

Quality of Transition to E-Learning under Corona pandemic: An Application Study in College of Administration and Economics, Baghdad University

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Abstract

E-learning is a lifeline for the educational process, which contributed to the sustainability of working educational organizations and prevented them from stopping, so the study came to measure the compatibility between E-learning quality dimensions (information technology, educational curricula, teaching methods, and intellectual capital of educational institution) as an independent variable, and educational services quality dimensions represented by (safety, tangibility, reliability and Confidence) as a dependent variable. The sample was 150 teachers was drawn from the College of Administration and Economics community of 293 teachers through the use of several statistical methods to measure the degree of correlation and impact between the variables. The study found a relationship and an impact between the dependent and independent variables, as well as the pandemic's contribution to digital literacy among teachers and learners and the elimination of language illiteracy because most of the digitized software for scientific content is not supported in the Arabic language.

Keywords

E-learning quality dimensions, educational services quality dimensions SAWT analysis, and digital education, Corona pandemic

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Introduction

E-learning is one of the scenarios that have contributed to preventing the educational process from stopping under the spread of the Corona virus, which made the process of teaching and learning easier and more enjoyable for students under the fertile cyberspace as well as the possibility of reducing educational costs and raising the quality of E-learning, as it represents a new era and epoch depends on speed and power of communication, transmitter and receiving with high quality and ability to extend the bridge of time and place for educational purposes because the E-learning made the education process as a piece of cake.

Methodology of Study

Research Problem

The impact of the spread of Corona virus (COVID -19) was so clear on all organizations, including organizations educational, As well as the repercussions of the security situation, that led to resorting to alternative solutions to get out of the crisis of economic instability by going into a real experience of applying integrated e-learning in the education and higher education sectors As a lifeline to get out of the crisis, the problem is not in its implementation, but in the possibility of overcoming the negatives and consolidating the quality of educational outcomes, and the degree to which students benefit from it and preserving the competitive name and position of the organization on the other side. Accordingly, the study problem can be formulated by raising the following questions:

- a. What is the mechanism to take advantage of e - learning under pandemic Corona?
- b. How does e-learning affect the quality of educational outcomes and their conformity with the labor market?
- c. How satisfied are students and academic bodies with the current experience of E-learning?
- d. Are the manufacturing, building and developing of Curricula are consistent with the requirements education quality dimensions?

Research Objectives

The research aims to Measure the positive and negative impact of the Corona pandemic (COVID-19) on the quality of E-learning as an alternative solution to traditional education under the obstacles to its application. Another aim is supporting educational cadres to develop their capabilities and capabilities in using modern technologies to make education easier, and contribute removing individual differences between learners and addressing the scarcity of scientific competencies.

Research Importance

The Corona crisis (COVID-19) surrounded many educational institutions of countries around the world, which caused breakdown and stopped of their institutions, On other hand, the flexible educational organizations that employed technology and digital space can support their educational organizations to be continue and go on, so the importance of research lies in: (a) The importance of digitizing education to shift from traditional education to E-learning as an alternative solution to face crises.(b) Benefit in getting rid of digital illiteracy and Ignorance, whether he is a learner or a teacher, through research in modern communication platforms and programs.(c) The importance of enhancing the effectiveness of the learner through discovery, analysis and acquisition of working skills with modern technology techniques.

Research Hypotheses

The research hypotheses lie in finding the relationship, correlation and effect, according to the following: (a) There is a statistically significant correlation between E-learning quality dimensions (information technology, educational curricula, teaching methods, and intellectual capital of educational institution) and educational services quality dimensions (safety, tangibility, reliability

and Confidence).(b) There is a statistically significant impact relationship between the E-learning quality dimensions (information technology, educational curricula, teaching methods, and the intellectual capital of the educational institution) and educational services quality dimensions (safety, tangibility, reliability and Confidence).

The Theoretical Framework of Research

Quality of Educational Service

Quality concepts are among the dynamic concepts that depend on the mission of the educational institution and not just one of its goals (Vlašić, Vale, & Puhar, 2009). Because it is one of the means to improve the educational process, it is a method that the organization uses to ensure its survival, continuity, distinction and competition) (Fabrice, 2010). The primary objective of the educational organization is to serve (customers / students), because they are the focus of its existence, growth and continuation, by providing them with the best educational service and practical experience. As for (Kotler, 2001) he indicated that the quality of service is the performance of any intangible activity or benefit provided by one party to another party, whose production may or may not be related to a physical product, or it is the amount of comfort and physical, psychological and social satisfaction that the consumer gets. As for (Liston, 1999) he also defines it as creating a distinct product by focusing on the quality of internal processes by reducing waste and the quality of external processes by continuously improving performance. Therefore, the quality of educational service as a set of service characteristics capable of satisfying the needs and desires of the educational service, the quality of the educational service starts from generating the satisfaction of the beneficiary resulting from his awareness of the extent of its quality (Russell & Russell, 1995). The concept changes with a change in the viewpoint of beneficiaries as (students, teachers, the state, society, families, management of employees and others) (Carvalho Pereira & Terra Da Silva, 2003). That is, it begins with the customer or the beneficiary and the extent of his awareness of being free of defects and suitability for the purpose for which they were bought, and this is what the beneficiary sees after realizing the actual performance of the educational service provided to him.

Dimensions of Educational Service Quality

Researchers differed in determining the dimensions of educational service quality such as (Al-Azzam, 2015; Armistead & Kiely, 2003; Armstrong, Adam, Denize, & Kotler, 2014; Berndt, 2009; Edvardsson, 1998; Ghazali & Saremi Inanlou, 2015; Mathew & Jagannathan, 2015; Otiso, Chelangat, & Bonuke, 2012; Ramseook-Munhurrin, Lukea-Bhiwajee, & Naidoo, 2010; Rodrigues, 2013; Shafii et al., 2016; Titrek, 2016; Verma, 2011) That They are five dimensions (reliability, response, trust, the presence of unconventional services and care) or others think that they are eight dimensions (communication, understanding, perception, timing, confidence in service performance, subjective content, continuity, tools) but most agree that they are ten dimensions (Reliability, connectivity, safety and understanding, reliability and accessibility, efficiency and courtesy). Reliability means the customer's confidence in the service provider to fulfill the promises made by him, while communication means communication between the service provider and the customer. As for security, it means that a feeling of security when the customer uses the services provided, and understanding and awareness of what the customer wants to be available in the service provided and this is a reflection of the accurate response, which achieves the reliability dimension, and providing it in the appropriate place and time achieves access to the service, and this requires that the service and its provider have tangible things that is the material facilities possessed, efficiency and civility, any experience and skill of the service provider and his high taste, taking into account the feelings of customers and dealing with them with friendliness during communication, As a result of the fact that the service is a product linked to market fluctuations, tastes, needs and desires of the labor market and individuals, other dimensions have been added to it, such as the commitment of the higher management of the educational institution, i.e. the adoption of a culture that contributes to raising the quality and sustainability of the performance of the educational institution, and the organization's culture, i.e. the values and behaviors that govern how the organization performs its work and continuous improvement: That is, business performance is better than it is now, and the labor market is represented by the extent of suitability of graduates of educational institutions to the practical reality of other organizations

located within the external environment of the educational institution.

The Importance of Educational Service Quality

The quality of educational service is the creation of an appropriate environment for the educational organization to carry out its work to provide an appropriate service that matches what the customer aspires to obtain from it under achieving customer satisfaction (Pakurár, Haddad, Nagy, Popp, & Oláh, 2019), as it works to provide services that exceed the level of his expectations to ensure survival and continuity under competition (Ramya, Kowsalya, & Dharanipriya, 2019). The importance of educational service quality lies in the following (Rastogi, 2010; Young & Burgess, 2010): (a) The reputation of the organization. (b) Reliability and quality of services, as the scientific institution is at the level of quality of the service provided. (c) Lower costs and increase the market share, the more the educational institution is able to raise the quality of its performance, it will reduce errors and the large number of service seekers, which reduces the final costs. (d) Consumer protection from fraud and deceit, especially when the purchased service does not achieve the goal for which it is being bought, unlike what it promotes. (e) Ability to compete internationally, as All organizations aspire to achieve excellence through the quality of their products to obtain market share in international markets and an opportunity for growth and development. This is only achieved if the educational institution focuses its attention on its inputs to ensure the quality of its outputs and make them suitable for the labor market by activating the culture of quality to reduce cases of failure and provide an appropriate environment for the teaching staff and encourage the spirit of work as a team to generate loyalty to the educational institution.

The Concept Of E-learning

E-learning is one of the methods adopted in many educational organizations because it is not a recent phenomenon, but its revolution began in the mid-nineties and today it has become a lifeline for educational institutions under the pandemic in all parts of the world to keep the wheel of education and learning without stopping, E-learning is known as a means of transferring knowledge using smart devices, the Internet, and personal experiences (Horton & Horton, 2003). It is also supportive of traditional education as it relies on creating a digital environment for interaction between people to facilitate the transfer of knowledge with the help of the Internet (Preda, CRIŞAN, & SAMUEL, 2008), With simple costs compared to traditional education (Aziz et al., 2019), it is also considered a system for liberation from the constraints and obligations of traditional education, as it is a world that allows learner to obtain and exchange knowledge at any time or place electronically (Benjamin, 1994) In a way that allows interaction between the parties of contact anywhere using information and communication technology (SALEEM, 2009). E-learning is the process of transferring the cost of learning and transferring knowledge from the organization to the customer / beneficiary to depend on what he uses of modern technologies and software at any time and place, if compared to the costs of traditional education, the success of E-learning depends on several basic elements (Gautam & Tiwari, 2016) such as the electronic teacher and his role as an advisor and guide, the electronic learner is represented by the beneficiary, the customer or the student who is the main element in the educational process in addition to the electronic course, libraries, electronic classes and e-mail on the other hand, which facilitates the process of sending and interaction between different groups depending on the information network. The reason for resorting to E-learning is that it contributes to (Agarwal & Pandey, 2013): (a) It is low cost compared to traditional education because it does not use stationery, transportation costs, fuel consumption and all other costs associated with traditional education and does not adhere to the size of the classrooms and the number of students. (b) It creates a more flexible environment for the interaction of the parties of communication among themselves, not determined by temporal or spatial restrictions. (c) Personalization unlike traditional education to enable learners to obtain their own knowledge requirements. The desire of organizations to contain the flow of knowledge in various fields and the rapid growth in the number of learners, which exceeds the capacities and absorptive capabilities of the educational organization under the financial crises caused by the spread of Covid-19 virus and other variables, as well as opening the way to those who missed educational opportunities, and extent of their contribution to electronic literacy Informatics, language barriers, and availability of digital

curricula, making it easier to circulate.

Types Of E-learning Education

Researchers agreed such as (Guragain, 2016) and (Arkorful & Abaidoo, 2015) that E-learning is a form of education based on technology and includes several types: (a) Distance education, it represents the education that gave the idea of E-learning to shorten time and distance. (b) Simultaneous electronic learning means that the two sides of the educational process, the sender and the recipient / teacher, and the learner are present at the same time. (c) Asynchronous electronic learning, education in which the two parties to the educational process are not required to be present at the same time, as in the case of sending lectures to students on YouTube. (d) Blended or dual education, It means the combination of traditional and electronic education tools. (e) Mobile or mobile education, It represents education based on smart phones or tablets, which is the most common among students in Iraq. In general, the electronic experience from earlier was very limited, and electronic education was brief for high school students in the Distinguished and Gifted Schools and some private schools. Now one of the positive aspects of the spread of Covid-19 is to clear the way for e-government, electronic administration, e-shopping, business performance, e-learning and other electronic experiences that come into effect and succeed in the Iraqi environment and become an alternative or assistant to traditional methods.

Quality E-learning. Dimensions

E-learning is an employment of the digital space to convey the educational message from the sender to the learner and vice versa (GOPAL, 2015) and includes several dimensions such as: (a) Information technology, includes all technologies and software in the digital space to facilitate the communication process between the learner and the teacher : (Jung, 2011). (b) Curriculum quality is represented by the scientific materials that are taught in the educational institution. (c) Teaching methods, include how to transfer knowledge from teacher to learner under digital space. (d) The intellectual capital, represented by the teaching members owned by the educational institution.

Goals And Importance Of E-learning

E-learning has become a tool for competition between educational organizations to keep pace with technological development and spread digital culture to facilitate the handling and processing of data and the transfer of knowledge (Adams & Seagren, 2004), As it contributes to the speed of changing the scientific curricula to match the educational requirements and ease of communication between the parties to the educational process. It also contributes to increasing the utilization of the available time compared to traditional education and contributes to filling the shortage of the need for scientific expertise and competencies in light of the increase in the number of students in the digital classes and also contributes to improving the quality educational outcomes that affect customer satisfaction and their competitive advantage, as well as contribute to reducing costs.

Advantages and Disadvantages of E-learning

E-learning is one of the successful means of education under the spread of the Corona virus COVID-19, and avoid stopping science wheel, spreading culture and knowledge, but it is not considered a substitute for teachers, but it supports changing in creative thinking deeply in a way that serves the education process (Al Rawashdeh, Mohammed, Al Arab, Alara, & Al-Rawashdeh, 2021) As it works on reducing cost of education for the educational organization and the learner, as it reduces, for example, the cost of establishing classes, laboratories, costs of transportation and other things. Among the advantages of E-learning education is changing the form of obtaining scientific material commensurate with capabilities and individual differences, the survival of the scientific material in the classroom with the possibility of re-utilizing it when it is needed, the possibility of returning the scientific material over and over, especially for audio and video lectures, the absence of the need for the physical presence of the student, full awareness of the mechanism Transitioning from traditional education to electronic learning (Turnbull, Chugh, &

Luck, 2021). On the other hand, e-learning is one of the means of distance education that helped in social distancing and reduce the risk of the outbreak of COVID- 19, but its application results in a set of defects, including (Pierce, Weber, Klein, & Stoecker, 2020) and (Hetsevich, 2017): (a) Absence of the human role in interaction and in performing tasks because dealing with machine and its software in addition the possibility of hacking programs and stealing students' information.(b) Infrastructure problems, and the need for both teacher and learner for training courses to hone skills and learn how to best use the software. (c) Language problems as there is no support for software in the Arabic language. (d) Many teachers still do not know how to use software. (e) The system kills the creativity of students in the answer because it is defined by ready-made systems. (f) The deterioration of health situation associated with sitting for a long time in front of computer and smart devices, which makes students feel Bored.

The difference between E-learning and traditional education

A distinction can be made between e-learning and traditional education, as in table (1)

E-Learning	Traditional education
1 Lower costs for being digital	The high costs of buildings, preparation and equipping of laboratories and the establishment of classrooms
2 Some are restricted and the other is not restricted by time and place	Temporal and spatial restrictions or exam classes
3 The content is renewed and the relationship is interactive, allowing the teacher to enter into its details through informative web pages	It prepares an instructional process for the course material
4 The possibility of taking advantage from communication and Internet technologies to bring together many students in multiple places of the world at the same time with one teacher	Difficulty getting experts or rare specialties to be present in more than one place
5 High flexibility in the transfer of knowledge and makes the process of gaining knowledge an interesting process for the student	The content is specific and the relationship between student and teacher is monotonous and rigid in educational curricula that facilitate success for some by using illegal methods (cheating).
6 It relies heavily on communication technologies, programs and the Internet within digital organizations and classes that make the whole world a small village	The process of interaction between student and teacher takes place exclusively within the boundaries of the educational organization

Challenges Facing the Quality E-higher Education Service

The reasons for weak application of educational service quality can be determined through a strategic analysis of performance by adopting a SWOT analysis of quality and scientific curricula according to E-learning based on the evaluation of actual performance according to (Nteliou, 2013) study, It is a matrix for strategic analysis established by the American business theorist (Alpert .S. Humphery) in the 1970s and called the Quartet Matrix for Strategic Analysis, working on the basis of identifying opportunities and how to take advantage of them under the strengths owned by the organization and bypassing threats and identifying weaknesses to strengthen them, and it was previously called SOFT, ((S)Satisfactory,(O) Opportunity,(F) Fault, and (T) Threat) until (Eric and Dor) came from British Stanford University and was modified to SWOT (Strengths, Weaknesses, Opportunity and Threats) (Gholamhosseini, Sadoughi, Ahmadi, & Safaei, 2019).The quality of E-higher education service can be analyzed with the following matrix (4.10.A) and (4.10.B)

SWOT Analysis of Faculty

WEAKNESSES

- 1- Since the teaching staff is young, their experience is limited.
- 2- The weakness of the organization's ability to accommodate the increasing number of students and the teaching staff owned by the educational organization.
- 3- Weakness of the funds allocated to develop the skills of the teaching staff.
- 4- Continuous pursuit by the educational staff, which increases conflict situation.

THREATS

- 1- Increasing the intensity of competition from private colleges in light of the increasing number of colleges.
- 2- Decreased scientific awareness in society.
- 3- Weak security, political and economic stability.
- 4- High publishing prices in scientific journals, which contributes to the reluctance of many professors to conduct studies and research under weak financial support for them.

STRENGTHS

- 1- The teaching staff has good experience.
- 2- The organization has distinguished and young teachers.
- 3- Diversity of faculty specializations and experiences.
- 4- High loyalty to the educational organization and the department, and the continuous pursuit of its distinction.
- 5- The social standing and the wages paid to the teaching staff are good compared to other jobs.
- 6- Seek to publish research and studies widely locally and internationally.
- 7- Seek to participate in scientific conferences.
- 8- The pursuit of permanent learning and gaining experiences and skills through doing many non-educational works in the educational organization.

OPPORTUNITIES

- 1- Constant pursuit of participation in conferences, seminars, and workshops in order to develop their expertise and skills.
- 2- The use of e-learning and blended learning.
- 3- The high turnout for the various specializations of the University of Baghdad.
- 4- Seeking to eradicate electronic literacy among all teaching staff.
- 5- Continuous support for the university by the state.
- 6- The continuous change of the scientific curriculum in line with the current development.

SWOT Analysis of Curriculum

WEAKNESSES

- 1- Curriculum development is to be carried out in limited proportions by private sector committees in higher education.
- 2- Weakness in speaking or using the English language, which creates illiteracy in an electronic mother tongue in the future, as programs for smart devices are rarely supported in the Arabic language.
- 3- Teaching in educational organizations takes an indoctrination approach.
- 4- The negative impact on the quality of the outputs due to the poor quality of the inputs.
- 5- The weakness of the curricula to focus on working as a team for the success of the organization.

THREATS

The high rate of electronic illiteracy and language effects on the quality of outputs due to poor inputs.

STRENGTHS

- 1- The educational program keeps pace with the progress and development of the curricula of the corresponding educational organizations.
- 2- The Power of Management Issues.
- 3- Diversification of general cultural issues.
- 4- Stability and consistency of curricula in the educational organization.

OPPORTUNITIES

The use of blended learning and mobile E-learning in learn.

Application Framework of Research

Analyzing the Questionnaire Variables

This section deals with analyzing and interpreting the responses of the sample members with regard to paragraphs of the variable education quality dimensions and educational service quality dimensions, with determining the extent of consensus in opinions of the research sample, through by using a number of statistical tools represented by the arithmetic mean to diagnose the answers of the research sample, and the standard deviation to estimate the extent of dispersion in The sample answers, and the coefficient of variation to determine the degree of homogeneity in answers, and the arrangement of research variables, to know the degree of interest sample and the arrangement according to the importance of the paragraphs, the five-point Likert scale was used in answers of sample members, as shown in table (2).

Table (2)

The five-point Likert scale

scale	Totally agree	Agreed	Neutral	Disagree	Not Quite Agree
Degree scale	5	4	3	2	1

There are five classes of averages. The category is determined by finding the length of the category, and it is a result of dividing range by number of classes, $(0.80 = 5 \setminus 4)$ The length of the category (0.80) is added to the lower bound of the scale or subtracted from the upper limit of the scale, and the classes are as follows:

(1 - 1.79): Very low represents the answer (not quite agree)

(1.80 - 2.59): low is the answer (disagree)

(2.60 - 3.39): moderate (neutral)

(3.40 - 4.19): High represents the answer (Agreed)

(4.20 - 5.0): Very high represents the answer (totally agree)

The following is a detailed explanation of the sample research response about research variables:

E-learning Quality Dimensions

Table (3) shows arithmetic mean, standard deviation, and general difference coefficient related to (E-learning quality dimensions), as the table shows a total arithmetic mean of (3.085) out of (5), which indicates the option (agreed), and it is a good value, and with good harmony In answers, it is confirmed by value of standard deviation and coefficient of variation, respectively (0.747) and (0.243), which confirms the degree of interest the research sample about E-learning quality dimensions in Administration and Economics College, the total of these results means that the intensity of sample answers in this axis is heading towards agreement.

Table (3)

the arithmetic mean, standard deviation, and coefficient of variation for the variable of total education quality dimensions

Variables	Arithmetic mean	standard deviation	Coefficient of variation
Quality Education Dimensions	3.085	0.747	0.243

E-learning quality dimensions were measured across four dimensions (information technology, educational curricula, teaching methods, and intellectual capital). The response of research sample will be explained in detail as follows:

Information Technology

Table (4) refers to the arithmetic mean, standard deviation, and general difference coefficient related to (information technology), as the table reflects a total arithmetic mean of (3.023) out of

(5), which indicates an option (agreed), it is a good value, harmony with answers, and it is confirmed by the value of the standard deviation and the coefficient of variation, respectively (0.851) and (0.282), which confirms the degree of interest of the research sample about information technology in the College of Administration and Economics, and the total of these results mean that the intensity of the sample answers in this axis is heading towards agreement. As for the questionnaire's paragraphs, paragraph (1) (the possibility of choosing the appropriate software and electronic platforms or social media to deliver scientific content using the digital space) achieved the highest mathematical mean of (3.222), that is, within a high category, and with an acceptable consistency of the answers, as it reached the standard deviation and the coefficient of variation. (1.174) and (0.365) respectively, and this result indicates that College of Administration and Economics relies on information technology mainly for communication between the relevant parties, while Paragraph (5) (Transferring the cost of learning from educational institution to learner and teacher) has achieved the lowest mean An arithmetic and its amount is (2.915), which is less than the hypothetical mean of (3), with an acceptable consistency in the answers, as the standard deviation and coefficient of variation reached (1.116) and (0.383) respectively.

Table (4)

the arithmetic mean, standard deviation, and coefficient of variation for the variable of total information technology

Information Technology	Arithmetic mean	standard deviation	Coefficient of variation
1 The ability to choose the appropriate software and electronic platforms or social media to deliver scientific content using digital space.	3.222	1.174	0.365
2 Reducing cost of education due to its reliance on digital classes dedicated to exchanging knowledge between members of educational process (student and teacher) that do not exist in reality.	3.077	1.068	0.347
3 Encouraging competition between educational institutions to provide the best for satisfying needs of learner and market.	3.049	1.127	0.370
4 Encouraging software and smart devices companies to provide the best, fastest, and least expensive or free	2.991	1.048	0.351
5 Transferring cost of learning from educational institution to learner and teacher.	2.914	1.116	0.383
Total of Information Technology	3.023	0.851	0.282

Educational Curricula

Table (5) refers to the arithmetic mean, standard deviation, and general difference coefficient related to (Educational Curricula), as the table reflects an overall arithmetic mean, as its value reached (3.113) out of (5), which indicates an option (agreed), which is good value, and harmony in answers, and confirmed by value of standard deviation and coefficient of variation, respectively (0.747) and (0.240), which confirms the degree of interest research sample about level of educational curricula in College of Administration and Economics, and the total of these results mean that the intensity of the sample answers in this axis is heading towards agreement. As for the questionnaire's paragraphs, Paragraph (7) (Curriculum Development to Correspond with Developments and Changes in the Labor Market) achieved highest arithmetic mean of (3.366) within a high category, and with moderate consistency in the answers, as the standard deviation and coefficient of variation reached (0.967) and (0.288) Consecutively, and this result indicates that the curricula in College of Administration and Economics are commensurate with requirements of labor market. As for Paragraph (8) (providing students with skills in dealing with smart devices and their programs), it achieved the lowest arithmetic mean of (2.867), which is less than the hypothesis of (3), with an acceptable consistency in answers, as the standard deviation and coefficient of variation reached (560.9) and (0.334) respectively.

Table (5)

The arithmetic mean, standard deviation, and coefficient of variation for the variable of the total Educational Curricula

	Educational Curricula	Arithmetic mean	standard deviation	Coefficient of variation
6	Digitization of curricula and the possibility of reducing the costs of obtaining them	3.202	0.960	0.300
7	Curriculum development to suit developments and changes in the labor market	3.366	0.967	0.288
8	Provide students with skills in dealing with smart devices and their programs	2.867	0.956	0.334
9	The possibility of seeking external expertise through simultaneous education and the participation of more than one educational institution through digital classes	3.068	0.979	0.319
10	Exiting from method of indoctrination to creative thinking and brainstorming to solve problems.	3	0.946	0.316
	Total of Educational Curricula	3.113	0.747	0.240

Teaching Methods

Table (6) refers to the arithmetic mean, standard deviation and general difference coefficient related to (Teaching Methods), as the table reflects an overall arithmetic mean, as its value reached (3.081) out of (5), which indicates an option (agreed), that is a good value, with good consistency in answers, which is confirmed by value of standard deviation and coefficient of variation, respectively (0.845) and (0.275), which confirms the degree of interest research sample about the level of teaching methods in College of Administration and Economics, and the total of these results means that intensity of sample answers in this axis is directed towards the agreement. As for the questionnaire's paragraphs, Paragraph (14) (the possibility of repeating the scientific content many times) achieved highest arithmetic mean of (3.366), that is, within a high category, and with moderate consistency of answers, as standard deviation and coefficient of variation reached (0.996) and (0.296), respectively. This result indicates that E-learning allows students to repeat the lecture. As for Paragraph (15) (the diversity of methods of communicating scientific content to students or beneficiaries), it has achieved a minimum arithmetic mean of (2.933), which is less than the hypothetical means of (3), with acceptable consistency with answers. The standard deviation and coefficient of variation were (1.027) and (0.351), respectively.

Table (6)

the arithmetic mean, standard deviation, and coefficient of variation for the variable of total Teaching Methods

	Teaching Methods	Arithmetic mean	standard deviation	Coefficient of variation
11	Taking advantage of simultaneous education feature in getting rid of the problem of scarcity of scientific competencies	3.068	0.969	0.316
12	Advantage of having opportunity to work and study together	3.058	0.944	0.309
13	Ease of managing electronic classes, regardless the place and time of study	2.981	1.106	0.371
14	The possibility of returning scientific content many times	3.366	0.996	0.296
15	Diversity of methods of delivering scientific content to students or beneficiaries	2.933	1.027	0.351
	Total of Teaching Methods	3.081	0.845	0.275

Intellectual Capital

Table (7) refers to the arithmetic mean, standard deviation and general difference coefficient related to (intellectual capital), as the table reflects a total arithmetic mean as its value is (3.150) out of (5), which indicates an option (agreed), that is a good value, with good consistency in answers, which is confirmed by value of standard deviation and coefficient of variation, respectively (0.809) and (0.257), which confirms the degree of interest research sample about the level of teaching methods in College of Administration and Economics, and the total of these results means that the intensity of the sample answers in this axis Destined for agreement. As for the questionnaire's paragraphs, Paragraph (20) (ease dealing with the professor by students electronically, especially for those who suffer difficulties in understanding or problems with communication) achieved the highest arithmetic mean of (3.251), that is, within a high category, and with acceptable consistency of the answers, as it reached the standard deviation and coefficient of variation. (1.022) and (0.315) respectively, as for Paragraph (16) (participation in workshops and training courses to hone skills of educational staff), it achieved the lowest arithmetic mean of (3) which is equal to the hypothetical mean of (3), with acceptable consistency with the answers. The standard deviation and coefficient of variation were (1.024) and (0.342), respectively.

Table (7)

the arithmetic mean, standard deviation, and coefficient of variation for the variable of total Intellectual Capital

	Intellectual Capital	Arithmetic mean	standard deviation	Coefficient of variation
16	Participation in workshops and training courses to refine the skills of the educational staff	3.01	1.024	0.342
17	Reducing illiteracy in the electronic or English language, as the software is not supported in the Arabic language	3.174	1.066	0.336
18	Making the process of teaching and learning easier and more enjoyable, depending on knowledge-rich digital space	3.058	0.944	0.309
19	Getting rid of the scarcity of scarce scientific competencies	3.126	1.022	0.327
20	ease dealing with the professor by students electronically, especially for those who suffer difficulties in understanding or problems with communication	3.251	1.022	0.315
	Total of Intellectual Capital	3.150	0.809	0.257

Educational Service Quality Dimensions

Table (8) shows arithmetic mean, standard deviation and general difference coefficient related to (educational services quality dimensions), as the table shows a total arithmetic mean of (3.217) out of (5), which refers to option (agreed), which is a good value with good consistency in answers, and confirmed by the value of standard deviation and coefficient of variation, respectively (0.598) and (0.186), that confirms the degree of interest research sample about educational services quality dimensions in College of Administration and Economics, and the total of these results means that the intensity of sample answers in this axis is heading Towards agreement.

Table (8)

the arithmetic mean, standard deviation, and coefficient of variation for the variable of total Educational Service Quality Dimensions

Variables	Arithmetic mean	standard deviation	Coefficient of variation
Educational Service Quality Dimensions	3.217	0.598	0.186

Quality Educational Services dimensions were measured through four dimensions (safety, tangibility, reliability and Confidence). The response of research sample will be explained in detail as follows:

Safety

Table (9) refers to arithmetic mean, standard deviation and general difference coefficient related to (safety), as the table reflects a total arithmetic mean, its value reached (3.547) out of (5), which refers to the option (agreed), that is a good value, and in harmony with answers, it is confirmed by the value of standard deviation and coefficient of variation, respectively (0.610) and (0.172), which confirms the interest of research sample about level of safety in College of Administration and Economics, the total of these results means that the intensity of sample answers in this axis is heading towards agreement. As for the questionnaire items, Paragraph (25) (achieved controlling and managing educational platforms of educational institution) with a higher arithmetic mean of (4.01), meaning that it included a high category, with moderate consistency in the answers, where the standard deviation and coefficient of variation were (1.024) and (0.256) Straight. As for Paragraph (22) (Maintaining social distancing, especially during the time of the (COVID-19) pandemic or other crises), it achieved the lowest arithmetic mean (3.049) within a medium category, with acceptable consistency in the answers, as it reached the standard deviation and the coefficient of variation (1.074) and (0.353) respectively.

Table (9)

the arithmetic mean, standard deviation, and coefficient of variation for the variable of total Safety

	Safety	Arithmetic mean	standard deviation	Coefficient of variation
21	Preserving the privacy of individuals participating in the educational process.	3.452	1.004	0.291
22	Maintaining social distancing, especially in times of the (COVID- 19) pandemic or other crises.	3.049	1.074	0.353
23	Reducing costs on learner, teacher and educational institution	3.616	0.938	0.260
24	The use of the official personal e-mail of educational institution Contributes to getting rid of bullies or intruders	3.452	1.284	0.372
25	Ease of control and management the educational platforms of the educational institution	4.01	1.024	0.256
	Total of Safety	3.547	0.610	0.172

Tangibility

Table (10) refers to arithmetic mean, standard deviation and general difference coefficient related to (tangibility), as table reflects total arithmetic mean as its value reached (3.018) out of (5), which indicates an option (agreed), that is a good value, and in harmony with High answers, its confirmed by value of standard deviation and coefficient of variation, respectively (0.890) and (0.295), which confirms the interest of research sample about level of tangibility in College of Administration and Economics, the total of these results mean that the intensity of the sample answers in this axis is heading towards agreement. As for the questionnaire's paragraphs, paragraph (26) (The educational institution is interested in holding workshops and training courses to train how using modern means and methods of E-learning) has achieved the highest arithmetic mean of (3.126), that is, within a high category, with a moderate consistency of answers, as it reached the standard deviation and the coefficient of variation (1.050) and (0.336) respectively. As for Paragraph (27) (providing publications and conducting tests after training sessions to identify strengths and weaknesses in performance to address them), it achieved the lowest arithmetic mean of (2.876), which is less than the hypothesis of (3), in harmony. The answers are acceptable, as the standard deviation and coefficient of variation are (1.221) and (0.425), respectively.

Table (10)

the arithmetic mean, standard deviation, and coefficient of variation for the variable of total Tangibility

	Tangibility	Arithmetic mean	standard deviation	Coefficient of variation
26	The educational institution is interested in holding workshops and training courses to train how using modern means and methods of E-learning	3.126	1.050	0.336
27	Providing publications and conducting tests after training courses to identify strengths and weaknesses in performance to be addressed	2.876	1.221	0.425
28	Providing electronic libraries (separate or connected) in educational platforms	3.087	1.116	0.362
29	Using teaching strategies and methods that are in harmony with the E-learning content	2.942	1.047	0.356
30	Provide students with feedback on the level of performance and ways to develop it	2.885	1.083	0.376
	Total of Tangibility	3.018	0.890	0.295

Reliability

Table (11) refers to the arithmetic mean, standard deviation and general difference coefficient related to (reliability), as the table reflects a total arithmetic mean, as its value reached (3.318) out of (5), which refers to the option (agreed), which is a good value, and the dispersion of The answers are few, and it is confirmed by the value of standard deviation and coefficient of variation, respectively (0.797) and (0.241), which confirms the degree of interest research sample about the level of reliability in College of Administration and Economics, and the total of these results means that the intensity of sample answers in this axis is heading towards agreement. As for the questionnaire's paragraphs, paragraph (32) (the evaluation process for students is transparent) achieved the highest arithmetic mean of (3,539), that is, within a high category, with moderate consistency in answers, as the standard deviation and coefficient of variation reached (0.870) and (0.246), respectively. Paragraph (35) (Supplying the educational process with external educational experiences through simultaneous education) has achieved the lowest arithmetic mean of (3,164) within a moderate category, with acceptable consistency of answers, as the standard deviation and coefficient of variation reached (1.035) and (0.327) respectively.

Table (11)

the arithmetic mean, standard deviation, and coefficient of variation for the variable of total Reliability

	Reliability	Arithmetic mean	standard deviation	Coefficient of variation
31	Use the evaluation results of students to develop, evaluate and improve E-learning in the educational institution	3.212	1.130	0.352
32	The student assessment process is transparent	3.539	0.870	0.246
33	Achieving the objectives of the academic program of the educational institution	3.202	0.969	0.303
34	Raising the efficiency of teaching staff in using modern electronic technologies	3.385	1.018	0.301
35	Supplying the educational process with external educational experiences through simultaneous education	3.164	1.035	0.3267
	Total of Reliability	3.318	0.797	0.241

Confidence

Table (12) indicates arithmetic mean, standard deviation and general difference coefficient related to (confidence), as the table reflects a total arithmetic mean, as its value reached (3.769) out of (5), which refers to the option (agreed), that is a good value in harmony with answers, and it is confirmed by the value of the standard deviation and coefficient of variation, respectively (0.501) and (113.30), which confirms the interest of research sample about the level of confidence in College of Administration and Economics, the total of these results mean the intensity of sample answers in this axis is heading towards agreement. As for the questionnaire's paragraphs, paragraph (38) (the main goal is to develop skills of its users) has achieved highest arithmetic mean of (3.289), that is, within a high category, and with moderate consistency of answers, as the standard deviation and coefficient of variation reached (0.973) and (0.296), respectively. As for Paragraph (37) (Satisfaction of parties about the educational process), achieved lowest arithmetic mean of (2.789), which is less than the hypothetical means of (3) because E-learning does not achieve complete interaction between teachers and students, with acceptable consistency of answers, as it reached the standard deviation and the coefficient of variation (1.138) and (0.409), respectively.

Table (12)

the arithmetic mean, standard deviation, and coefficient of variation for the variable of total Confidence

	Confidence	Arithmetic mean	standard deviation	Coefficient of variation
36	Evaluating students according to the targeted plans in the course description	2.904	1.187	0.409
37	Feeling satisfaction of parties about the educational process	2.789	1.138	0.409
38	The main goal is to develop the skills of its users	3.289	0.973	0.296
39	Education continues without interruption under the (COVID-19) pandemic	3.251	1.032	0.318
40	Students acquire the experience and skills required by sparking scientific debate and brainstorming to find the solution as a team	3.010	0.940	0.313
	Total of Confidence	3.760	0.501	13.301

Test The Hypotheses of Correlation Between Research Variables

This paragraph seeks to define the nature of the correlations between research variables, using the simple correlation coefficient (Person), and to know the extent of acceptance or rejection of the main hypothesis which states: There is a significant correlation relationship with statistical significance between E-learning Quality dimensions and educational service quality dimensions. It is noted from Table (13) that the total E-learning quality dimensions achieved a significant correlation relationship with educational service quality dimensions, and the correlation relationship had a value of (0.768**), at a level of significance (0.01), and the number of moral relationships was (20) What constitutes (80%), this result indicates the interest of researched organization in educational curricula, which leads significantly to educational service quality dimensions. This leads to positive and indicative correlation that explains the strength relationship between teaching methods and tangibility, as for the least correlation was with the safety dimension and educational curricula of (0.042), which is a non-indicative and moral correlation. From here we infer the acceptance of the hypothesis that there is a significant correlation relationship between E-learning quality dimensions and Educational Service Quality dimensions in general.

Table (13)

The relationship of correlation between E-learning with dimensions and Educational Service Quality dimensions at the overall level

Educational Service quality dimensions		Safety Y ₁	Tangibility Y ₂	Reliability Y ₃	Confidence Y ₄	Educational service quality dimensions Y	Moral relationships number percent
E-learning dimensions							
information technology	Correlation coefficient	.042.	.711**	.595.**	.579**	.677**	
	morale level	.713.	.000	.000	.000	.000	
educational curricula	Correlation coefficient	.042.	.711**	.595.**	.579**	.677**	
	morale level	.713.	.000	.000	.000	.000	
teaching methods	Correlation coefficient	.031	.821**	.612**	.650**	.760**	
	morale level	.761	.000	.000	.000	.000	
intellectual capital	Correlation coefficient	.041	.788**	.582**	.595**	.722**	
	morale level	.684	.000	.000	.000	.000	2 80% 0
Total dimensions of E-learning quality	Correlation coefficient	.004	.838**	.621**	.666**	.768**	
	morale level	.975	.000	.000	.000	.000	

(**) Significant correlation at level (0.01).

(*) Significant correlation at level (0.05).

Test influence hypotheses research variables

The relationship between independent variable (E-learning quality dimensions) and dependent variable (educational service quality dimensions) will be revealed and analyzed, as the second main hypothesis states that independent variable (E-learning quality dimensions) has a significant effect on dependent variable (Educational service quality dimensions), this hypothesis will be tested through Simple Linear Regression analysis. Under this hypothesis, a functional relationship between them was formulated and the regression equation is as $Y = \alpha + \beta X$, the following is a detailed analysis of this hypothesis:

4.3.1. The model of impact information technology on dimensions of educational service quality was significant below at level of (0.01) in terms value (F) computed to be (84.916**), which is higher than the tabular value of (F) to be (6.98), and the value of coefficient determination (R²) was (0.451) This means that information technology explains its value (50.0%) from dimensions educational service quality, the value of information technology factor (β) amounted to (0.474), meaning that a change in one unit of information technology creates a change about (47.4%) in dimensions of educational service quality This result allows sufficient support to accept, the first sub hypothesis of the second chair: "There is a significant effect of information technology on Educational service quality dimensions." Thus, the regression model is as follows:

Educational service quality dimensions = 1.78 + 0.474 (Information Technology)

4.3.2. The model of impact the educational curricula on the dimensions of educational service quality was significant below at level of (0.01) in terms value (F) computed to be (85.667**), which

is higher than the tabular value of (F) to be (6.97) below the level of significance (0.01), and the value of coefficient of determination was (R^2) (0.542) This means that the educational curricula explain its value (54.2%) from dimensions educational service quality, and the value of educational curriculum coefficient (β) amounted to (0.542), meaning that a change in one unit of educational curriculum results a change about (54.2%) in dimensions educational service quality. This result gives sufficient support to the second sub-hypothesis of second president: "There is a significant impact on the morale of educational curricula on Educational service quality dimensions." Thus, the regression model is as follows:

Educational service quality dimensions = 1.535 +0.542 (Educational Curricula)

4.3.3. The model of the effect teaching methods in the dimensions of educational service quality was significant below the level (0.01) in terms of the calculated value of (F) (98.735**), which is higher than the tabular value of (F) of (6.97) below the significant level (0.01), and the value of the coefficient of determination was (R^2) (0.573) This means that teaching methods explain its value (57.3%) from dimensions educational service quality, and the value of the teaching methods coefficient (β) amounted to be (0.538), meaning That is, a change in one unit of teaching methods brings a change about (53.8%) in dimensions educational service quality. This result allows sufficient support to accept the third sub-hypothesis from the second chair: "There is a significant effect of moral Teaching methods on Educational service quality dimensions." Thus, the regression model is as follows:

Dimensions of educational service quality = 1.563 +0.538 (Teaching Methods)

4.3.4. The model of effect the intellectual capital in dimensions of educational service quality was significant below the level of (0.01) in terms value of (F) computed at (99.686**), which is higher than the tabular value of (F) about (6.97) below the level of significance (0.01). Determination (R^2) (0.257), this means that the intellectual capital explains its value (25.7%) from the dimensions of educational service quality and the value of the intellectual capital coefficient (β) reached (0.533), That is, a change in one unit of intellectual capital brings a change about (53.3%) in dimensions of educational services quality. This result allows sufficient support to accept the third sub-hypothesis from the second president: "There is a significant influence of intellectual capital on Educational service quality dimensions" Thus, the regression model is as follows:

Educational service quality dimensions = 1.541 +0.533 (Intellectual Capital)

4.3.5. The model of effect total E-learning quality dimensions on educational service quality dimensions was significant below the level (0.01) in terms of the value of (F) calculated (102.208**), which is higher than the tabular value of (F) at (6.97) below the level of significance (0.01). The value coefficient of determination (R^2) (0.586), this means that total E-learning quality dimensions explain its value (58.6%) from educational service quality dimensions and the value coefficient E-learning quality dimensions (β) reached (0.615) Thus, a change of one unit of total E-learning quality dimensions creates a change about (61.5%) in educational service quality dimensions. This result allows sufficient support to accept the second main hypothesis: "There is a statistically significant effect between E-learning quality dimensions and Educational service quality dimensions." Thus, the regression model is as follows:

Educational service quality dimensions = 1.323 + 0.615 (E-learning quality dimensions).

4.3.6. The results of total impact both of E-learning quality dimensions and of the educational service quality dimensions can be summarized in Table (14) as follows:

Table (14)

results of total impact both E-learning quality dimensions on educational service quality dimensions (n = 150)

educational service quality Dimensions								
Variable	dimensions	α	β	F computed	Moral	R ² Adjusted	moral e level	Accept or reject hypothesis
E-learning quality dimensions	information technology	1.787	0.474	84.916**	000.	45.0 %	moral e	Accept
	educational curricula	1.535	0.542	85.667**	.000	45.2%	moral e	Accept
	teaching methods	1.563	0.538	98.735**	.000	57.3%	moral e	Accept
	intellectual capital	1.541	0.533	99.686**	.000	51.7%	moral e	Accept
total E-learning quality dimensions		1.323	0.615	102.208**	.000	58.6%	moral e	Accept

Tabular F value under significance level (0.05) = 3.92, and tabular F value under significant level (0.01) = 6.97

Conclusions

The study came to prove the extent of the correlation and impact between the elements of digital education and quality service of educational in a large way, after the digital space was a means of entertainment, modern technologies and games, , it became a lifeline for the educational process under Corona pandemic, and software companies competed in serving student audience by providing facilities in educational process to be communication Interaction with computers and smart devices is more flexible in learning. The pandemic of the spread of the Corona virus has also contributed to the possibility of education in a more interactive way and the possibility of returning digitized scientific content many times for those who find difficulties in communicating, or understanding quickly and possibility of enrolling in studies in remote areas or the poor class, as well as eliminating many excessive and unjustified costs, So turning to E-learning helped shift to green education to reduce pollution of gaseous emissions and reduce the spread of viruses to raise awareness.

References

- Adams, J. C., & Seagren, A. T. (2004). Distance education strategy: Mental models and strategic choices. 7(2), 1-13. Retrieved from <https://digitalcommons.unl.edu/cehsedadfacpub/102/>
- Agarwal, H., & Pandey, G. (2013). Impact of E-learning in education. International Journal of Science and Research (IJSR), 2(12), 146-147. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.676.7736&rep=rep1&type=pdf>
- Al-Azzam, A. F. M. (2015). The impact of service quality dimensions on customer satisfaction: A field study of Arab bank in Irbid city, Jordan. European Journal of Business and Management, 7(15), 45-53. Retrieved from <https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.736.3256&rep=rep1&type=pdf>
- Al Rawashdeh, A. Z., Mohammed, E. Y., Al Arab, A. R., Alara, M., & Al-Rawashdeh, B. (2021). Advantages and Disadvantages of Using e-Learning in University Education: Analyzing Students' Perspectives. Electronic Journal of e-Learning, 19(3), 107-117. Doi:<https://doi.org/10.34190/ejel.19.3.2168>
- Arkorful, V., & Abaidoo, N. (2015). The role of e-learning, advantages and disadvantages of its adoption in higher education. International Journal of Instructional Technology and Distance Learning, 12(1), 29-42. Retrieved from https://www.itdl.org/Journal/Jan_15/Jan15.pdf#page=33

- Armistead, C., & Kiely, J. (2003). Creating strategies for managing evolving customer service. *Managing Service Quality: An International Journal*, 13(2), 164-170. Doi:<https://doi.org/10.1108/09604520310466860>
- Armstrong, G., Adam, S., Denize, S., & Kotler, P. (2014). *Principles of Marketing*: Pearson Australia. Retrieved from <https://books.google.com.pk/books?id=UKYaBQAAQBAJ>
- Aziz, R. C., Hashim, N., Omar, R. N. R., Yusoff, A. M., Muhammad, N. H., Simpong, D. B., . . . Safri, F. H. M. (2019). Teaching and Learning in Higher Education: E-Learning as a Tool. *International Journal of Innovative Technology and Exploring Engineering (IJITEE)*, 9(1), 458-463. Doi:<https://www.doi.org/10.35940/ijitee.A4188.119119>
- Benjamin, A. (1994). Affordable, restructured education: a solution through information technology. *RSA Journal*, 142(5449), 49-62. Retrieved from <https://www.jstor.org/stable/41376455>
- Berndt, A. (2009). Investigating service quality dimensions in South African motor vehicle servicing. *African Journal of Marketing Management*, 1(1), 001-009. Doi:<https://doi.org/10.5897/AJMM.9000050>
- Carvalho Pereira, M. A., & Terra Da Silva, M. (2003). A key question for higher education: Who are the customers? Retrieved from <http://hdl.handle.net/10919/97779>
- Edvardsson, B. (1998). Service quality improvement. *Managing Service Quality: An International Journal*, 8(2), 142-149. Doi:<https://doi.org/10.1108/09604529810206972>
- Fabrice, H. (2010). *Learning Our Lesson Review of Quality Teaching in Higher Education: Review of Quality Teaching in Higher Education*: OECD Publishing. Retrieved from <https://books.google.com.pk/books?id=mi7WAgAAQBAJ>
- Gautam, S., & Tiwari, M. K. (2016). Components and benefits of E-learning system. *International Research Journal of Computer Science (IRJCS)*, 3(1), 14-17. Retrieved from <http://irjcs.com/volumes/Vol3/iss1/03.JAJCS10082.pdf>
- Ghazali, N., & Saremi Inanlou, S. (2015). Service Quality Assessment within Notable Chain Restaurants of Tehran. Retrieved from <http://www.diva-portal.org/smash/record.jsf?pid=diva2:1018014>
- Gholamhosseini, L., Sadoughi, F., Ahmadi, H., & Safaei, A. (2019). Health Internet of Things: Strengths, Weakness, Opportunity, and Threats. Paper presented at the 2019 5th International Conference on Web Research (ICWR). Doi:<https://www.doi.org/10.1109/ICWR.2019.8765286>
- GOPAL, R. (2015). Impact of E-learning on student learning and employability–A study in India. Retrieved from <http://www.dypatil.edu/schools/management/wp-content/uploads/2015/05/Zulaika-Homavazir-2016.pdf>
- Guragain, N. (2016). E-learning benefits and applications. Retrieved from <http://urn.fi/URN:NBN:fi:amk-201602122192>
- Hetsevich, I. (2017). Advantages and disadvantages of E-learning technologies for students. *Joomlалms*. Jult, 31. Retrieved from <https://www.joomlалms.com/blog/guest-posts/elearning-advantages-disadvantages.html>
- Horton, W., & Horton, K. (2003). *E-learning Tools and Technologies: A consumer's guide for trainers, teachers, educators, and instructional designers*: Wiley. Retrieved from <https://books.google.com.pk/books?id=fyDS2crqAbgC>
- Jung, I. (2011). The dimensions of e-learning quality: from the learner's perspective. *Educational Technology Research and Development*, 59(4), 445-464. Doi:<https://doi.org/10.1007/s11423-010-9171-4>
- Kotler, P. (2001). *Marketing management, millenium edition*: Prentice-Hall, Inc. Retrieved from http://blog.ub.ac.id/apic/files/2012/10/philip_kotler.pdf
- Liston, C. (1999). *Managing quality and standards*: Open University Press. Retrieved from https://search.library.uq.edu.au/permalink/f/1o0ff38/61UQ_ALMA2192728730003131
- Mathew, J. J., & Jagannathan, L. (2015). Study Based on Servqual Dimensions in Service Industry- A Literature Review. *Industrial Engineering & Management*, 4(03), 3-5. Doi:<https://www.doi.org/10.4172/2169-0316.1000167>
- Nteliou, K. (2013). Stakeholder perception of quality in higher education and its links with societal culture. Doi:<http://dx.doi.org/10.12681/eadd/32288>
- Otiso, K. N., Chelangat, D., & Bonuke, R. N. (2012). Improving the quality of customer service through ICT use in the Kenya Power and Lighting Company. *Journal of Emerging Trends in Economics and Management Sciences*, 3(5), 461-466. Retrieved from <https://hdl.handle.net/10520/EJC127674>

- Pakurár, M., Haddad, H., Nagy, J., Popp, J., & Oláh, J. (2019). The service quality dimensions that affect customer satisfaction in the Jordanian banking sector. *Sustainability*, 11(4), 1113. Doi:<https://doi.org/10.3390/su11041113>
- Pierce, L. M., Weber, M. J., Klein, C. J., & Stoecker, B. A. (2020). Transitioning an advanced practice fellowship curriculum to eLearning during the COVID-19 pandemic. *Journal of Nursing Education*, 59(9), 514-517. Doi:<https://doi.org/10.3928/01484834-20200817-07>
- Preda, A.-M., CRIȘAN, D. A., & SAMUEL, A. N. A. (2008). Implementing E-Learning In The Romanian Educational System-A Priority In The Context Of Eu Integration. *Journal of Information Systems & Operations Management*, 2(1), 179-193. Retrieved from <https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.1032.7814&rep=rep1&type=pdf>
- Ramseook-Munhurrun, P., Lukea-Bhiwajee, S. D., & Naidoo, P. (2010). Service quality in the public service. *International journal of management and marketing research*, 3(1), 37-50. Retrieved from <https://www.theibfr.com/download/ijmmr/2010-ijmmr/ijmmr-v3n1-2010/IJMMR-V3N1-2010.pdf#page=39>
- Ramya, N., Kowsalya, A., & Dharanipriya, K. (2019). Service quality and its dimensions. *EPRA International Journal of Research & Development*, 4, 38-41. Retrieved from <https://www.researchgate.net/publication/333058377>
- Rastogi, M. K. (2010). *Production and Operation Management*: Laxmi Publications Pvt Limited. Retrieved from <https://books.google.com.pk/books?id=UnaHbbTO6JcC>
- Rodrigues, L. L. R. (2013). *Service Quality Measurement: Issues and Perspectives*: Anchor Academic Publishing. Retrieved from <https://books.google.com.pk/books?id=wcMhAAAAQBAJ>
- Russell, B., & Russell, R. S. (1995). *Production and operations management*: Prentice hall. Retrieved from <https://www.amazon.com/Production-Operations-Management-Roberta-Russell/dp/020514733X>
- SALEEM, M. A. (2009). Investigation the role of online experience in learning (E-Learning) environment a review for researchers. *Journal Of Wassit For Science & Medicine*, 2(2), 110-126. Retrieved from <https://www.iasj.net/iasj/download/7316bdf299edefb7>
- Shafii, M., Rafiei, S., Abooe, F., Bahrami, M. A., Nouhi, M., Lotfi, F., & Khanjankhani, K. (2016). Assessment of service quality in teaching hospitals of Yazd University of Medical Sciences: using multi-criteria decision making techniques. *Osong public health and research perspectives*, 7(4), 239-247. Doi:<https://doi.org/10.1016/j.phrp.2016.05.001>
- Titrek, O. (2016). Relations between trust in principal and shared leadership. *The Anthropologist*, 24(1), 300-308. Doi:<https://doi.org/10.1080/09720073.2016.11892019>
- Turnbull, D., Chugh, R., & Luck, J. (2021). Transitioning to E-Learning during the COVID-19 pandemic: How have Higher Education Institutions responded to the challenge? *Education and Information Technologies*, 1-19. Doi:<https://doi.org/10.1007/s10639-021-10633-w>
- Verma, H. V. (2011). *Services Marketing: Text and Cases*, 2/e: Pearson Education. Retrieved from <https://books.google.com.pk/books?id=nfszVjvXj1QC>
- Vlašić, S., Vale, S., & Puhar, D. K. (2009). Quality management in education. *Interdisciplinary Management Research*, 5, 565-573. Retrieved from <http://www.efos.unios.hr/repec/osi/journal/PDF/InterdisciplinaryManagementResearchV/IMR5a46.pdf>
- Young, L., & Burgess, B. (2010). *Marketing Technology as a Service: Proven Techniques that Create Value*: Wiley. Retrieved from <https://books.google.com.pk/books?id=jZ94gJKh8l0C>