



The Growth of Knowledge Society in Saudi Universities Using Electronic Learning Tools: Imam Abdulrahman Bin Faisal University as A Model

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Abstract

The study aimed to use the virtual classes as an enhancement to the educational process applied in the traditional lectures. The researchers took the Imam Abdul Rahman bin Faisal University as a model by identifying the proportion and effectiveness of students' use of the virtual classes in the university and identifying the pros and cons in using virtual classrooms from their point of view, and identify constraints that limit their use of virtual classes.

The study population consist of female students enrolled in the Internet in information facilities course in the library and information department. The study sample consulted of 72 students. The results of the study showed that there is an effective role for the virtual classrooms in building the knowledge society in the universities. The study resulted in a number of recommendations to increase the efficiency of using the virtual classroom and to use it to serve the educational process.

Key words: Virtual class, Blackboard, Knowledge Society, e-learning.



مستخلص الدراسة

هدفت الدراسة الى استخدام الفصول الافتراضية كتعزيز للعملية التعليمية التي تطبق في المحاضرات التقليدية، واتخذت الباحثات جامعة الإمام عبد الرحمن بن فيصل نموذجاً، وذلك من خلال التعرف على نسبة وفعالية استخدام الطالبات للفصول الافتراضية في الجامعة، والتعرف على الإيجابيات والسلبيات في استخدام الفصول الافتراضية من وجهة نظرهن، والتعرف على المعوقات التي تحد من استخدامهن للفصول الافتراضية. وتحقيقاً لأهداف الدراسة، استخدمت الباحثات المنهج الوصفيّ المسحيّ معتمداً على الاستبانة لجمع البيانات. وتكوّن مجتمع الدراسة من الطالبات المسجلات في مقرر الإنترنت في مرافق المعلومات في قسم المكتبات وتكونت عينة الدراسة من ٧٢ طالبة. و أظهرت نتائج الدراسة ان هناك دور فعال للفصول الافتراضية في بناء مجتمع المعرفة في الجامعات، وأسفرت الدراسة عن عددٍ من التوصيات لرفع كفاءة استخدام الفصل الافتراضي وتوظيفه لخدمة العملية التعليمية.

الكلمات المفتاحية:

الفصل الافتراضي، بلاك بورد، مجتمع المعرفة، التعليم الالكتروني.



1. Introduction

The knowledge society is the society of the present and the future, which reflects the importance of knowledge in modern societies. In order to reach the knowledge society, societies should take an interest in the concept of knowledge economy as an alternative to traditional economic systems. The future of any society begins with a greater interest in the human component of knowledge, which is an essential source of power and a key to economic and social development. Thus, the acquisition of knowledge and its use through education can provide the essential human element, which is the most important element of knowledge production in modern societies.

There is no doubt that the knowledge society has now become an integrated program that includes education, science, culture and communication combined in an integrated and coherent unit, and that the production of knowledge is now a profitable commodity with social status and cultural and economic domination over other communities(Bezan 2013). Societies based on knowledge, knowledge economy are strong, and qualitative societies compared to traditional societies.

The knowledge society is now a reality and not an option for nations. Knowledge is the basis for shaping the wealth of society and for its well-being. Therefore, societies must preamble of information technology, communication, information localization and knowledge in order to enter the knowledge society. The reality we are living now makes us stand at a historic turning point in the knowledge society becoming a reality that compels us as societies to accelerate the absorption of technological developments and information and communication technology (ICT), which in turn has changed the structure of wealth in societies (Bezan 2013). Knowledge in the knowledge society is rooted in an added value for the individual and the community and at the same time responsible for improving the quality of life for individuals and living in continuous progress.

Information technology is one of the most important axes that contribute to the building of knowledge societies. The knowledge society defined as the society that possesses the ability to possess the information that can be easily exchanged and traded using various computing and satellite technologies. This information is used to improve human life. (Jabbari 2015)



The knowledge society is closely linked to universities, as university education is no longer limited to the provision, production and dissemination of knowledge, but the concept of university education has become an important vector of economic power and a means of transferring the cultural and scientific expertise to societies where knowledge resources prevail over material resources. The role of the university in accelerating the production of knowledge is one of the strongest axes that shape the new form of society. The researchers agreed that the distinction of the knowledge society and the economy based on it is linked to the increasing strategic role of universities in filling the need to invest in modern technological innovations and remove barriers between different knowledge sectors (Qanbar 2015).

We also know that universities have several sources to access and exchange knowledge. The most important of these is their reliance on digital libraries in scientific research. They are available free of charge to their students and faculty. They are available for e-learning programs that have many tools that help transfer knowledge.

Today, we are living in an era of technological and technological revolutions. Traditional methods of education are not keeping up with the speed of technology-based development, so new ways must be explored of helping and supporting the transfer and exchange of information. (El-Senousy & Alquda 2017)

As mentioned above, the e-learning tools available at universities are a real opportunity to build, enable and exchange knowledge. Examples of these systems are the e-learning system Black board. Black Board is an integrated learning environment that allows students to access information from a variety of sources. It allows the teacher to feed the course with electronic resources to enable students to use the material. The teacher can also evaluate student participation through system tools such as forums and virtual classroom. (El-Senousy & Alquda 2017).

The Virtual Classroom is one of the tools that enable the student and the teacher to access the information despite their presence in different places and different times. However, the teacher provides students with a variety of sources during the virtual learning session, such as videos and electronic links, and the teacher can return to the scientific sources while answering the students.



As well as for students can refer to the sources of information before their participation, and the virtual classes provide the possibility of discussion and interactive dialogue, which may be attractive to many students. (Gedera 2014)

2. Literature Review

(Faraj, 2016) examined the importance of the knowledge society in our time and its main features, and the statement of the reality of knowledge in information institutions and their readiness for the requirements of the knowledge society, and the role of information institutions in the transition to the knowledge society. Highlighting the obstacles that could limit the efforts of information institutions to transform into a knowledge society, and finally discussed the most important requirements for strengthening the role of information institutions in the development of the knowledge society.

(Al-Jabari, 2015), discussed the importance of employing the knowledge provided by scientific research activities And the use of cognitive skills resulting from education and training, which is an important issue in the interaction of the institutions of society, and focused on the pillars of the composition of the knowledge society, including technology, joint strategies, institutions, especially scientific research institutions, human and the environment, and these axes need effective management.

(Ahmed, 2016) conducted a study aimed at highlighting the importance of applying the quality assurance of higher education institutions and their role to meet the requirements of the knowledge society and to identify the requirements of transition to the knowledge society in terms of preparing and developing the human element, community service, and reached some conclusions concerning the status of higher Arab education in terms of commitment to the implementation of quality assurance and the requirements of the knowledge society and made suggestions to activate the role of higher education in the transition to the knowledge society.

(Al-Zubayani 2012) examined the role of Saudi universities in building the knowledge society. The results of the study revealed a weakness in their contribution towards the knowledge society, due to the absence of clear and prior practical plans to disseminate knowledge.



(Jamel & Wohih, 2006) The study aims to identify how e-learning can be activated to achieve the foundations of the knowledge society in the educational learning environment. It discussed the most important advantages of e-learning for students, teachers and curriculum, they explained the most important characteristics that must be provided in e-learning in the knowledge society, the benefits of e-learning in the knowledge society and discussed the most important requirements of e-learning to achieve the foundations of the knowledge society.

In his study, (Al-Mazroue ,2011) aimed to identify and evaluate the concept of e-learning, while reviewing the stages of e-learning development at King Khalid University, he concluded his study by discussing the impact of e-learning on student achievement.

While the study (Al-Jarrah, 2011) aimed to identify the attitudes of students of the Higher Diploma in the ICT program at the University of Jordan towards the use of Blackboard software in their learning, where the study obtained the results that there are relatively positive trends in the students.

In her study, (El-Senousy & Alquda ,2017) reported that one of the most important e-learning tools that help to build knowledge, exchange information and increase educational attainment is the tools of Mash-up tools. It is a collection of tools that allows you to add videos, pictures and educational resources to the course.

(Al-Qahtani 2010) aimed at discussing the reality of the use of virtual classrooms in the distance learning program from the point of view of faculty members at King Abdulaziz University in Jeddah, where he discussed the opinions of faculty members about using virtual classrooms in the distance education program, he also explained the importance of using virtual classes in the distance learning program from the point of view of faculty members. he also discussed the difficulties that limit the use of virtual classrooms in the distance learning program from the perspective of faculty members.

(Khalif, 2011) discussed the assessment of the use of virtual classrooms from the point of view of teachers and high school students in Palestine, where he discussed the readiness of teachers and their qualification for teaching using virtual classrooms, and discussed the views of teachers and students on the pros and cons of using virtual classrooms in education.



(Gedera ,2014) aims to present students' experiences in learning using Adobe Connect at a university in New Zealand, The study showed the usefulness of using virtual classes, which facilitated communication among students, clarifying problems and putting immediate responses to solve them, and also discussed the benefit of the discussion through the virtual classes in the students' knowledge of each other.

The study (Al-Saeed, 2014) aimed to study the impact of the distance training program using the virtual classes (Blackboard Collaborative) in the development of teaching skills for teachers and the study has reached an improvement in the level of trainees after using the virtual classes in the training program and recommended that educators responsible for training programs be aware of the importance and effectiveness of distance training using virtual classes.

While the study (Al-Subaie, 2015) aimed to evaluate the use of virtual classrooms in distance learning programs, and reached some results related to the role of infrastructure, communication , real and direct technical support in improving the performance of virtual classrooms, and give educational programs and training for users of virtual classrooms Of students and faculty members priority.

The study (Al-Omari, 2016) focused on identification to the effect of using the virtual classes in developing the skills of dialogue and academic achievement in Qassim University. The study found the effectiveness of the use of virtual classes in developing the skills of dialogue among learners and the effectiveness of teaching in raising students' achievement and recommended the use of virtual classes in teaching.

Jouda et al., (2017) conducted a study aimed at identifying the effect of the different types of simultaneous and asynchronous virtual classes on the development of skills for learners in schools. The study found that there is no difference in the cognitive tests, the effectiveness of the virtual classes on cognitive achievement. The survival of the impact of learning and recommended the activation of the role of virtual classrooms in the stages of education.



The review of previous studies indicates that they focused on the importance of knowledge and the role of information institutions in general and institutions of higher education in particular; in building and transforming the knowledge society.

Some of them emphasized the importance of e-learning and the extent to which students benefit from its services and tools in increasing academic achievement. The concept of virtual classes and the extent of their application with mention of their advantages and difficulties that hinder their use.

In view of the technological and cognitive development that is taking place in our time, and because of the important role played by educational institutions in building the knowledge society in general and universities in particular, this study is used to identify the effect of using the virtual classes in the Blackboard program as an e-learning tool available to students at Imam AbdulRahman bin Faisal University and its role in building the knowledge society.

3. Research Context

The importance of the study shows the role of educational platforms such as Blackboard in universities, as universities are centers of knowledge production and contribute significantly to the construction and establishment of the knowledge society and therefore need to be improved and continuous development,

The importance of the study stems from the fact that the use of virtual classes in regularity programs is a modern and limited experience in the Saudi universities in general and Imam Abdul Rahman bin Faisal University in particular, so it needs study and analysis to identify the strengths and weaknesses in them and make proposals for their development and improvement. , by identifying the advantages of their use and identifying the obstacles that may limit their use and overcome these obstacles, in addition to determining the impact of their use in the development of the cognitive and technical aspects and the impact on increasing the educational achievement of the students.

As a result of the orientation of educational institutions in the Kingdom of Saudi Arabia to activate their role in building knowledge societies, and exploitation of the technical and technological resources available to them. Because the experience of virtual classrooms in universities is great in the field of distance education, but it is still in its early programs stages of regularity,



as the program of regularity depends more on the use of traditional lectures and not virtual, so the application of the virtual classroom system needs expansion , a lot of research, more experience and study.

This study seeks to activate the role of e-learning systems in universities in order to keep abreast of all that is new and developed through the experience of evaluating the use of virtual classes in the regularity program to identify the extent to which students benefit from their use. Whether they are studying their impact on academic achievement or its impact on developing and improving. The educational process, which is one of the basics of building a knowledge society.

3.1 Research Questions

The study seeks to answer the general question: Do virtual classrooms in e-learning systems in universities have a role in building and developing the knowledge society?

The following questions arises from the general question:

1. What technical skills do students have in using Blackboard and the Virtual Classroom program? What is the impact of using virtual classrooms in developing these skills?
2. What are the views of female students about the role of the teacher in managing virtual classrooms?
3. What are the students' views on the use of virtual classrooms?
4. What are the views of students about the benefits of using e-learning?
5. What are the views of students about the obstacles to using e-learning?

3.2 Research Objectives

The main objective of the study is to evaluate the use of virtual classes in the program of regularity at Imam Abdul Rahman bin Faisal University using the Blackboard Collaborative tool in the Blackboard program, which is achieved through the following objectives:

1. Identify the technical skills in using the Blackboard program and the virtual classes of the students and identify the impact of the use of virtual classrooms in the development of those skills
2. Defining the role of the teacher in virtual classroom management
3. Identifying the extent to which students benefit from virtual classes



4. Determining the advantages of using e-learning
5. Identifying the constraints that limit the use of e-learning
6. Making recommendations and proposals for the most of the use of virtual classes in the program of regularity at the university, which leads to building a knowledge society for students and raise the efficiency of the educational process and learning.

3.3 Research Sample

The study was limited to a sample of 72 students in the library and information department in the internet in information facilities course. They used the virtual classroom system using the Blackboard Collaborative tool in the Blackboard program at the Faculty of Arts / Imam Abdul Rahman bin Faisal University in Dammam, Saudi Arabia in the second semester 1439 /1440

3.4 Terminology of study

Knowledge Society: A society that depends on the human mind and its innovations in the fields of knowledge production, dissemination and employment.

E-learning: A method of modern teaching methods in which modern communication mechanisms are employed by computer systems, networks, multimedia, video and video files, images, graphics, research mechanisms, and electronic libraries.

Blackboard: An educational platform used to manage learning, courses and follow-up students, allowing students to communicate with the curriculum outside the classroom anywhere, anytime, and enable the course teacher to build integrated electronic courses.

Virtual Classes: The classes in which teachers and students interact with each other electronically and simultaneously to develop their skills and raise their level of science.

Blackboard Collaborative: A Blackboard tool that allows the teacher to create virtual classes that provide services such as visual communication, voice and text chat, and enables the teacher to deliver presentations that can be interacted with him or her.



4. Methodology

We used the analytical descriptive approach that is consistent with the nature of this study, which describes the phenomenon, as it is in fact a precise description and expresses a qualitative and quantitative expression (McMillan & Schumacher 2001).

A scientific material was chosen and explained during the traditional lectures, a virtual class was created at various times for discussion and answer questions about the material, supported by explanatory videos and educational resources. A sample questionnaire was then presented to the Blackboard students to measure their technical skills and previous experience in the use of eLearning systems.

4.1 Study Tool

The study was based on the construction of a questionnaire consisting of 29 paragraphs and includes five axes, which are as follows:

- The first axis: the technical skills of female students.
- The second axis: the role of the teacher in the virtual classes.
- The third axis: the extent to which students benefit from virtual classes.
- The fourth axis: The advantages of e-learning.
- The fifth axis: E-Learning Constraints.

In order to verify the authenticity of the tool, it was presented to arbitrators at Imam AbdulRahman bin Faisal University. Their observations were taken into consideration and the tool was rephrased according to their suggestions.

5. Results & Discussion

Based on the methodology used in this study, an electronic questionnaire was provided through the Blackboard e-learning system on the sample of 72 students.

The results of the five axes of valid responses are as follows:

The first axis: measuring the technical skills of the student

This course deals with a set of points that measure the technical skills of the student. Table (1) represents the frequency of answers to the questions of the first axis:



Table (1): Frequency of the first axis questions

Measuring the technical skills of the student		The scale	Agree strongly	Agree	Disagree
1	I have basic computer skills	Frequency	12	6	0
		Percent	66.7%	33.3%	0%
2	I have basic skills in using eLearning (Blackboard system)	Frequency	13	5	0
		Percent	72.2%	27.8%	0%
3	I can use e-Learning (Blackboard system) easily	Frequency	12	6	0
		Percent	66.7%	33.3%	0%
4	Achieves the use of e-Learning (Blackboard System) interest	Frequency	16	2	0
		Percent	88.9%	11.1%	0%
5	I have previous experience in using virtual classes in the Blackboard system	Frequency	5	7	6
		Percent	27.8%	38.9%	33.3%
6	The use of virtual classes in the Blackboard system achieves interest	Frequency	12	6	0
		Percent	66.7%	33.3%	0%
Result		Frequency	70	32	6
		Percent	64.8%	29.6%	5.6%

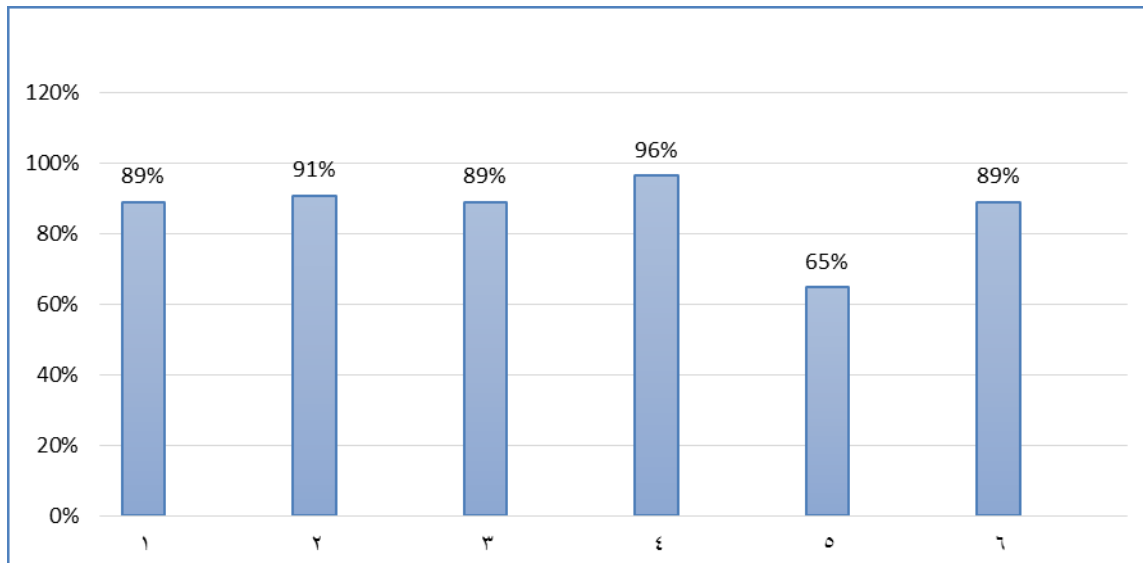
Table (2): The Mean and the Standard Deviation of the first axis responses:

Measuring the technical skills of the student	Mean	Standard Deviation	Percentages
1 I have basic computer skills	2.67	0.49	89%
2 I have basic skills in using e-learning (Blackboard system)	2.72	0.46	91%
3 I can use e-learning (Blackboard system) easily	2.67	0.49	89%



4	Achieved the use of e-learning (Blackboard system) interest	2.89	0.32	96%
5	I have previous experience in using virtual classes in the Blackboard system	1.94	0.80	65%
6	The use of virtual classes in the Blackboard system achieved interest	2.67	0.49	89%
Result		2.59	0.51	86%

Chart (1): The Percentages of the Arithmetical Mean of the answers to the questions of the first axis



The first axis dealt with the technical skills of the female students in general. It is noted from the responses of the students that there is agreement by the female students with a high rate of 96% that the Blackboard education system achieves their interest, and there is also a high consensus between 89% and 91% Basic computer skills and e-learning systems, the students also supported the approval of up to 89% that students have the ability to use eLearning (Blackboard) easily,



and their previous experience in the use of virtual classes before the experiment was the lowest proportion and was neutral, reaching only 65% and concludes from this necessity Provide courses on the use of classes for students of regularity as a tool to help build knowledge between them.

The second axis: measuring the role of the teacher in the virtual classes

This axis deals with a set of points that measure the role of the teacher in the virtual classes.

Table (3): Frequency of the questions of the second axis:

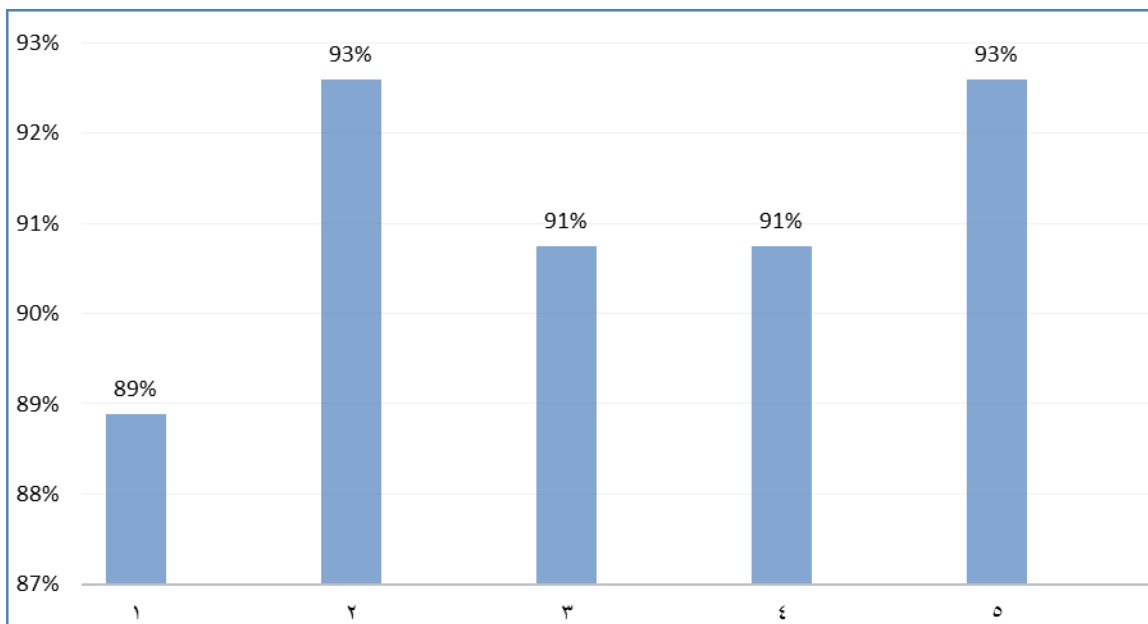
Measure the role of the teacher in the virtual classroom	The scale	Agree strongly	Agree	Disagree
1 The teacher cares about and appreciates my thoughts, opinions and suggestions presented	Frequency	13	4	1
	Percent	72.2%	22.2%	5.6%
2 The teacher can communicate information in different ways through virtual classes	Frequency	14	4	0
	Percent	77.8%	22.2%	0.0%
3 The teacher has time to read and respond to all student submissions through virtual classes	Frequency	13	5	0
	Percent	72.2%	27.8%	0.0%
4 The teacher provides feedback for all students through virtual classes	Frequency	13	5	0
	Percent	72.2%	27.8%	0.0%
5 The teacher manages the virtual class well	Frequency	14	4	0
	Percent	77.8%	22.2%	0.0%
Result	Frequency	67.0	22.0	1.0
	Percent	74.4%	24.4%	1.1%



Table (4): The Mean and the Standard Deviation of the second axis responses:

Measure the role of the teacher in the virtual classroom	Mean	Standard Deviation	Percentages
1 The teacher cares about and appreciates my thoughts, opinions and suggestions resented	2.67	0.59	89%
2 The teacher can communicate information in different ways through virtual classes	2.78	0.43	93%
3 The teacher has time to read and respond to all student submissions through virtual classes	2.72	0.46	91%
4 The teacher provides feedback for all students through virtual classes	2.72	0.46	91%
5 The teacher manages the virtual class well	2.78	0.43	93%
Result	2.73	0.47	91%

Chart (2): The Percentages of the Mean of the questions of the second axis questions





In the second axis, it noted that there is 91% approval for all the points mentioned in the axis. The students found that the teacher cares about, appreciates the ideas of the students and their suggestions through the virtual classes, and can communicate the information to the students in a variety of ways. Where students supported a high rate of up to 93%, that feeding the discussion interactive sources of learning such as videos and explanatory explanations is useful and has positive results, and that the virtual classroom allows the teacher to provide feedback directly to students as the interventions of students documented and can be passed on and understood by the teacher And evaluated directly, it was also noted that the teacher management of the virtual classroom was excellent.

This indicates that the traditional educational environment, which affected by many factors, makes the teacher unable to manage the classroom, such as external provinces, and the surrounding educational conditions, which can be exceeded in the virtual classroom.

The third axis: measuring the extent of student benefit from the virtual classes.

This axis deals with a set of points that measure the extent to which the student has benefited from the virtual classes.

Table (5): Frequency of the questions of the third axis

Measuring the extent to which students benefit from virtual classes	The scale	Agree strongly	Agree	Disagree
1 I had full knowledge and experience about the subject in the virtual classroom	Frequency	11	7	0
	Percent	61.1%	38.9%	0%
2 I have time to think about trying to understand and understand the concepts of the subject in the virtual classroom	Frequency	10	5	3
	Percent	55.6%	27.8%	16.7%
3 I learned from my mistakes through peer discussions through virtual classroom	Frequency	10	7	1
	Percent	55.6%	38.9%	5.6%
4 I formed a knowledge society with my colleagues on the topic in the virtual classroom	Frequency	7	9	2
	Percent	38.9%	50.0%	11.1%
5 The evaluation questions in the virtual	Frequency	14	4	0

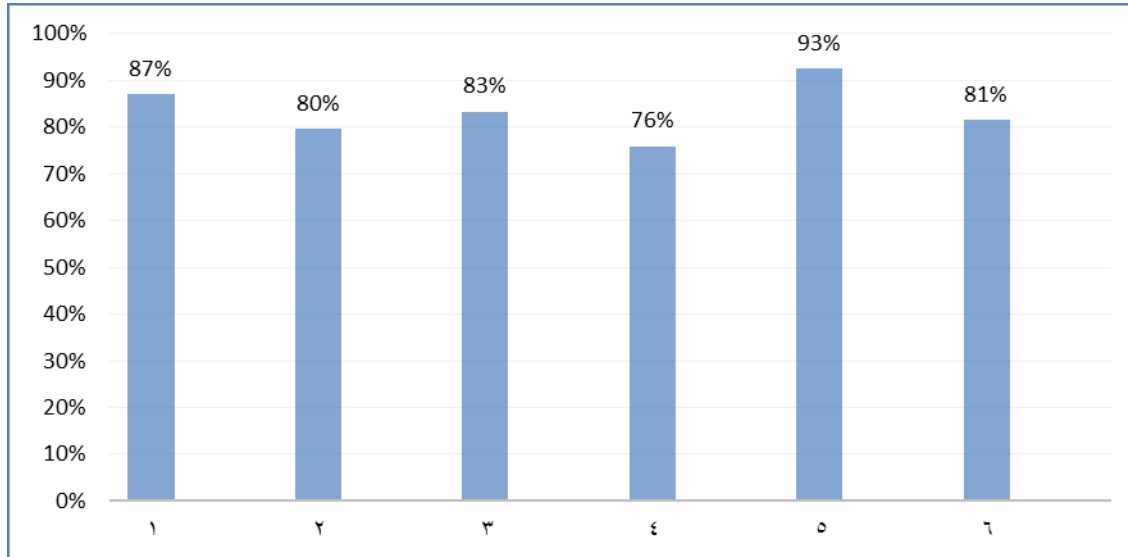


classroom are clear and understandable	Percent	77.8%	22.2%	0.0%
6 Achieved high results in the valuation of the subject in the virtual classroom	Frequency	9	8	1
	Percent	50.0%	44.4%	5.6%
Result	Frequency	61	40	7
	Percent	56.5%	37.0%	6.5%

Table (6): The Mean and the Standard Deviation of the third axis responses:

Measuring the extent to which students benefit from virtual classes	Mean	Standard Deviation	Percentages
1 I had full knowledge and experience about the subject in the virtual classroom	2.61	0.50	87%
2 I have time to think about trying to understand and understand the concepts of the subject in the virtual classroom	2.39	0.78	80%
3 I learned from my mistakes through peer discussions through virtual classroom	2.50	0.62	83%
4 I formed a knowledge society with my colleagues on the topic in the virtual classroom	2.28	0.67	76%
5 The evaluation questions in the virtual classroom are clear and understandable	2.78	0.43	93%
6 Achieved high results in the evaluation of the subject in the virtual classroom	2.44	0.62	81%
Result	2.50	0.60	83%

Chart (3): The Percentages of the Mean of the questions of the third axis questions



In the third axis students generally supported that the idea of virtual classrooms is useful, and that the participation of students in the virtual classroom because they have a knowledge society during the discussion on the subject in the virtual classroom. As the virtual classes allowed them time to understand the subject and learn from their mistakes from the answers of colleagues, and therefore had the impact on their results in assessments on the subject. After the results extrapolated, the highest percentages were that the questions about the subject in the virtual classroom were clear to them by 93%, and the least was that the student formed a professional society on the subject in question, which was 76%. This may indicate that the students need to know more about the concept of the knowledge society. They needed longer in the application.

The forth axis: Measuring the advantages of e- learning:

This axis deals with a set of points that measure the benefits of e-learning for female students.



Table (7): Frequency of the questions of the fourth axis

Measuring the advantages of e- learning		The scale	Agree Strongly	Agree	Disagree
1	Provides students with assistance and support to each other using eLearning tools (Blackboard)	Frequency	13	3	2
		Percent	72.2%	16.7%	11.1%
2	Helps students evaluate work as groups with eLearning tools (Blackboard)	Frequency	12	5	1
		Percent	66.7%	27.8%	5.6%
3	The possibility of expressing views freely using e-learning tools (Blackboard)	Frequency	13	4	1
		Percent	72.2%	22.2%	5.6%
4	Students can evaluate each other's answers and provide feedback by e-learning tools (Blackboard)	Frequency	13	5	0
		Percent	72.2%	27.8%	0.0%
5	Easy communication with the teacher with e-learning tools (Blackboard)	Frequency	12	6	0
		Percent	66.7%	33.3%	0.0%
6	Improving student achievement using e-learning tools (Blackboard)	Frequency	11	6	1
		Percent	61.1%	33.3%	5.6%
Result		Frequency	74	29	5
		Percent	68.5%	26.9%	4.6%

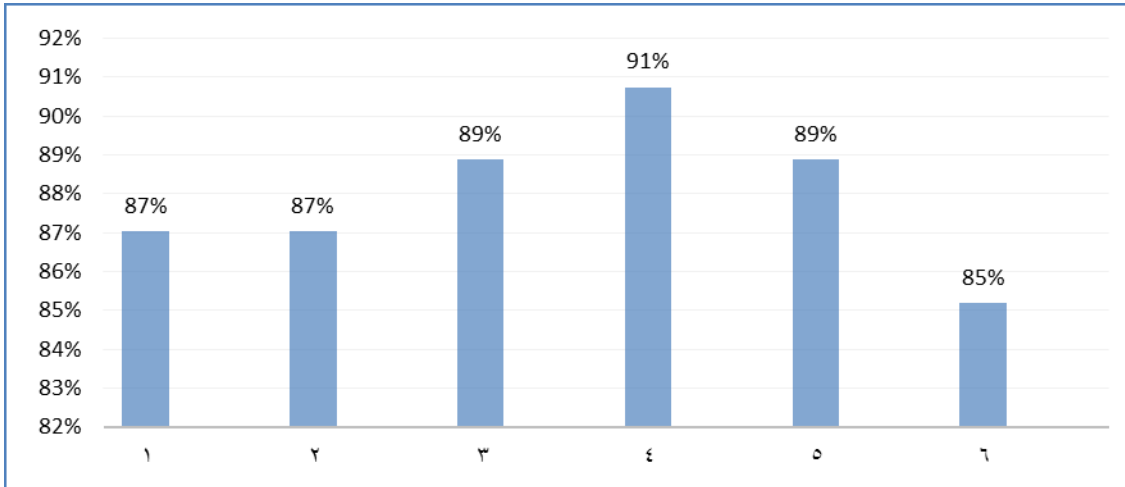


Table (8): The Mean and the Standard Deviation of the fourth axis responses

Measuring the advantages of e- learning		Mean	Standard Deviation	Percentages
1	Provides students with assistance and support to each other using eLearning tools (Blackboard)	2.61	0.70	87%
2	Helps students evaluate work as groups with eLearning tools (Blackboard)	2.61	0.61	87%
3	The possibility of expressing views freely using e-learning tools (Blackboard)	2.67	0.59	89%
4	Students can evaluate each other's answers and provide feedback by e-learning tools (Blackboard)	2.72	0.46	91%
5	Easy communication with the teacher with e-learning tools (Blackboard)	2.67	0.49	89%
6	Improving student achievement using e-learning tools (Blackboard)	2.56	0.62	85%
Result		2.64	0.58	88%



Chart (4): The Percentages of the Mean of the questions of the fourth axis



The fourth axis revolves around the advantages of e-learning. The students supported all the advantages offered in the axis. Their support ranged from 85%-91%. This confirms the importance of e-learning among female students.

The fifth axis: Measuring the obstacles of e-learning

This axis deals with a set of points that measure the constraints of e-learning.

Table (9): Frequency of the fifth axis questions

Measuring the obstacles of e-learning		The scale	Agree strongly	Agree	Disagree
1	Students need enough skills to use eLearning tools (Blackboard)	Frequency	14	3	1
		Percent	77.8%	16.7%	5.6%
2	Technical problems at work with e-learning tools (Blackboard)	Frequency	5	10	3
		Percent	27.8%	55.6%	16.7%
3	Interruption of the Internet while using electronic learning tools (Blackboard)	Frequency	5	11	2
		Percent	27.8%	61.1%	11.1%
4	Interruption of students with each other during discussion via e-learning tools (Blackboard)	Frequency	2	5	11
		Percent	11.1%	27.8%	61.1%

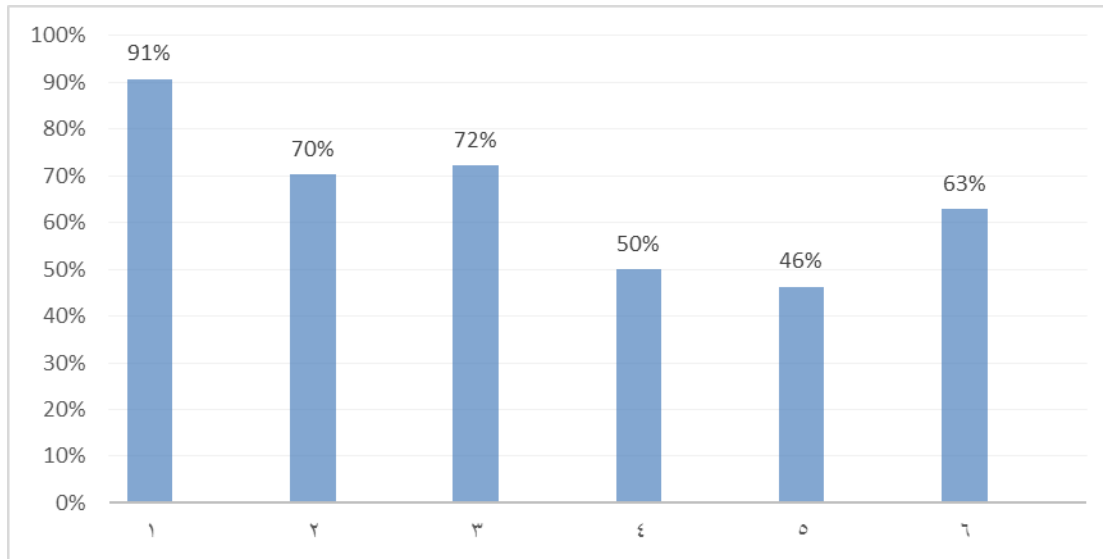


5	Out-of-the-box discussions in the use of e-learning tools (Blackboard)	Frequency	2	3	13
		Percent	11.1%	16.7%	72.2%
6	Feeling bored while sitting in front of the device and using electronic learning tools (Blackboard)	Frequency	3	10	5
		Percent	16.7%	55.6%	27.8%
Result		Frequency	31	42	35
		Percent	28.7%	38.9%	32.4%

Table (10): The Mean and the Standard Deviation of the fifth axis responses

Measuring the obstacles of e-learning		Mean	Standard Deviation	Percentages
1	Students need enough skills to use eLearning tools (Blackboard)	2.72	0.57	91%
2	Technical problems at work with e-learning tools (Blackboard)	2.11	0.68	70%
3	Interruption of the Internet while using electronic learning tools (Blackboard)	2.17	0.62	72%
4	Interruption of students with each other during discussion via e-learning tools (Blackboard)	1.50	0.71	50%
5	Out-of-the-box discussions in the use of e-learning tools (Blackboard)	1.39	0.70	46%
6	Feeling bored while sitting in front of the device and using electronic learning tools (Blackboard)	1.89	0.68	63%
Result		1.96	0.66	65%

Graph (5): The Percentages of the Mean of the answers to the questions of the fifth axis



Several obstacles proposed that might encounter the use of e-learning tools. The students supported 91% of the sample. The most important of these obstacles is the lack of sufficient skills for students to use them. This emphasizes the importance of holding training for students to acquire all the skills required during the use of e-learning systems. The percentage of support was neutral about technical problems during the use of e-learning systems, the disruption of the Internet while using e-learning systems, the boredom during the use of the device and the use of e-learning tools. As for the incidence of boycotts among students during the discussion through e-learning programs and the occurrence of discussions outside the subject during the use of e-learning tools, students were not supportive of these constraints, where the support rate between 46%-50%.

6. Conclusions and Recommendations

Considering the previous results, the study presents the following recommendations and proposals:

- Employing technological programs - through the e-learning system - to support decisions and build knowledge societies, given the e-learning system with the following features:



1. The availability of courses on the system supported by a wide range of images, videos and other means of explanation and clarification and to provide all means of effective discussion, both consistent and non-compliant.
2. The ability to strengthen them with links that allow students access to university libraries.
3. The availability of virtual classroom tools to exchange dialogue, ideas, and practice different forms of interaction that does not allow the time of traditional lectures to activate them as required.
4. The effective means of direct communication between the teacher and student, dialogue and discussion among students
 - Encouraging faculty members to undertake scientific studies and research on building knowledge societies at the university using ICT such as the Blackboard e-learning system.
 - Identifying the reasons for the lack of orientation of some students to use technology in learning and work to find solutions to this and thus increase their educational attainment.
 - Searching for modern technologies that transform information into knowledge societies and activate them.
 - Applying the idea of virtual communities as a strategy to achieve learning outcomes and build knowledge among students and obligating faculty to use them
 - Developing courses in accordance with the use of virtual classes, so as to take the mandatory nature of feeding traditional lectures and provide direct feedback to students.
 - Organizing workshops and training courses for faculty members to develop their teaching and technical skills to keep abreast with modern technological methods in education such as Blackboard interactive tools, especially non-active tools in regular education such as virtual classes.
 - Holding a training courses and workshops for students to use the Blackboard e-learning system and virtual classrooms.
 - Providing guidance and visuals on how to use virtual classrooms to enhance the technical skills needed to use virtual classroom.



- Supporting universities for e-learning systems technically, providing technical support specialists while using the tools of e-learning synchronized, which requires the treatment of technical problems in an instant to ensure continuity and achieve its objectives.

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