The Importance of Educational Technology and its Impact on Sustainability Education An exploratory Study in Iraqi Universities

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Abstract. Education technology is a study, design, practice, manufacture, and the use of computers, servers, monitors, printers, storage devices, networks, communication systems, strategies and practices that improve and enhance educational sustainability efficiently and effectively. This study embraces the importance of educational technology in Iraqi universities and its use in sustainability education, which contributes to building new ways of thinking that contribute to improving the use of available resources and developing skills to activate sustainability in the work environment on information and technological resources for as long as possible, And upgrading the level of maturity of the capabilities of Iraqi universities to qualify them to adopt the project of building educational campuses. In addition to promoting sustainability in higher education institutions, undertaking sustainable development research, striving for "greening university cities", supporting technology sustainability efforts in our society, and finally promoting capacity building in technology, science, and innovation, for achieving sustainable development goals in a technology-based economy. Capacity-building is the only way to enhance competitiveness, increase economic growth, generate new jobs and reduce poverty.
Keywords: Educational Technology, Sustainability Education.

1 Introduction:

In the current era, technology is determining the availability of competitiveness, and information technology has been able to play an important role in sustainable development, by harnessing all the infinite possibilities contained in information technology and utilizing it for developing sustainable educational, economic and social development. For education to have the transformative capacity to support the new sustainable development agenda, it must rise to a higher level than it is now, that is, "education as usual" will not be sufficient to meet the requirements of sustainable development in university education. Education should be refined to be interactive and complementary. Universities should become exemplary places of technological sustainability, democratic, inclusive and non-exclusionary, and thus able to lay the foundations for achieving educational sustainability goals. Any successful educational system requires a distinguished academic staff filled with modern technical expertise as well as leadership skills to facilitate the educational process, despite all the developments that reduce the reliance on human resources and facilitate the provision of information in a systematic and high-quality technology, but it is indispensable In addition to the development of references in the age of technological revolution and information technology to mix all the developments in the academic field and sustain them into a single sophisticated template accommodates the

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needs of students to reformulate intellectual awareness about the entity of the educational institution.

2 Research Methodology

First, the research problem: The higher education sector suffers from a problem (how to benefit from educational technology and its impact on sustainability education in Iraqi universities). Second: research objectives: The research aims at the issue of the sustainability of education with a focus on higher education institutions, Including a scientific model that takes into account all the factors affecting the educational process in its analytical and descriptive deductive approach by analyzing the dimensions of the issue of the sustainability of education and characterize the elements of success in this area. Third: The importance of research: 1) This research is of great importance in the theoretical aspect as it provides an applied study that can be utilized in the labor market, which was not addressed by researchers previously. 2) Its importance provides all the potential services to use electronic devices and equipment and information and communication technology, which contribute to enrich the educational process and how to maintain its durability. 3) Higher education institutions at the local level can be seen shortly as "institutions that create decision-makers", i.e. they contribute to the establishment of "sustainability societies" substantially and build new ways of thinking. 4) That education is to be a part of the main courses in all scientific disciplines to help graduates to possess and develop skills to activate sustainability in the work environment. Fourth: The default design of the study: this shows in the following figure.

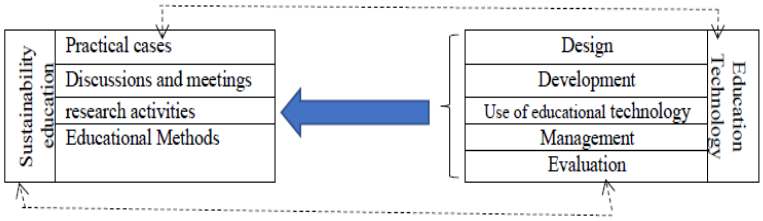

Figure 1: Default Design proposal.

Fifth: Study hypotheses: Assumptions are considered assumptions that require validation and are formulated based on the hypothetical study model. The first main hypothesis: (There is a significant correlation between education technology and sustainability education) in the field of study, from which the following sub hypotheses can be derived: 1. There is a significant correlation between design and sustainability education. 2. There is a significant correlation between development and sustainability education. 3. There is a significant correlation between the use of educational technology and sustainability education. 4. There is a significant correlation between management and sustainability education. 5. There is a significant correlation between evaluation and sustainability education. The second main hypothesis: There is a significant impact of education technology and sustainability education in the field of study. 1- Significant impact effect on educational technology in practical cases. 2 -Significant impact effect on educational technology in discussions and meetings. 3 - Significant impact effect on educational technology and research activities. 4 - Significant impact effect on educational technology and teaching methods. Sixth: Study Methodology: The present study relied on the descriptive and analytical methodology to achieve the objectives of the study, with answering questions by choosing the hypotheses through two axes of theoretical and practical study to

enable the compatibility between these two parts of the study and analysis. Seventh: Limits of the Study: The basic limits of the study are including 1 - Knowledge limits - the study addressed both the technology of education and the sustainability of education in Iraqi universities. 2 - Spatial Boundaries - The study was completed at (University of Nineveh, Northern Technical University). 3 - Time limits - the study was conducted during the period 15/7/2019 until 14/12/2019. 4 - Human limits - In our study, the researchers adopted a survey of the views of the lecturers as human limits for the current study. Eighth: The study subjects: The subjects were chosen to be tested the variables and the hypothetical model by the sound scientific foundations of the field of study, for achieving the objectives and directions. Therefore, the researcher chose Mosul University, Northern technical university. The questionnaire was distributed with (100) questionnaires and (76) valid questionnaires were retrieved. *Ninth: Data collection methods:* For collecting primary and secondary data we used to accomplish the study in both theoretical and practical aspects. The use of instructional technology, management and evaluation, while the variables of sustainability education were practical cases, discussions and meetings, research activities and educational methods.

3 The Educational Technology

First: Educational Technology Concepts:

- Researchers knew that educational technology is a means or a tool that enables us to obtain information according to the necessary characteristics used by the beneficiary for decision-making [1].
- Is a systematic application of the principles and theories of education in practice in the actual reality of the field of education, or the science of the application of knowledge in educational purposes in an orderly manner [5].
- Educational technology is a broad specialty concerned with all aspects of education technology, processing and management of the educational process, especially in universities, through dealing with computer software and electronic computers to transfer, store, protect, process, transfer and retrieve information [3].
- It represented a total of hardware, human and intellectual components as well as software and high technical capabilities that invest in all kinds of communications to achieve the objectives of the organization in the near and long term [7].

Procedural Definition: Modern educational methods and methods to improve the learning and teaching process to achieve advanced educational goals and high economic effectiveness that enable graduates to sustain in the work environment.

Educational Technology System Components: The system is defined as a set of overlapping, interdependent and integrated elements that affect each other to perform functions and activities whose end result is to achieve the target output achieved through this system; therefore, the components of instructional technology are: 1 - Design: it is concerned with the design of educational systems and the design of materials and educational strategies and writing educational texts and take into account the characteristics of the learner [6]. 2 - Development: This is the process of converting design specifications into a physical format that focuses on production and development such as printed materials, the production of audio, audio and video programs, and the applications of computer technology such as multimedia technology, computer-assisted education, and high-media technology [4]. 3 - Use of Educational technology: in this area is concerned with the use of educational media as well as the dissemination of educational innovations and follow-up, and the establishment of systems and policies necessary for application in the educational process [6]. 4 - Management: This area is

concerned with the management of projects and administrative resources, systems of exchange and administrative communication, and the management of information and knowledge and organization of sources [16]. 5 - Evaluation: It is concerned with the analysis and treatment of educational problems, as well as takes care of the measurement of the reference, formative evaluation and final evaluation [2].

Second: The concept of sustainability education:

- Sustainability education is a process of learning how to make decisions that take into account the distant future of the economy, the environment and justice among all societies [12].
- It refers to "acquiring and practicing knowledge, values and skills that strike a balance between the economic, social and environmental aspects of development, taking into account the growth and progress of the individual and society in life" [8].
- [14] defined it as a process of consolidating sustainability in higher education institutions in two big directions "greening the headquarters" and "greening the courses" with a growing trend towards adopting strategic and operational plans in these two directions.
- Defined as the process of integrating sustainability concepts into curricula, including environmental and economic information and indicators in a way that develops awareness and positive attitudes towards sustainability [2].
- Continuing education is closely related to an individual's understanding, developing his vision and developing his understanding of others. Understanding modern science is a central part of education aimed at building a sustainable future. Everyone has to learn the skills that enable them to develop their knowledge and knowledge in the context of sustainability [3].
- It is defined as the process of supporting education for its sustainability, that is, supporting education throughout life, at all times and places and within the limits of the educational institution. This concept contributes to promote the development of education and the dissemination of knowledge and deepen and install, as well as contribute to the development of modern programs and plans for education. Promoting and encouraging development in the educational process, and contributing to the provision of modern educational mechanisms for learning [8].
- It is also defined as a sustainable or continuing education that contributes to the learning process of knowledge, which includes how to seek information sources to take advantage of lifelong learning opportunities. This contributes to the learning process of coexistence with others, which includes the learner's acquisition of skills to maintain and keep the resources environment sound and effective in the work environment and create a sound higher education environment capable of giving and development[13].

Procedural Definition: It is defined as a cumulative construction process; whose literature appears in the initial experiments of the educational context to complement the establishment of sustainable universities rooting and maintaining environmental awareness while engaging in the developmental educational process that takes into account the principles of sustainability.

Obstacles to Sustainability Education: Some of the most important obstacles to sustainability education [8] include: 1- Lack of good and modern university books. 2. Weak scientific efforts in engaging diverse scientific disciplines in joint scientific discussions and research [14]. 3 - Difficulty of winning a qualified teaching staff in this area. 4. Availability of sustainability education programs. 5. Weak curricula, teaching methods and scientific evaluation [11].

Sustainability Education Tools include 1- Practical cases. 2- Discussions and meetings. 3- Research activities. 4 - Educational methods and types: A) Service-learning: based on integrating university education with community service as well as maximizing the use of

educational technologies [15]. B) Learning is effective: education that seeks to accumulate, integrate and operate knowledge in an effective mental way by the learner, with the necessary reinforcement of the internal motivation of learning that encourages the adoption of the principle of "lifelong learning" [10]. C) Deep learning is an education that encourages students to infer meanings and build in-depth understanding by reading and analyzing the material and careful thinking of concepts and terminology with the superior ability to benefit from the accumulation and integration of ideas, science and results [9].

4 Practical framework for research

First: - Description of the study sample: 1- Sample of the study: The sample of the study included Iraqi universities, where 100 questionnaires were distributed to the teaching staff in the Iraqi universities and 76 questionnaires were retrieved. 2- Sample collection method: The researcher used the simple random sample method to distribute the questionnaire forms to the teachers on the assumption that society is homogeneous. Therefore, the researcher used the simple random sample and then the appropriate sample was withdrawn as the sample size reached 76 teachings which represented the study population. 3- Statistical indicators: The researcher relied on the statistical data and information obtained from the research according to the Likert scale. The researcher used the most important statistical indicators to suit the research hypotheses and questions through 1- Frequencies and percentages: to know the number and percentage of respondents within the research sample. 2 - Weighted arithmetic mean: used to determine the degree of approval of the sample of the questions. 3 - Standard deviation: used to determine the extent of dispersion of the responses of the sample researched on the degree of approval. 4 - correlation coefficient Person: It is used to measure the relevance of research variables with each other and determine the type of relationship is it positive (positive) or negative (negative). 5 - Test F: used to find out the impact of independent variables in the research on the dependent variable. 6 - simple regression equation: It was used to find out the effects of the independent variables on the approved variables. It should be noted here that all these indicators were calculated by the Statistical Package for Social Sciences (SPSS). Second: Demographic variables of the research: shows the description of the demographic variables of the members of the research sample

Note in Table (1): 1 - With regard to the sex variable where the frequency of males was the highest, reaching 44 by 57.9%, while the frequency of females 32 by 42.1%. 2. With regard to age groups where the frequency of age group 45 and 55 and above was 22.9%. 3 - With regard to the educational attainment categories, the frequency of the Ph.D. class was highest with 32 percent (42.1%). 4 - With regard to the number of years of experience in the category was the highest repeat of the category more than 25, which is 28 by 36.8%.

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Third: Description and diagnosis of research variables include: 1- Computational media and standard deviations of sample responses for instructional technology; First: Presenting the results of the questionnaire form indicating the strengths and weaknesses in each educational field: This includes the description and diagnosis of the main study variables, where technological education is adopted as an independent variable, and sustainability education as an accredited axis in the Iraqi University. After the researcher found the mean total weighted

media and the percentages of the paragraphs within each axis and each separately, to show the strength and weakness side of each dimension, the results are as follows: 1- Description and diagnosis of research variables related to information technology axis variables.

Table 1: Frequencies and Percentages Demographic Variables for Research

Years of service			
		Duplicates	Percentage %
Valid	5-1	6	7.9
	10-6	18	23.7
	15-11	16	21.1
	20-16	4	5.3
	25-21	4	5.3
	more than 25	28	36.8
	Total	76	100.0
Age			
Valid	Less 25	2	2.6
	34-25	12	15.8
	44-35	18	23.7
	54-45	22	28.9
	more than 55	22	28.9
	Total	76	%100

Sex			
		Duplicates	Percentage %
Valid	Male	44	57.9
	Female	32	42.1
	Total	76	100.0
Academic achievement			
Valid	bacilluria	14	18.4
	High diploma	6	7.9
	master	24	31.6
	Ph.D.	32	42.1
	Total	76	100.0

Table 2: Averages and standard deviations of the research sample responses for the design dimension

No.	Paragraphs	Arithmetic mean	Standard deviation	Relative importance%
1	Our universities attach great importance to the design of educational systems Our universities are interested in modernizing the curriculum Our universities are interested in planning educational strategies in a practical manner	3.53	0.797	70.6%
2	Our universities are interested in modernizing the curriculum	3.5	0.688	70%
3	Our universities are interested in planning educational strategies in a practical manner	3.18	0.896	63.6%
	Design	3.403	0.602	68%

Table 3: Mean and standard deviation of research responses for the development dimension

No.	Paragraphs	Arithmetic mean	Standard deviation	Relative importance%
1	Our universities are interested in developing curriculum printing and continuously updating it on the website	3.37	0.877	67.4%
2	Our universities are interested in producing audiovisual programs to improve technical education and the multiplicity of its methods	3.24	0.63	64.8%
3	Our universities pay great attention to the use of educational technology such as the use of multimedia and high media	3.37	0.814	67.4%
	Development	3.3246	0.6036	66.4%

The results of the analysis of the observation form from the sample respondents in Table (2) indicate, as, for the design dimension, it obtained an arithmetic mean of (3.403) and a standard deviation (0.602) where the relative importance was (68), which is greater than 60%. For this dimension, mean arithmetic mean (3.53) and standard deviation (0.797).

The results of the analysis of the observation form from the sample respondents in the Table (3) indicate as for the dimension of the operating system and cloud applications, it obtained an arithmetic mean of (3.3246) and a standard deviation was (0.6036) where the Relative importance was (66.4) which is greater than (60%). As the highest relative importance in this dimension with arithmetic mean (3.37) and standard deviation (0.877) and (0.814).

Table 4: Arithmetic mean and standard deviation of the research responses related to the axis of using educational technology

No.	Paragraphs	Arithmetic mean	Standard deviation	Relative importance%
1	Our universities are interested in the dissemination of educational innovations and follow-up	3.45	0.828	69%
2	Our universities encourage all cadres to use educational technology	3.71	0.867	74.2%
3	Our universities work to establish the systems and policies necessary to apply in the educational process	3.47	0.797	69.4%
	The use of education technology	3.5439	0.712	70.8%

Table (4) indicates concerning the dimension of the use of educational technology has obtained arithmetic mean of (3.5439) and a standard deviation was (0.712), where the relative importance was (70.8), that is greater than 60% and this is a strong indicator of this dimension, while paragraph (2) The highest relative importance was (74.2) in this dimension, of arithmetic, mean (3.71) and standard deviation (0.867).

Table 5: Arithmetic mean and standard deviation of the research responses for the management dims.

No.	Paragraphs	Arithmetic mean	Standard deviation	Relative importance%
1	Our universities are committed to the process of incorporating sustainability into the curriculum and supporting the environmental and economic resources required	3.32	0.933	66.4%
2	Our universities are interested in systems exchange and administrative communication	3.42	0.688	68.4%
3	Our universities are interested in managing information and knowledge and organizing their sources	3.47	0.862	69.4%
	Management	3.4035	0.667	68%

Table (5) indicates the dimension of management has obtained an arithmetic mean of (3.4035), the standard deviation of (0.667) where the relative importance is (68), which is greater than 60% and this is a strong indicator of this dimension, while paragraph (3) as the highest relative

importance for this dimension with (69.4), of arithmetic mean (3.47) and standard deviation (0.862).

Table 6: Arithmetic mean and standard deviation of the sample responses of the evaluation dimension

No.	Paragraphs	Arithmetic mean	Standard deviation	Relative importance%
1	Our universities attach importance to the analysis and treatment of educational problems	3.29	0.867	65.8%
2	Our universities take care of measuring the reference teller (measuring individual level within the group)	3.21	0.811	64%
3	Our universities carry out the quarterly and final calendar	3.37	0.589	67.4%
	Evaluation	3.289	0.543	66%

Table (6) indicates the dimension of the evaluation has obtained an arithmetic mean of (3.289) with standard deviation (0.543), where the relative importance is (66), which is greater than 60% and this is a strong indicator of this dimension, while paragraph (3) as the highest relative importance for this dimension that was (67.4), with arithmetic mean (3.37) and standard deviation (0.589).

Table 7: shows the order of educational technology dimensions

No.	Dimensions	Arithmetic mean	Standard deviation	Relative importance%	Order of dimensions
1	Using educational technology	3.5439	0.712	70.8%	Firstly
2	Management	3.4035	0.667	68%	Second
3	the design	3.403	0.606	68%	Third
4	Development	3.3246	0.6076	66.4%	Fourthly
5	Evaluation	3.2895	0.54344	66%	Fifth
Education Technology		3.393	0.4636	67.86%	

From the table above, we note that the educational technology has obtained a mean of (3.393) standard deviation (0.4636) and relative importance of (67.86), and about the order of dimensions we note that the dimension of the devices using educational technology came first, which obtained arithmetic mean of (3.5439), the standard deviation of (0.712) and relative importance was (70.8).

Table 8: Mean and standard deviation of the research sample for the dimension of practical cases

No.	Paragraphs	Arithmetic mean	Standard deviation	Relative importance%
1	Our universities participate with the participation of scientific departments and teaching staff in practical exercises	3.58	0.889	71.6%

2	Our universities gain their students with field experience by practicing practical exercises	3.47	1.006	69.4%
3	Our universities provide all the resources and practical requirements for sustainability	3.18	0.955	64%
	Practical Cases	3.4123	0.69935	68%

Table (8) indicates the dimension of the use of educational technology has obtained an arithmetic mean of (3.4123) and standard deviation (0.699) where the relative importance is (72.74), which is more than 60% and this is a strong indicator of this dimension, while paragraph (1) The highest relative importance which is (71.6) in this dimension, the arithmetic mean was (3.58), the standard deviation was (0.889).

Table 9: Statistical parameters of the research responses after discussions and meetings

No.	Paragraphs	Arithmetic mean	Standard deviation	Relative importance%
1	Our universities identify appropriate sources of discussion (article, report, document, website)	3.42	0.858	68%
2	Our universities attend monthly meetings to discuss educational developments	3.71	0.927	74%
3	Our universities attach importance to holding seminars that include all professors from all disciplines to improve the quality of courses and contents and how to prepare syllabus course	3.42	0.913	68%
	Discussions and meetings	3.5175	0.7	70%

Table (9) indicates the dimension of the discussions and meetings, it got arithmetic mean of (3.5175) and a standard deviation (0.7) where the relative importance was (70), which is greater than 60% and this is a strong indicator of this dimension, while paragraph (2) has the highest Relative importance with (74), and arithmetic means (3.71), the standard deviation of (0.927) in this dimension.

Table 10: Mean and standard deviation of the responses related to the research activities dimension

No.	Paragraphs	Arithmetic mean	Standard deviation	Relative importance%
1	Our universities have practical role models to develop scientific research	3.55	0.978	71%
2	Our university attaches importance to the research partnership to integrate our local expertise with international expertise	3.34	0.909	66.8%
3	Our universities use peer participation and role play in the research areas	3.16	0.855	63.2%
	research activities	3.3509	0.74716	67%

Table (10) indicates the dimension of the research activities, it obtained an arithmetic mean of (3.3509) and a standard deviation (0.74716), where the relative importance was (67), which is greater than 60% and this is a strong indicator of this dimension, while paragraph (1) as the

highest relative importance in this dimension which is (71), and the arithmetic mean was (3.55), the standard deviation was (0.978).

Table 11: Mean and standard deviation of the responses based on the educational methods

No.	Paragraphs	Arithmetic mean	Standard deviation	Relative importance%
1	Our universities use service-learning, which is the integration of university education with community service	3.39	0.79	67.8%
2	Our universities use effective learning that seeks to accumulate, integrate and operate knowledge in an effective mental way by the learner	3	0.658	60%
3	Our universities use deep learning that encourages students to analyze and conclude	3.05	0.899	61%
	Educational Methods	3.1491	0.54081	62.98%

Table (11) indicates the dimension of the methods, it obtained an arithmetic mean of (3.149), the standard deviation was (0.5408) where the relative importance was (62.98) which is greater than 60% and this is a strong indicator of this dimension, while paragraph (1) came as the highest relative importance for this dimension has (67.8) with arithmetic mean (3.39) and a standard deviation (0.79).

Test hypotheses of the study:

Test the first main hypothesis: - which provides a significant correlation between education technology and sustainability education

H_0: There is no significant correlation between education technology and sustainability education

H_1: There is a significant correlation between education technology and sustainability education

The following sub-hypotheses emerge

1. There is a significant correlation between design and sustainability education
2. There is a significant correlation between development and sustainability education
3. There is a significant correlation between the use of educational technology and sustainability education
4. There is a significant correlation between management and sustainability education
5. There is a significant correlation between evaluation and sustainability education

Table 12: Represents the correlation relationships

Correlations						
		Design	Development	Use Technology Education	Management	Evaluation
Sustainability Education	Pearson Correlation	0.776**	0.648**	0.772**	0.865**	0.602**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000
	No.	76	76	76	76	76
** Correlation is significant at the 0.01 level (2-tailed). *Correlation is significant at the 0.05 level (2-tailed).						

Through table (12) indicates:

- There was a significant correlation in general between educational technology and sustainability education in the research sample. It is equal to (0.000) which is less than 0.01 with 99% confidence. This means that the first main hypothesis is achieved i.e. there is a significant correlation between educational technology and sustainability education.

At the level of sub-hypotheses were:

- The significant correlation between design and instructional technology where the correlation value was (0.776), because the moral value is sig. Equal to (0.000) which is less than 0.01 with 99% confidence.
- Correlation is a significant development and educational technology where the correlation value was equal to (0.648), because of the moral value sig. Equal to (0.001) which is less than 0.01 with 99% confidence.
- The correlation was significant between the use of information technology and educational technology where the value of the correlation was equal to (0.772) because of the moral value sig. Equal to (0.001) which is less than 0.01 with 99% confidence.
- The correlation was significant between management and educational technology where the correlation value was (0.865), because the moral value is sig. Equal to (0.000) which is less than 0.01 with 99% confidence.
- The correlation was significant between evaluation and educational technology where the correlation value was (0.602), because the moral value is sig. Equal to (0.020) which is more than 0.01 with 99% confidence.

Test the second main hypothesis: which provides a significant impact on technology education and sustainability education

- H0: There is no significant effect of education technology and sustainability education
- H1: There is a significant effect of education technology and sustainability education

The sub-hypotheses arise:

- The significant influence of educational technology in practical cases.
- The significant influence of educational technology in discussions and meetings.
- The significant influence of educational technology in research activities.
- The significant influence of educational technology in educational methods.

Table 13: Represents the table of variance analysis

ANOVA[a]							
Model		Sum of Squares	Df	Mean Square	F	Sig.	R^2
1	Regression	8.293	1	8.293	80.593	.000[b]	0.722
	Residual	7.614	74	.103			
	Total	15.907	75				
a. Predictors: the constant, sustainability education							
b. Dependent Variable: Educational Technology							

Table 14: Impact of Educational Technology on Sustainability Education

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	Constant	1.038	.265	----	3.92	.000

	Education technology	.701	.078	.722	8.977	.000
a. Dependent Variable: sustainability education						

The result of F test indicates that there is an effect of instructional technology on the sustainability education shown in Table (13). Rejection of the hypothesis means non acceptance and acceptance of the alternative hypothesis. This means that there is an impact of the education technology and sustainability education.

Table (14) indicates that the impact value is B= (1.038). This means that increasing the educational technology variable by one unit of standard deviations will increase the sustainability education by 0.701% of the standard deviation unit.

Table 15: Impact of Educational Technology on Sustainability Education

Supported variable / Supported variable	Sustainability education			
	F	R^2	B	Impact significance
Design	48.656	0.397	0.718	Moral
Development	24.705	0.250	1.186	Moral
Use education technology	25.462	0.256	1.01	Moral
Management	50.159	0.404	0.42	Moral
Evaluation	12.084	0.140	1.857	Moral

A- Table (15) indicates that the value of R2 equals (0.397). What does it mean that the design has explained 39% of the changes in sustainability education and the value of B = 0.718 of standard deviations will increase sustainability education by 7.18% of the standard deviation unit.

B - Table (15) indicates that a value of R2 equals (0.250), What does it means that the development has accounted for 25% of the changes in the sustainability education and the value of B = 1.186, standard deviations will increase sustainability education by 11.86% of the standard deviation unit.

C - Table (15) indicates that a value of R2 is (0.256), What does it mean that using of educational technology has accounted for 25.6% of the changes in education sustainability and the value of B = 1.01, Instructional technology, one unit of standard deviations will increase sustainability education by 10.1% of the standard deviation unit.

D- Table (15) indicates that the value of R2 equals (0.404). This means that the administration has interpreted 40.4% of the changes in sustainability education. The value of B = 0.42 means that the increase of the management variable is one unit of standard deviations will increase sustainability education by 4.2% of the standard deviation.

E- Table (15) indicates that the value of R2 equals (0.14). What does it mean that the evaluation has explained 14% of the changes in the sustainability education B = 1.857, this means one unit of management will increase sustainability education by 18.57% of the standard deviation unit.

5. Conclusions:

The most important conclusions are firstly, based on Education Technology, that includes:

1 - After the use of educational technology the arithmetic mean of that axis is 3.5439 and a standard deviation of 0.712, and relative importance of 70.8%, which is greater than 60%, which indicates that there is a strong indication of this dimension. This dimension was ranked first. As shown in Table (4), the second paragraph of this dimension has obtained the highest percentage weight 74.2% with a mean of 3.71 and a standard deviation has 0.867.
2 - After the design obtained arithmetic mean of that axis is 3.403, and a standard deviation of 0.602, and relative importance has 68, which is greater than 60%, which shows that there is a strong indicator of this dimension has obtained this second ranking as shown in table (2), and got paragraph The first of this dimension has the highest relative importance of 70.6 with an arithmetic mean of 3.53 and a standard deviation of 0.797, as shown in Table (2).
3 - After obtained the administration of the mean of that axis is 3.4035, and a standard deviation of 0.667, and relative importance of 68, which is greater than 60%, which indicates that there is a strong indicator of this dimension. He obtained the third order as shown in Table (5). The third paragraph obtained the highest Relative importance% 69 for this dimension with arithmetic mean of 3.47 and a standard deviation has 0.862.
4 - After obtained the development of arithmetic mean of that axis is 3.3246, and a standard deviation of 0.6076, and relative importance of 66.4, which is greater than 60%, which indicates that there is a strong indicator of this dimension. The first and third paragraphs obtained the highest 67.4 relative importance for this dimension with arithmetic mean of 3.37 and a standard deviation of 0.883 and 0.814. as shown in Table (3).
5 – After obtained the evaluation of arithmetic mean of that axis is 3.289, and a standard deviation 0.543, and the relative importance 66 is greater than 60%, which indicates that there is a strong indicator of this dimension, as shown in Table (6). The third paragraph obtained the highest relative importance of 67.4 for this dimension with arithmetic mean of 3.37 and a standard deviation of 0.589.

Secondly based on the Sustainability Education, that includes:
The first major hypothesis was accepted, which states that there is a significant correlation between education technology and sustainability education. It is equal to (0.000) which is less than 0.01 and with 99% confidence as shown in Table (12).
At the level of sub-hypotheses were:
1- Significant correlation between design and sustainability education where the correlation value was 0.776 because of the moral value of sig. Equal to (0.000) which is less than 0.01 and with 99% confidence.
2- Significant correlation between development and sustainability education where the correlation value was 0.648 because of the moral value of sig. Equal to (0.000) which is less than 0.01 and with 99% confidence.
3 - A significant correlation between the use of educational technology and sustainability education where the value of the correlation was equal to 0.772 because of the moral value of sig. Equal to (0.000) which is less than 0.01 and with 99% confidence.
4 - A significant correlation between management and sustainability education where the value of the correlation was equal to 0.865 because of the moral value of sig. Equal to (0.000) which is less than 0.01 and with 99% confidence.
5- Significant correlation between evaluation and sustainability education where the value of the correlation was 0.602 because of the moral value of sig. Equal to (0.000) which is less than 0.01 and with 99% confidence.

Thirdly includes: the accept the second main hypothesis - which provides a significant significance for education technology and sustainability education and reject the null hypothesis where the results of the F test indicate the impact of education technology on sustainability

education where the calculated value of F was 80.593 at a significant level 0.05 and the value of P.Value Is equal to (0.000) which is less than 0.05. This shows the impact of cloud computing on e-learning. As shown in Table (13).
Fourthly includes: the value of R2 is 0.722, which means that education technology has accounted for 72.2% of the changes in sustainability education as shown in Table (13).

Fifthly includes: the effect value of (B) is equal to 1.038, which means that increasing the educational technology variable as one of the standard deviations will increase the e-learning by 10.38% of the standard deviation unit as shown in Table (14).

Sixthly includes there is a positive trend among respondents regarding the urgent need to embrace modern educational technology with an agreement to adopt these applications in the study sample organization.
Seventhly includes that there is a motivation to upgrade the level of Iraqi universities that must be known to teach sustainability in terms of goal, components, components and methods and the adoption of a sustainable information technology project.

Finally, includes on how to diagnose environmental problems resulting from the use of information technology and propose solutions.

We also proposed the following recommendations and suggestions, such as:
1- The researcher recommends the need to create a clear vision among leaders in the organizations of the study sample to the extent of full conviction of any developments that fall within the framework of the so-called sustainability education and maintain the sustainability of the educational process to remain an asset for generations leaders with the benefit of the experiences of others through the corresponding universities to exchange experiences And experiences.
2- The researcher finds diagnostic solutions to the environmental problems resulting from the use of information technology.
3 - The researcher believes that it is necessary to find a motive to raise the level of Iraqi universities so that their students can fully understand and awareness of the principles of sustainable education content, components and goals.

References:
[1] Al-Ahmari, Saadia, e-learning, Baghdad, 2015, pp. 43-44.
[2] Al-Azzawi, Mohammed Abdul Wahab, The role of e-learning in the development of higher education, research presented at the second scientific conference of the College of Administrative Technology, Mosul, Iraq, (2012).
[3] Aldwikat, Sana, Components of the educational system, mawdoo.com, (2018).
[4] Ali Mohamed El-Sayed, Educational Technology and Teaching Aids, Cairo, Dar Al-Fikr Al-Arabi, (2002).
[5] Al-Todary, Awad Hussain, Educational Technology: Its Innovations and Applications, Series Altad, Cairo, (2009), p.91-92.
[6] Attar, Abdullah Ishaq and Kansawa, Ihsan Mohammed, means of educational communication, Riyadh: Jarir Bookstore. (2004), p3-4.
[7] Darwish, Saad Zenad, E-learning is a societal necessity, Delmon University, (2016), pp. 8-9.
[8] Embusaidi, Abdullah, Integrating the concepts and themes of education for sustainability, Amman, Tawasul magazine, (2011), p15-17.
[9] Holdsworth, S., Wybron, c., Bekessy, s. and Thomas, I., Professional development for education for sustainability, International Journal of Sustainability in Higher Education, vol. 9 (2), (2008), p. 131-146.
[10] MacVaug, J.and Northon, M., Introducing sustainability into business education context using active learning, International Journal of sustainability in Higher education, vol.13 (1), (2012), p. 72-87.
[11] Postal, Abdullah, Sustainability Education in Arab Universities, the first scientific symposium of the Center for Sustainable Development, Qassim University, Saudi Arabia, (2013), p 28-30.

[12] Rio, 2012, United Nations Conference on sustainable Development, 20-22 June, (2012).
[13] Salloum, Taher, Sustainable Development in Curricula, Conference Towards Better Investment of Science in the Challenges of the Times, Faculty of Education, Damascus University, Damascus, (2009).
[14] Savelyeva, T. and McKenna, J., Campus sustainability: emerging curricula models in higher education, International Journal of sustainability in Higher education, vol.12 (1), (2011), p.22-23.
[15] Shephard, K., Higher education for sustainability: seeking affective learning outcomes, International Journal of sustainability in Higher education, vol.9 (1), (2008), p.87-98.
[16] Zaki, Samy Mohamed, Practical Applications for the Production of Teaching Aids, Journal of Educational Studies, Egypt, (2000), p6-9.