HIGHER EDUCATION INSTITUTIONS READINESS FOR OBTAINING THE ACADEMIC ACCREDITATION THROUGH ENSURING E-LEARNING QUALITY

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ABSTRACT

Purpose: *the main subject of the research is to investigate the quality of e-learning subject and the readiness of getting the academic quality Accreditation certificate from the Foundation for academic Accreditation in Egypt.*

Design/methodology/approach *A questionnaire was distributed to 129 participants from members of the staff of all faculties and colleges, in the universities under this study in response to questionnaire form according to their understanding and perception of the quality of e-learning subject and the readiness of the Foundation for academic Accreditation.*

Findings *– Based on the research results several universities are seeking to put some of their contributions in the e-learning form, which is governed by the quality of educational services, that enable a company to obtain academic accreditation , and that was the purpose of the research is to explore the relationship between readiness for Academic Accreditation and the quality of service e-learning,*
and to study the relationship between quality of e-learning service, educational content, and infrastructure.

Research limitations: *the research was conducted at the electronic universities in Egypt*
Practical implications *– suitable for implementation by educational institutions, especially in the Middle East.*

Originality/value *– The research is the first to study the readiness of getting the academic quality Accreditation certificate from the Foundation for academic Accreditation in Egypt*
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KEYWORDS

Service Quality, e- learning, Higher education, quality standards

1. INTRODUCTION

Because higher education policy plays an essential part of public policy, according to the importance of institutions of higher education and its role in developing the economy and society, so the achievement of Quality within these institutions is a key requirement. This can be achieved by the potential of e-learning in supporting higher education.

Accordingly, the study identified the quality of electronic learning, and the advantages and difficulties of it, and how to work on getting the academic accreditation in e-learning institutions.

2. THEORETICAL BACKGROUND

2.1 Quality in e-learning

E-learning provides us with new opportunities to change the way of education (Ulf-Daniel Ehlers, Oct 11, 2006) and breaking down the barriers between the teacher and the learner.

However, efforts often had been concentrated on e-learning quality in the computer usage and the quality of the technology used in e-learning, which led to lack of success that is often the result of isolating the learner from the teacher, and the absence of flexibility in educational content to be suited with the change in the surrounding environment

The need to improve e-learning quality

Universities need to improve the educational levels of service quality that need to be supported through e -learning, which can be through the following forms:

1. Design, production, evaluation, and maintenance of traditional learning environments.
2. Achieving quality in educational services through the integration between learning technology and educational materials provided.
3. Design, production, and evaluation of e-learning materials on a continuous basis.
4. The integration between the external environment, materials, and technology used to provide learning in different sources of support and advice.

Assessing the quality of educational services

The assessment of the quality of educational services is necessary to improve the educational plans (Bravo, 2012) and the required improvement programs.
The continued use of e-learning system is used as a success gauge (T. Ramayah, 2010) of applying it.

To maximize the utilization of e-learning assessment (Asil Oztekin, 2010) process, we need to:
 1- Identify the problems of usage.
 2- explore ways to overcome these problems
 3- Finally, working to decrease the time and effort required for the evaluation process.

When assessing e-learning service quality, there are many factors (Terrie Lynn Thompson, 2005) that can affect the quality level including:

 1- educational content
 2-   the formation of the team work
 3- and the integration between these components so that it is appropriate to meet the students' needs so as to maximize the utilization from the proceeds of e-learning
 4-   as well as the course structure
 5- Moreover, flexibility in Assessment Strategy, which leads to build an electronic educational environment that, enables it to respond to the needs of learning.

The e-learning is now becoming an important alternative to traditional education (Bing Wu, 2012). It differs from other electronic activities, because it needs to manage the knowledge of the organization; and this process includes psychological and pedagogical aspects, making it more

complex in its assessment, resulting in the need for getting integrated solutions to increase the quality of the electronic educational process.

E-learning provides the advantage of co-learning which is unavailable in the traditional ways of learning (Atousa rasouli, 2012), as co-learning depends on four basic parts:

1. Objectives
2. Collaborative Content
3. The shared application
4. Assessment

2.2 Improving levels of educational service quality

Universities need to improve the electronic educational service quality levels (Pawlowski, 2007) that they have provided through e-learning methods, which result in many benefits, including:

1 - It can provide access to educational material to all students equally.
2 - Increasing the participation of students with each other in discussions about educational topics available about the taught courses
3 - Providing facilities for the educational process to ensure the removal of duplicates and extra padding and reduce rates of delays in the delivery of educational material.
4 - Improving the management of the educational system in order to make effective use of available resources.

Improving levels of educational services quality (Harun Chowdhury, 2013) can to take the following forms:

1. Design, production, evaluation, and maintenance of electronic learning environments.
2. Seeking to achieve quality in educational services through the integration of technology education with educational materials provided.
3. Design, production, and assessment of educational materials and electronic presentation on an ongoing basis.
4. The integration between the external environment, educational materials, and technology used in education, taking into account providing various forms of support and counselling for students.

The basic components of quality

To ensure the achievement of quality (Dagiene, 2010), the work must achieve the following integrated concepts:

(1) Continuing to maintain the quality of the product or learning service.
(2) Improving the quality of the educational product or service on an ongoing basis.
(3) The availability of resources and facilities that lead to maintain and improve the quality of services.
(4) Work on the proper management and audit authority regularly, and providing the ability to succeed in the audit systems and quality of audit.
(5) Security, confidence and consistency between the different quality standards.

Improving the quality of education in Egypt

To improve the quality of education, whether private or public in Egypt, the President of the Arab Republic of Egypt, released a decision No. 25 of 2007 issuing the executive regulations of Law

No. 82 of 2006 to establish a National Authority for quality assurance and accreditation in education, which included the following:
1 - Putting some of the standards for quality assurance.
2 - Revising those standards every five years at the most.
3 - The institution that sets itself a certain level of academic standards ' inalienable and consistent with the stated mission.

In addition, the National Authority for quality assurance and accreditation in education holds these criteria:

1 - Determining the vision and mission of the institution.
2 - Studying whether self-evaluation done by the organization or by somebody else.
3 - Developing a plan to improve the organization, and the presentation of results.
4 - Determining calendar systems and quality control proceedures.
5 - Providing any data required by the Commission.

The goal of the project quality assurance and accreditation

This project aims to enable institutions of higher education to establish quality assurance systems, prepare, and qualify themselves   to apply for accreditation from the National Authority for the adoption and ensure the quality of education, through:

1. Introduction and development of quality assurance systems and accreditation in higher education institutions in Egypt.
2. Preparation for the establishment of the National Authority for Quality Assurance and Accreditation.
3. Spread the culture of quality in the community of higher education institutions.
4. Developing mechanisms to ensure the quality of the graduates of Egyptian universities and their competitiveness at the national, regional and international levels.
5. The establishment of national standards Academy for reference and means of measurements consistent with international standards.
6. Institutional capacity building for faculty members at Egyptian universities, to ensure the development and sustainability of quality in higher education.

Planning steps to build a high-quality system (Cepujnoska, 2003) **in educational institutions**

1. Definition of quality (what is the quality of the educational quality of service?).
2. Quality Planning (Design - documents).
3. Providing the necessary conditions for the perception of quality knowledge.
4. Quality control (self-evaluation and external evaluation).
5. Take the necessary actions to correct defects.

Preparing for quality assurance of higher education

For gaining quality assurance of higher education in many educational institutions (Harman, 1996), it needs to work on the maintenance and improvement of education levels, learning, and research methods,

In addition, to providing culture for students; which includes improvements in the work quality on the adaptation of graduates with a changing work environment, by determining how quality could be defined and measured.

Moreover, the application of management concepts which is likely to lead for better results to universities and colleges; and evaluation methods such as the use of comparative benchmarking or use of performance indicators; and learning how to persuade the owners of the institutions and educational systems in the organization to do the work, leading to ensure excellent outcomes for students.

In order to identify many of these things, the results appear to work in institutions of higher education; or academic and teaching staff in the achievement of excellent results of student learning as well as to increase the operational capacity of the professional graduates when they enter in various jobs. In addition, it is possible to contribute to the electronic and dissemination of the contents of the educational to students, or to facilitate access to it through computer networks, in the improvement of the management of educational systems, or institutions of higher education, and to increase their levels of quality.

The main things in the quality of higher education considerably continue to maintain academic standards, according to some domestic and international standards, and continuous updating of the curriculum, and improving the levels of education and learning and working, to provide the financial resources sufficient to accomplish quality in higher education and access for the high quality of the graduates.

As a starting point to support the process of quality assurance in the educational process is:

1 - To share information and expertise between faculty members and each other.
2 - Involve students in assessing the quality of higher education.
3 – Determining the best applications, practices and basics necessary to continue the success of the quality of higher education.

The necessary steps to implement quality assurance for e-learning

1. Determining needs for quality tools.
2. Making sure that the availability of following-up of the educational process at the local level.
3. Proposing the necessary tools for the new improvements / and how to adapt to them.
4. Encouraging groups to work towards progress in quality assurance.
5. Assessing the progress and results.

Tools of quality assurance application for e-learning

1. The basic framework for quality
2. User's Guide for the quality of e-learning.
3. Quality Manual of e-learning in official places of learning
4. Feedback mechanisms for quality in the field of e-learning

External evaluation by a third-party institution

The most important reasons (Nathalie Costes, 2010) for the external evaluation are the following:

1. Rating / or the development cycle for the e-learning system is not completed to the end.
2. Apart from the life cycles of the previous system development, the activities conducted by the educational institution is evaluated and taken into consideration.
3. Assessment has been done to serve the future planning of the activities of the institution.
4. Evaluation was focused only on the internal and external environment surrounding neglected institution.

5. Reviewing work is done again in order to follow up the previous assessment

Achieving the learning objectives

Providing all the content or learning experiences (MANGAL, 2007) needed to achieve the learning objectives depend on:

1. Instructional materials.
2. Set of criteria that are used to evaluate existing materials.
3. Learning materials Components.
4. Learning materials Content Sequencing.

Factors influencing the educational content

Frist of all, in the educational process, the only thing common between the teacher and the learner is the educational content (Jared Danielson, 2014). Secondly, the subject of study and how to achieve the educational objectives and its orientation have to focus on the quality of educational content and shared learning experiences gained during the process of teaching.
Based on the foregoing, the weak learning content leads to a poor learning outcomes and rich content leads to learning experiences appropriate to the nature of the need to working interests, since the teacher abilities always affect the realization of educational objectives and achieve them, so some of the factors affecting the educational content includes:

1 - The nature of the educational content.
2 - Testing of the basic points of the educational content and learning experiences gained.
3 - Organization and presentation of the content and the way for giving the educational experience to the student.

Factors influencing the way of presenting educational material

1 - The review of the main points on the subject (Xiaoran Wang, (2009)), which is taught.
2 - The interaction with students through various communication media.
3 - The level of flexibility, which would allow the possibility of adjustment in the content.
4 - Allowing students to interact with teacher and respond to their questions.

Factors influencing the educational process

1. The Method, which is used for providing the professional and practical experiences for students (Simona Sava, 2010), which relies mainly on meeting the preferences of students to support the educational process.
2. Linking between employment and education.
3. Linking the course subject due to courses in other educational programs in the same faculty.
4. Maximizing the use of the potential of the students.
5. Continuous review of the exercises of the educational activities for students.

Factors relating to the learner

One of the things that affect the e-learning quality, the learner-related factors and expectations towards the education service and how to meet it (Mehmet Karahan, n.d.), and that can be achieved through:

1. Reviewing the educational background of the student.
2. Determination of the required motivations to learn.
3. Determination of the level of accomplishments by the student.
4. Determining (Tolga DURSUN, 2013) the extent of a student's readiness to develop himself.

Incremental learning steps to achieve e learning quality

Steps to achieve quality of learning can be summarized (Marenglen Biba, 2011) as follows:

1 - Retrieving the required information for the education topic.
2 - Emphasis on flexibility and objectivity in the educational content points.
3 - Identifying and understanding the structure of educational content.
4 - Focusing on Most of the moral content.
5 - Analysis of the arrangement of the educational content.
6 - Listing points for organizing the educational content based on the required background knowledge.
7 - Emphasis on achieving the needs of the learner according to what is required in business functions.

2.3 E- learning quality task analysis

Task analysis of the educational content to achieve (Ruth C. Clark, 2012) the quality of e-learning:

When putting the scenario of the characteristics of the tasks required for the educational content to achieve the quality of e-learning, the following steps have to be taken into account:

1 - Supporting educational content with realistic problems.
2 - An attempt to simulate reality when depicting practical situations.
3 - Supporting educational content with the means to help, such as audio or video files.
4 - Allow learners by trial and error when learning and guiding them for mistakes.
5 - Providing a quick feedback to the student when doing mistake or the assignments solution in the wrong way.
6 - Acquainting the student with sequentially logical rules to solve and govern problem.

Lesson design for electronic content to achieve e-learning educational quality

When designing an electronic lesson for educational content to achieve the quality of e learning (Rinzler, 2009), the following have to be taken into account:

1 - Emphasis on student response and express of his opinion about the functional and realistic situations and helping him to devise alternatives to solve problems.
2 – Preparing learning environment and building on it the learning objectives and the required knowledge and gained skills.
3 - Stimulating student and urging him to learn.
4 - Directing the learner to the correct way to do the work.
5 - Enabling the student to interact with the various educational resources.
6 - Enhancing the work experience of the student.
7 - Training student to correct mistakes and learn from them.

Determining the test conditions that is used to measure the characteristics of the electronic educational materials

When doing the test to determine the conditions of the characteristics of e- learning materials you must take into account the following:

1 - Determining the detailed requirements needed to achieve the quality of e-learning.
2 – Deciding how to understand the nature of the e-learning readiness that must be completed.
3 – Determining the characteristics of the system and standards that binding it.
4 - Analysing of the structural system by dividing it by a series of operations.
5 - Explaining how to do all of the processes that take place through the system.
6 - Following-up the extent of adherence to standards designed to achieve a system quality, as well as fulfilling all the requirements needed for it.

3. RESEARCH BACKGROUND

The assessment of the e-learning quality that is used to determine the readiness of the educational institution for academic accreditation is considered one from the important prerequisites of many educational institutions.

Moreover, commitment to implement the quality standards and the set of standards for evaluating the quality of the e-learning service models and its impact on the usage of e-education system is necessary to any of the institutions of higher education.

The research problem

The expeditionary study showed that higher education institutions need to have the academic accreditation, which depends on the quality of the e-learning service; but achieving e learning quality faces several problems, these problems can be identified in the following:

1. Various problems and challenges can delay getting the academic accreditation in the eLearning higher education institutions.
2. It is hard to improve learning outcomes in the electronic learning environment.
3. It is hard to insure educational quality in the absence of face-to-face instruction.
4. It is hard to motivate students for learning courses offered through the Internet.

Accordingly, the focus of the research problem can be in:

"The presence of several problems facing e learning quality, in higher education institutions, due to lack of efforts that are made to insure service quality at those institutions."

Research Objectives

1 - Designing a general framework to assess the readiness of the higher education institution for academic accreditation.
2 - The study of the relationship between the institution readiness for Academic Accreditation, and the quality of educational services.
3 - The study of the relationship between the quality of educational services, and the quality of educational content and quality of the infrastructure of the institution.

Research Methodology

The design of the questionnaire form

When designing the questionnaire form the following considerations were taken into account:

1 - The general framework of the questionnaire form consists of three sets of questions; a special group of demographic analysis, a special set of questions relating to test hypotheses, and a special set of open questions.
2 - The Likert scale was used to measure the research variables and the five alternatives in questions relating to the hypotheses test.
3 - Arrangement and sequence of questions helps in the completion of response to the questions in the questionnaire.
4 - The questions are designed for hypothesis testing and measurement of research variables.

Sampling procedures

Research population includes institutions of electronic higher education, and the questionnaire form has been distributed to two hundred items who are members in faculties of electronic higher education institutions, namely:

1 - Egyptian E-Learning University
2 - Arab Open University

Where the random sampling method was used, the questionnaire forms were distributed to all faculties equally so as to be representative of the research population, and questionnaire forms were collected in the period from December 2013 until March 2014; answering totalled to 129 forms of the 200 questionnaire forms.

Statistical method

First; Simple linear regression was used to test the first hypothesis and the research variables are as follows:

1 - **Dependent variable**: Readiness for Academic Accreditation.

2 - **The independent variable**: the quality of e-learning educational services
Second, the multiple linear regression was used in order to test the second research hypothesis and its variables are as follows:

1 - **Dependent variable:** the quality of e-learning educational services

2 - **Independent variables**: a - the quality of educational content, b - the quality of the infrastructure of the educational institution

The demography of participants

	Gender		*Educational level*		
	male	Female	diploma	bachelor	Others
No	50	79	15	45	69
%	39%	61%	12%	35%	53%
total		100%	100%		

As is clear from the field study and by limiting the open-ended questions; the research found that the advantages that can be obtained when applying the e-learning quality standards

A table showing the advantages that can be obtained when applying the e-learning quality standards, and the repeated answer in the open question no. (1) in the questionnaire form

No.	Advantage	Repetition
1	Providing different ways to provide educational materials to the students, whether through e-learning or mobile learning at any time of the day.	8
2	Providing standards for both students and lecturers and teaching assistants to ensure the quality of the educational process.	5
3	Empowerment of the integration of the various educational activities offered to students by making it easier to communicate with them.	4
4	The possibility of supporting the requirements for the provision of electronic educational material for students.	3
5	Quality improvements support functions that can improve the possibilities of e-learning.	2
6	E learning Quality enables monitoring the special operations to provide the maintained educational activities electronically through the stages of life cycles for each course.	1
7	E learning Quality provides The comprehensive feedback for all the required data during the different stages of each course.	1
8	Organizing the method of work in accordance with the standards of quality to provide new educational services.	1
9	The commitment to quality standards in e-education provide an opportunity to increase employment opportunities for graduates of the University.	1
10	Knowledge can be provided with wide-ranging process to qualify the student professional skills and practice.	1
11	Insuring that each course meets the needs of various learners	1
12	Emphasis on the provision of new ways to provide educational services in any place in the world.	1
13	The Development offers integrated educational lessons.	1
14	E learning Quality provides diversification in the course contents available, including courses to allow the student to choose what they want to study.	1
15	E learning Quality provides possibilities for self-learning with ensuring that students acquire the required professional skills.	1
16	E learning Quality provides the conviction of the students at the different educational level about services provided to them.	1
17	Educational content can be increased to ensure access for all the required information to students.	1
18	The e-learning decreases many of the costs, which can be re-employed in assuring quality.	1

As is clear from the field study and by limiting the open-ended questions; the research found that the disadvantages associated with the possible exposure to risks that the institution can encounter if it couldn't apply the e-learning quality standards, were as follows :

A table showing the possible exposure to risks that the institution can encounter if it couldn't apply the e-learning quality standards, and the repeated answer in open question no. (2) in the survey questionnaire form

No.	risks	Repetition
1	Despite the cost savings achieved through e-learning, it is often coupled with poor levels of quality, than which could be achieved through traditional learning.	7
2	It is difficult to reach a fair standard achievements of students through e-learning.	6
3	There is a variety of ways of applying the standards of quality, which is difficult to be controlled.	6
4	There are many obstacles that could face the application of the standards required to achieve quality when there are practical applications associated with it.	3
5	The educational institution is not abide to choose an uniform method to assess quality in all faculties from the variety of methods available to them, thus causing a difference in the results.	2

6	Although the criteria for quality aimed at overcoming the educational problems, the application led to the occurrence of many of the problems.	1
7	The application of quality standards in educational institution is a difficult task requires consensus and coordination between different departments.	1
8	The quality criteria may be incompatible with the requirements of the students.	1
9	There is difficulty in requiring all workers commitment to the application of quality standards.	1
10	The application of the standards of quality needs more resources than the cost that has been saved through e learning.	1

As is clear from the field study and by limiting the open-ended questions that the proposed suggestions for overcoming the possible exposure to risks that the institution can encounter when it couldn't apply the e-learning quality standards are as follows:

A table showing the proposed suggestions for overcoming the possible exposure to risks to the institution when it could not apply the e-learning quality standards, and the repeated answer in open question no. (3) in the questionnaire form

No.	The proposed solution	Repetition
1	The use of e-learning to ban falling in many of the errors resulting from the self-learning	11
2	Ensuring quality in e-learning can be enhanced through traditional education as well as electronic methods to ensure access of educational material to students in a right manner.	9
3	Improving the quality of educational opportunities could be achieved through an emphasis on the benefit from the e-learning.	3
4	The emphasis on the role of learners in the quality levels in education.	2
5	Emphasis on the quality of the achieved saturation of requests for work to graduates of educational programs provided by the educational institution.	1
6	Working on the development of quality of educational services as a primary responsibility for e-learning policy.	1
7	Considering quality as a key gauge of the success of the use of electronic tools in education.	1
8	Working on the integration between all educational activities provided through e-learning.	1

Hypotheses Testing

To test the research hypothesis, a simple linear regression analysis was used to test the first hypothesis, and the multiple regression analysis was used to test the second hypothesis , where the sum for all answers of each variable questions were calculated , then the data were analysed using the statistical program SPSS/PC and the degree of significance was 5% .

Finally, the test of the result was significant, meaning that the alternative hypothesis for both hypotheses was accepted and null hypothesis was refused.

Regression analysis
First hypothesis test
Null hypothesis

There is no significant relationship between academic acceleration readiness and e-learning service quality

The alternative hypothesis

There is a significant relationship between academic acceleration readiness and e-learning service quality

Descriptive Statistics

	Mean	Std. Deviation	N
y12	39.50	9.842	129
x1	40.60	13.171	129

Correlations

		y12	x1
Pearson Correlation	y12	1.000	.703
	x1	.703	1.000
Sig. (1-tailed)	y12	.	.000
	x1	.000	.
N	y12	129	129
	x1	129	129

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	x1[b]	.	Enter

a. Dependent Variable: y12
b. All requested variables entered.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.703[a]	.494	.490	7.027	.494	124.066	1	127	.000	.995

a. Predictors: (Constant), x1
b. Dependent Variable: y12

R = 0.703 meaning that the quality of prediction of the dependent variable is 70.3%.

R^2 = 0.494 meaning that the independent variable explain 49.4% of the variability of dependent variable.

Adjusted $R^2 = 0.490$ meaning that the research data of the independent variable report 49% of the variability of dependent variable accurately.

Statistical significance

F ratio of ANOVA = 124.066 and sig. = 0.000 so the overall regression model is a good fit for the data, and the independent variable statistically significantly predicts the dependent variable.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6126.676	1	6126.676	124.066	.000[b]
	Residual	6271.572	127	49.382		
	Total	12398.248	128			

a. Dependent Variable: y12
b. Predictors: (Constant), x1

The significance is .000 therefore we accept the alternative hypothesis and reject the null hypothesis.

Estimated model coefficients

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	18.175	2.012		9.032	.000					
x1	.525	.047	.703	11.138	.000	.703	.703	.703	1.000	1.000

a. Dependent Variable: y12

The general form of the equation to predict Y (academic acceleration readiness) from X1 (e-learning service quality) is predicted:

Y = 18.175 + 0.525 X1

Statistical significance of the independent variable = 0.000
The independent variable coefficient is statistically different from 0 (zero)

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions	
				(Constant)	x1
1	1	1.952	1.000	.02	.02
	2	.048	6.347	.98	.98

a. Dependent Variable: y12

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	28.16	50.74	39.50	6.918	129
Residual	-33.540	21.541	.000	7.000	129
Std. Predicted Value	-1.640	1.624	.000	1.000	129
Std. Residual	-4.773	3.065	.000	.996	129

a. Dependent Variable: y12

General result

A simple linear regression was run to predict Y (academic acceleration readiness) from X1 (e-learning service quality).

Second hypothesis test

Null hypothesis

There is no significant relationship between e-learning service quality and the quality of educational content, and the quality of infrastructure.

The alternative hypothesis

There is a significant relationship between e-learning service quality and the quality of educational content, and the quality of infrastructure

Descriptive Statistics

	Mean	Std. Deviation	N
x1	40.60	13.171	129
x11	54.01	8.799	129
x12	46.10	9.819	129

Correlations

		x1	x11	x12
Pearson Correlation	x1	1.000	.173	-.182
	x11	.173	1.000	-.078
	x12	-.182	-.078	1.000
Sig. (1-tailed)	x1	.	.025	.020
	x11	.025	.	.191
	x12	.020	.191	.
N	x1	129	129	129
	x11	129	129	129
	x12	129	129	129

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	x12, x11[b]	.	Enter

a. Dependent Variable: x1

b. All requested variables entered.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.242[a]	.058	.044	12.881	.058	3.911	2	126	.023	.985

a. Predictors: (Constant), x12, x11
b. Dependent Variable: x1

R = 0.242 meaning that the quality of prediction of the dependent variable is 24.2%.

R^2 = 0.058 meaning that the independent variable explain 5.8 % of the variability of dependent variable.

Adjusted R^2 = 0.044 meaning that the research data of the independent variable report 4.4% of the variability of dependent variable accurately.

Statistical significance

F ratio of ANOVA = 3.911 and sig. = 0.023 so the overall regression model is a good fit for the data, and the independent variable statistically significantly predicts the dependent variable.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1297.780	2	648.890	3.911	.023[b]
	Residual	20907.057	126	165.929		
	Total	22204.837	128			

a. Dependent Variable: x1
b. Predictors: (Constant), x12, x11

The significance is .023 Therefore we accept the alternative hypothesis and reject the null hypothesis.

Estimated model coefficients

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	38.114	9.221		4.134	.000	19.867	56.361					
x11	.240	.130	.160	1.847	.067	-.017	.497	.173	.162	.160	.994	1.006
x12	-.227	.116	-.169	-1.950	.053	-.457	.003	-.182	-.171	-.169	.994	1.006

a. Dependent Variable: x1

The general form of the equation to predict Y2 (e-learning service quality) from X21 (The quality of educational content) and X22 (The quality of infrastructure)is predicted:
Y2 = 38.114 + 0.240 X21 -0.227

Statistical significance of the first independent variable = 0.067
Statistical significance of the first independent variable = 0.053

Coefficient Correlations[a]

Model			x12	x11
1	Correlations	x12	1.000	.078
		x11	.078	1.000
	Covariances	x12	.014	.001
		x11	.001	.017

a. Dependent Variable: x1

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions		
				(Constant)	x11	x12
1	1	2.952	1.000	.00	.00	.00
	2	.038	8.821	.01	.26	.67
	3	.010	17.350	.99	.74	.32

a. Dependent Variable: x1

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	34.67	49.60	40.60	3.184	129
Residual	-27.601	23.664	.000	12.780	129
Std. Predicted Value	-1.863	2.825	.000	1.000	129
Std. Residual	-2.143	1.837	.000	.992	129

a. Dependent Variable: x1

General result

A multiple linear regression was run to predict Y2 (e-learning service quality) from X21 (The quality of educational content) and X22 (The quality of infrastructure).

5. RESULTS

There are specific criteria for success in achieving quality in e-learning, including
:
  1- A way of exploiting technology used in support of education.

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2- Planning to improve the quality of the e-learning.
3- The provision of the required infrastructure to support e-learning.
4- Emphasis on educational issues associated with e-learning .
5- The efficiency of the Staff Development and Training on the use of technology.
6- Training students in the use of the technology.
7- Emphasis on the design of educational activities during all stages of the educational services life cycle.

6. RECOMMENDATIONS

Based on the findings from the study it recommends the following:

1- Emphasis on the role of students in the application of the standards of quality in e-learning.
2- Ensuring that educational services providers working on the application of quality standards.
3- Emphasis on the application of standards of quality in e-learning.
4- Measuring the impact of the application of the standards of quality and evaluating educational activities to ensure their application.

Results and recommendations for the research study

Serial	The result	Recommendation for the result
1	Educational institutions could provide access to educational materials available to large number of students	Providing the expansion of access to the classroom through e learning which enables an increase in the number of virtual classrooms.
2	Encreasing the absorptive capacity that can be served by virtual classroom	Educational guidance can be limited in educational content and presentation to the largest number of students.
3	Enabled adherence to quality standards in e-learning to improve methods of following-up students to the instructor.	Managing support tools for educational methods and following-up to a teacher lecturing to students and monitoring who's got the educational materials, and the number of times the student visits website and the extent of the electronic access to the lesson.
4	Criteria for the quality of the e-education was not understood or known by the sponsors of the education services, which may cause problems in the beginning.	Informing the sponsors of the educational services with quality standards in e-learning, and training them on how to implement it.
5	There is a resistance to working toward compliance with many of the criteria for the quality of the e-learning	Ensuring the commitment of many criteria for the quality of the e-learning gradually so employees can accept.
6	The return of adherence to the standards of e-learning quality appears directly after application.	Removing all obstacles and challenges that may face commitment to quality standards in e-learning

7	Educational programs provided by the e-learning is not characterized by sustainability and requires a continuously change.	Emphasis on the educational materials sustainability when applied in practice.
8	A lack of understanding of the requirements of quality in e-learning	The work of the clarification and understanding of the different methods of e-learning matters surrounding its application.
9	The educational programs in education , including electronic learning is not compatible with requests for post graduates in the business environment	Improving the educational programs in e-learning, in conformity with requests for post graduates in the business environment.
10	The application of quality standards and procedures to obtain academic credit is non-documented.	Documenting policies and procedures for the application of quality standards in a clear manner.
11	Students are not interested in the application of quality standards and tend to resist applying it in various ways.	Encouraging the students to apply the quality in education and training.
12	Neglecting of educational communication skills with students when designing the electronic lesson.	Taking into account educational communication skills for students when designing e-lesson.
13	There is no attention to assessing the quality of e-learning.	Ensuring the assessment of the quality of the e-learning as one of the important tasks in the teaching services
14	There is not any interest about groups of students in educational tasks.	Emphasis on targeting the team working groups of the students in addition to ensuring that the contents of the new educational materials encourage the students to participate in the work.
15	There are many administrative procedures, which must be done to ensure the quality of education.	An attempt to develop a system of work in e-learning, including reducing the administrative tasks and focusing on several key tasks.

7. ACKNOWLEDGEMENTS

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CONCLUSIONS

Success in the application of the quality of the e-learning for academic accreditation needs to be cautious when designing the following:

1- E-learning programs.
2- Technology used in e-learning.
3- The educational processes must be smarter.
4- Requirements for self-learning, which must confirm the:

    a. Objectives of educational learning.
    b. Emphasis on responsibility of learner in achieving quality.
    c. Encouraging the student for learning.

APPENDIX A: Questionnaire oriented to employees in electronic universities in Egypt

NOTE: DATA ON THIS QUESTIONNAIRE IS CONFIDENTIAL AND USED ONLY FOR THE PURPOSES OF SCIENTIFIC RESEARCH

Gender: Male []   Female []
Age: 20 -30   [] 30-40 []   40-50 []   50 and above []
Employment: IT worker [ ]   Researcher []   administrative []   Other []

Please draw a circle on the selected number note that each number corresponding equivalent item in the following table

STRONGLY DISAGREE	DISAGREE	UNDECIDE	AGREE	**Strongly Agree**
1	**2**	**3**	**4**	**5**

PERCEPTION OF THE EMPLOYEES ABOUT THE EDUCATIONAL INSTITUTION AND ITS READINESS FOR ACADEMIC ACCREDITATION

1-THE EDUCATIONAL INSTITUTION HAS POSSIBILITIES FOR OBTAINING ACADEMIC ACCREDITATION.	1	2	3	4	5
2. EDUCATIONAL ACTIVITIES CARRIED OUT BY EDUCATIONAL INSTITUTION WOULD ALLOW IT TO HAVE	1	2	3	4	5
3. THE EDUCATIONAL INSTITUTION HAS DEVELOPED A LIST OF INSTRUCTIONS FOR EMPLOYEES TO ENSURE	1	2	3	4	5
4. ASSESSMENT OF EDUCATIONAL PROCESS IS DONE TO ENSURE CONTINUOUSLY OF ACADEMIC	1	2	3	4	5
5. ASSESSMENT OF THE CRITERIA NEEDED TO ENSURE THE QUALITY OF THE EDUCATIONAL PROCESS AND	1	2	3	4	5
6. THE NATIONAL AUTHORITY FOR QUALITY ASSURANCE AND ACCREDITATION IN EDUCATION	1	2	3	4	5
7- EDUCATIONAL INSTITUTIONS USE SUFFICIENT EVIDENCE TO DEMONSTRATE ITS COMMITMENT TO	1	2	3	4	5
8. THE INSTITUTION MAKES PERIODIC INTERNAL AUDITS TO ENSURE ITS COMMITMENT OF ALL OF THE	1	2	3	4	5
9. THE EDUCATIONAL INSTITUTION USES EDUCATIONAL THIRD PARTIES TO REVIEW THE EXTENT OF THE	1	2	3	4	5
10 . EDUCATIONAL PROGRAMS PROVIDE EDUCATIONAL CURRICULUM WITH GENERAL SKILLS REQUIRED FOR	1	2	3	4	5
11. EDUCATIONAL PROCESS PROVIDES UNDERSTANDING OF THE SKILLS AND KNOWLEDGE	1	2	3	4	5
12. EDUCATIONAL PROCESS PROVIDES PROFESSIONAL SKILLS REQUIRED FOR ACADEMIC ACCREDITATION.	1	2	3	4	5
13. EDUCATIONAL PROCESS PROVIDES MENTAL SKILLS REQUIRED FOR ACADEMIC ACCREDITATION.	1	2	3	4	5

PERCEPTION OF THE EMPLOYEES IN THE EDUCATIONAL INSTITUTION FOR THE QUALITY OF ELECTRONIC LEARNING SERVICE.

1-THE APPLICATION OF TECHNIQUES OF ELECTRONIC LEARNING HELPS TO DEVELOP EDUCATIONAL SERVICE.	1	2	3	4	5
2. THE APPLICATION OF ELECTRONIC METHODS OF EDUCATION IS NECESSARY TO UPGRADE THE QUALITY OF	1	2	3	4	5
3. THERE ARE CONFIDENT OF THE STUDENTS ABOUT HOW TO RECEIVE EDUCATIONAL MATERIALS METHODS	1	2	3	4	5
4. THE QUALITY OF THE EDUCATION SERVICE COULD BE INCREASED IF GOOD PLANNING METHODS OF E-	1	2	3	4	5
5. THE LACK OF ATTENTION TO THE APPLICATION OF THE METHODS OF ELECTRONIC LEARNING LEADS TO REDUCE	1	2	3	4	5
6-TANDEM FOR WORKERS TO INCREASE THE SKILLS AND PROFESSIONAL STUDENTS THE PROCESS THROUGH	1	2	3	4	5
7-THE APPLICATION OF THE E-LEARNING METHODS PLAYS A FUNDAMENTAL ROLE IN REDUCING RATES OF	1	2	3	4	5
8. EDUCATIONAL INSTITUTION TAKE INTO ACCOUNT COMMITMENT TO ESTABLISHED CRITERIA, INCLUDING	1	2	3	4	5
9. ACCESS TO THE LEVEL OF THE QUALITY IS ONE OF THE LONG-TERM OBJECTIVES OF THE BASIC FOR THE	1	2	3	4	5
10 . THE APPLICATION OF ELECTRONIC METHODS OF EDUCATION IS CRITICAL TO IMPROVE THE WAYS TO	1	2	3	4	5
11 -REACHING THE DESIRED LEVEL OF KNOWLEDGE AND SEEKING HIGH LEVELS OF QUALITY, IS DONE THROUGH	1	2	3	4	5
12 -EMPLOYEES ARE TRYING TO SOLVE PROBLEMS THAT FACE MEETING QUALITY STANDARDS IN E-LEARNING.	1	2	3	4	5
13. EDUCATIONAL INSTITUTION TAKE INTO ACCOUNT COMMITMENT TO ESTABLISHED CRITERIA, INCLUDING	1	2	3	4	5
14. EXAMINATIONS EXAMPLES IS COMMITMENT TO THE RULES GOVERNING THE EXAMINATIONS.	1	2	3	4	5

PERCEPTION OF THE EMPLOYEES IN THE EDUCATIONAL INSTITUTION FOR THE QUALITY OF ELECTRONIC LEARNING CURRICULUM CONTENTS

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1- THE APPLICATION OF THE E-LEARNING METHODS ENABLES YOU TO GAIN THE REQUIRED LEVEL OF EDUCATIONAL SERVICE	1	2	3	4	5
2. ACADEMIC PROGRAM IS SUFFICIENT FOR FOLLOWING-UP THE NEEDS OF THE NECESSARY QUALITY STANDARDS NEEDED	1	2	3	4	5
3. COURSES CURRICULUM CONTENT ARE COMPATIBLE IN ACCORDANCE WITH THE REQUIRED QUALITY STANDARDS.	1	2	3	4	5
4. COURSES CURRICULUM CONTENT ARE COMPATIBLE WITH PROFESSIONAL REQUIREMENTS REQUIRED IN THE LABOR	1	2	3	4	5
5. EDUCATIONAL CONTENT IS UPDATED CONTINUOUSLY IN LINE WITH THE SURROUNDING ENVIRONMENTAL CHANGES.	1	2	3	4	5
6. ASSESSMENT OF EDUCATIONAL CONTENT IS CRITICAL TO MAKE SURE OF ITS QUALITY STANDARDS.	1	2	3	4	5
7. STANDARDS USED IN THE ASSESSMENT OF EDUCATIONAL CONTENT IN LINE WITH QUALITY STANDARDS.	1	2	3	4	5
8. THE LECTURES INTRODUCED FOR STUDENTS, ARE ENSURING THAT THEY RECEIVE ALL THE REQUIRED EDUCATIONAL	1	2	3	4	5
9. THE EDUCATIONAL INSTITUTIONS HELD MANY SEMINARS TO SUPPORT EDUCATIONAL PROCESS.	1	2	3	4	5
10. THERE IS NO PARTICIPATION BETWEEN STUDENTS AND PROFESSORS AND FOLLOWING-UP TO EACH OF THEM AS AN	1	2	3	4	5
11. THERE IS FLEXIBILITY IN THE WAY OF INTRODUCING THE EDUCATIONAL MATERIALS TO ENSURE ACCESS FOR ALL	1	2	3	4	5

12- THE EDUCATIONAL INSTITUTIONS IS HELPING STUDENTS TO SHOW THEIR INNOVATION AND CREATIVITY IN THE AREA OF	1	2	3	4	5
13. THE EDUCATIONAL INSTITUTIONS EMPHASIS ON THE PRACTICAL APPLICATION OF THE EDUCATIONAL WORK OF THE	1	2	3	4	5
14-THERE IS A PERIODIC EVALUATION OF THE SUCCESS OF THE PROVISION OF THE COURSES EDUCATIONAL CONTENT	1	2	3	4	5
15. THERE ARE COORDINATION BETWEEN THE VARIOUS RELATIONSHIPS BETWEEN COURSES IN THE CURRICULUM AND	1	2	3	4	5

PERCEPTION OF THE EMPLOYEES IN THE EDUCATIONAL INSTITUTION FOR THE QUALITY OF E-LEARNING SERVICE INFRASTRUCTURE.

1-ASSESSMENT OF RESOURCES REQUIRED TO COMPLETE BASIC EDUCATIONAL PROCESS.	1	2	3	4	5
2. THERE IS A NEED TO EXPLOIT ALL THE POSSIBILITIES AVAILABLE TO THE EDUCATIONAL INSTITUTION TO	1	2	3	4	5
3. THE EDUCATIONAL INSTITUTION PROVIDES ALL THE REQUIRED NEEDS TO PROVIDE EDUCATIONAL SERVICE	1	2	3	4	5
4. THE TRAINING OF EMPLOYEES IN THE USE OF THE DEVICES USED IN E-LEARNING IS DONE SUCCESSFULLY.	1	2	3	4	5
5. EMPLOYEES WISH TO CONTINUOUSLY UPDATE THE INFORMATION SYSTEMS THEY HAVE TO ENSURE A HIGH	1	2	3	4	5
6-EMPLOYEES ARE TRYING TO IMPROVE THE POSSIBILITIES OF THEIR COMPUTERS, INCLUDING	1	2	3	4	5
7-EMPLOYEES ARE TRYING TO SOLVE THE PROBLEMS THAT THEY ENCOUNTERED WHEN THEY USE AND	1	2	3	4	5
8- THE EDUCATIONAL INSTITUTION PROVIDES HOLDS THE DEVELOPMENT OF INFRASTRUCTURE ACCORDING	1	2	3	4	5
9- THERE IS COORDINATION BETWEEN WHAT IS PROVIDED THROUGH THE INFRASTRUCTURE AND THE	1	2	3	4	5
10. INTERNAL ACTIVITIES COULD BE MANAGED WELL THROUGH THE PROVISION OF THE INFRASTRUCTURE	1	2	3	4	5
11. THERE IS A PROVISION OF THE COMMUNICATION AND NETWORKING TOOLS FOR DIRECT CONTACT WITH	1	2	3	4	5
12. THERE IS EASY ACCESS FOR STUDENTS TO THE FIXED AND VARIABLE EDUCATIONAL MATERIALS AT	1	2	3	4	5

Q1) WHAT ARE THE ADVANTAGES THAT COULD BE OBTAINED IN THE APPLICATION OF QUALITY STANDARDS IN E-LEARNING?

Q2) WHAT ARE THE RISKS OF POSSIBLE EXPOSURE TO THEM IN THE APPLICATION OF THE STANDARDS OF QUALITY IN E-LEARNING?

Q3) WHAT ARE YOUR SUGGESTIONS TO OVERCOME THESE RISKS?

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