimental goals

- The ability to practice communication skills with others.
- The ability to express different opinions and ideas in front of students.
- Using the internet to search for artistic subjects, especially primitive and ancient civilizations.

6. Discussion and Implementation

6.1 The content of the suggestion and its organization

In consideration of the previous objectives, the proposal content was chosen and organized into the following elements:

- Introducing the primitive arts and its various fields.
- The style and characteristics of cave paintings.
- The art of civilizations of the ancient world, including:
- Ancient Egyptian civilization (prehistory, an ancient state, a middle state and a modern state).
- Ancient Iraq (Sumerians, Akkadians, Babylonians and Assyrians).
- The arts of Greek and Roman civilization and its various fields.
- Analytical readings of selected models of primitive art and the art of ancient civilizations.

These elements represented the topics, and files for presentations were prepared and uploaded to the system and then reviewed and explained over the course of 14 lectures that were taught in fifteen consecutive weeks at a rate of 2 hours per lecture, which totals 28 hours. After these meetings, students made presentations and wrote research papers that reflected the extent of their skill development after taking the course, and they have the authority to present and discuss their production during the direct virtual session.

6.2 The teaching aids used

The two researchers used more than one method, including PowerPoint presentations and video clips in an attractive and sequential manner, that maintain the process of communication and visual interaction with the students to motivate them to learn. These methods have greatly benefited the course content, which was uploaded and presented through the Blackboard system.

6.3 Educational activities

The educational activities were selected and organized considering the goals to be achieved. Multiple techniques were included that provided opportunities for students to participate positively and in a manner consistent with the mechanisms available in the Blackboard system, for example, conducting research and preparing reports on the primitive arts and the art of civilizations. Books, references and the internet were used to conduct research and write reports. Videos should be uploaded to implement some of the applications related to the practical aspects of the course, documenting the stages and methods of implementation.

6.4 Teaching methods and methods of interaction

The two researchers were keen to diversify the teaching methods, as they used the method of dialogue and discussion, as well as communication with students through simultaneous and asynchronous interaction methods through blogs, forums, e-mail and live lectures.

7- Evaluation methods

The tasks required of students during the semester were established through a timetable that organizes these tasks throughout the semester, the specific grade for each assignment was set in the link for assignments and evaluations, and the use of the progressive evaluation method was taken into account during the teaching meetings about the system. Blackboard and the final calendar for a detailed statement appeared in the Grade Center and the following was also carried out through the calendar:

- Measuring the achievement of cognitive goals through a cognitive test to measure the concepts and previous experiences of students on the topics included in the proposal before and after its implementation.

- Measuring the achievement of the goals by means of an achievement test, the results have been unpacked in the two applications (pre and post), for use in statistical treatment.

7.1 Validity of the suggestion for teaching

The proposal was presented to art education arbitrators through a questionnaire designed for this purpose to explore their views on the validity of the proposal and to achieve the objectives of the study. The questionnaire included three responses (appropriate, somewhat appropriate, and inappropriate), and the two researchers used the coefficient of difference method to be subtracted from (100%) to obtain the agreement factor. The agreement factor of 87% was suitable for designing this unit.

7.2 Teaching the suggestions

The proposal was taught to the sample consisting of 20 students over the course of 14 direct sessions of 2 hours for a total of 28 hours; it was discussed with the students and the problems associated with them were solved. The direct sessions were also recorded on the system so that students could use them. In case of absenteeism or recall, it could be accessed through the link to the recorded lectures.

8. Conclusion, Limitations and Future Research

The study's importance in theory and practice derives from its contribution to the development of the learning process through the application of virtual learning environments. The study employed the Blackboard platform in teaching art education courses, keeping pace with global trends in education that are in line with the Kingdom's 2030 vision and with the King Faisal University strategic plan. We present a proposed model for teaching art education courses remotely using the Blackboard to overcome the problems facing the teaching of art education courses using the regular system. We identified the extent of student satisfaction toward employing virtual learning environments by using the Blackboard system in teaching art education courses. The limits of the study include human limits: A sample of fourth-level students, Department of Art Education of the College of Education at King Faisal University, who are studying the course (Primitive Arts and Civilizations Arts 228207); space and time limits: The second semester of the 1441–1442 academic year, Department of Art Education of the College of Education at King Faisal University; and objectivity border: Cognitive skills, primitive arts and civilization arts course, and the Blackboard learning management system. In future research, according to the results of the current study, the two researchers recommend expanding the use of technological innovations that depend on virtual environments to overcome the obstacles of traditional systems in education, such as epidemics, disasters and other difficulties, as they enhance the concept of self-learning among students. There is a necessity of providing workshops for faculty members to train them to employ virtual learning environments in improving achievement and thinking skills, as well as measuring students' satisfaction on an ongoing basis, to benefit from the evaluation and course development process and a mechanism for quick and direct communication between students and the Deanship of Information Technology to provide urgent technical support to students to overcome the urgent problems that they may face while dealing with the Blackboard system. The study proposes expanding the teaching of practical courses and applications through virtual learning environments to take advantage of the simultaneous and asynchronous interaction methods and methods provided by the system.

Data Availability: The cognitive test and questionnaire data used to support the findings of this study are available from the author upon request.

Acknowledgment: The Authors acknowledge the Deanship of Scientific Research at King Faisal University for the financial support under grant (77).

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