The Extent of Awareness of Faculty Members at Albaydha University About the Concept of Educational Technology and Their Attitudes Towards It

Nayef Ali Saleh Al-Abrat[1]
and Mohammed Hasan Ali Al-Abyadh[2,3](✉)

[1] College of Education and Science in Rada'a, Albaydha University, Rada'a, Albaydah, Yemen
dr.nayefalabrat78@gmail.com
[2] College of Education in Wadi Addawasir, Prince Sattam bin Abdulaziz University, Alkharj, Saudi Arabia
m.alabyadh@psau.edu.sa
[3] College of Education, Thamar University, Thamar, Yemen

Abstract. The study aimed to find out the awareness of faculty members at Albaydha University about the concept of educational technology and their attitudes towards it. In order to achieve the aim of the study, the researcher followed the descriptive approach. He also designed the study tool (questionnaire) that consisted of (38) items distributed in two areas and was of sufficient validity and reliability for the purposes of this study. The study sample consisted of all (96) faculty members. After collecting the data using the study tool, the researcher analyzed it statistically, and used in this the arithmetic means, standard deviations, percentages, and the (T-test). The results of the study were as follows:

- The results revealed that the extent of the study sample's awareness of the concept of educational technology is low.
- There is statistically significant differences awareness of the study sample members of the concept of educational technology due to the variable years of experience in education, and in favor of the study samples who have less than five years of experience.
- The results reveal that there is an average positive trend in the study sample towards educational technology.
- There are statistically significant differences of the trend towards educational technology due to the years of experience in education variable, and in favor of the study samples who have less than five years of experience.
- There is a positive correlation relationship with statistical significance between the extent of the study sample's awareness of the concept of educational technology and their level of attitudes towards it.

Keywords: Educational technology · Attitude · Faculty members

A. M. Al-Bakry et al. (Eds.): NTICT 2021, CCIS 1511, pp. 189–207, 2021.
https://doi.org/10.1007/978-3-030-93417-0_13

1 Introduction

The tremendous development in human knowledge and experiences has resulted in many aspects and developments in all fields, the most important of which is technology. This technology was initially produced and employed in non-educational fields, such as the industrial, medical, and other fields. Then, this technology was adapted and used in the educational field, and it was called educational technology. Many workers in the field of educational technology have broad hopes for the role that educational technology can play if it is best used and employed in the educational learning process. As educational technology includes devices, tools, materials, educational situations, teaching strategies, evaluation and feedback, it is included in all educational fields, which leads to effective development and a noticeable increase in the outcomes of the educational process (Ashteiuh and Olayan 2010: 37).

Its use in teaching and learning processes works to support education, enhance learning, and provide an opportunity for both the teacher and the learner to use this technology in an appropriate manner and to achieve educational goals. The intelligent and skilful use of appropriate educational technology to teach the learner individually and collectively increases the teacher's level in his work and raises the level of the learner in his learning (Al-Jamal 2004: 124; Labusch and Eickelmann 2018). Despite the great importance attached to educational technology and its role in the teaching and learning process, its concept is still tainted with much ambiguity. There are some who believe that the concept of educational technology narrows to be limited to educational aids, including the devices and tools they contain (Salama 2001: 125).

This common belief towards educational technology is unfair, as it adds a lot of ambiguity to the content of the term and limits its adoption in the fields of educational system development in all its aspects. This explains that technology, for many, means machines and electronic devices that represent tangible aspects of technology that are used in everyday life. They lose sight of the intangible aspects of technology, namely the complex processes, systems and tasks that must be planned, managed, and evaluated in order to obtain the best. It means the orderly application of scientific knowledge, that is, it includes both the theoretical and the practical sides. It provides a cognitive framework to support the application (Shami et al. 2008: 15).

This ambiguity may prevent educational technology from adopting and employing it ineffectively during the teaching process by faculty members. The results of some studies, such as the study of Clark (2000, 179), Sultan (2001, 166), Haji Issa (2001, 215) and Salem (2004, 104) indicate that one of the most important reasons for faculty members' resistance to using educational technology is due to the ignorance of the teaching staff or their lack of awareness and lack of their culture about the concept of educational technology, lack of belief in the scientific value of educational technology, in addition to their poor awareness of the importance and role of its use in education. Salama (2007, 122) adds the teacher's negative attitude towards educational technology, as some faculty members see that educational technology is a competition for them, without being aware of the role of the new teacher, which has changed under educational technology from a mere conveyor of information to a manager of the educational position, providing the necessary facilities for education, a designer for the

educational process, a producer of educational materials, a guide for the learner, and a constant evaluation of the educational system. This reflects negatively on the attitudes of faculty members towards educational technology. The results of many studies indicates that the attitudes of faculty members towards educational technology affect their use of it.

1.1 The Problem of the Study

Despite the results of many studies dealing with the issue of educational technology, and what some researchers reported, such as Salem and Saraya (2003: 277), Salem (2004), Salama (2007: 116) and Shammi et al. (2008: 20) the benefits of using educational technology and its importance in supporting the performance of the teacher, saving his effort and time, overcoming the problem of increasing the numbers of learners, facing the increase in scientific knowledge, treating the problem of individual differences between learners, achieving learning in its various cognitive, skill and emotional aspects, and increasing the motivation of learners to learn, participate and pay attention. As well as developing the learner's ability to self-learning, increasing his linguistic wealth, training in sound scientific thinking methods, and solving some of the problems of faculty members.

However, the researcher noticed through his experience in field work as a faculty member that there is negligence or evasion by faculty members in employing educational technology and exploiting its potential in the teaching and learning process, and their reliance largely on the style of lecture and class discussions, as they consider it the best way to transfer skills and information and discussing it with their students.

The researcher felt through this that the reason may be due to the lack of awareness of faculty members of the concept of educational technology and its role in the teaching and learning process.

Accordingly, the issue of awareness of the concept of educational technology and the importance of employing it on the ground is a matter of great importance because of its impact on the development of educational reality. Awareness of the concept of educational technology is an essential step for feeling the importance of employing it in the educational field and adopting it in the field. Moreover, identifying the extent of the faculty members' awareness of the concept of educational technology and their attitudes towards it is a necessary matter that reveals the negative aspects and limits them, enhances the positive aspects, and prompts the suggestion of solutions to get rid of these negative aspects.

Although there are Arab and foreign studies that dealt with such a topic in educational technology, but within the limits of the researcher's knowledge, no study has been conducted on the awareness of faculty members about the concept of educational technology and their attitudes towards it in the Republic of Yemen. Therefore, the researcher felt the need to know the awareness of the faculty members at Albaydha University of the concept of educational technology and their attitudes towards it.

Specifically, the study tried to answer the following questions:

- To what extent are the faculty members at Albaydha University aware of the concept of educational technology?

- Are there statistically significant differences in the awareness of faculty members at Albaydha University with the concept of educational technology due to years of teaching experience (less than 5 years - more than 5 years)?
- What are the attitudes of faculty members at Albaydha University towards educational technology?
- Are there statistically significant differences in the attitudes of faculty members at Albaydha University towards educational technology due to years of teaching experience (less than 5 years - more than 5 years)?
- Is there an overall relationship between the awareness of faculty members at Albaydha University about the concept of educational technology and their attitudes towards it?.

1.2 Importance of the Study

The importance of the study stems from the role of educational technology and the advantage it occupies in the educational-learning process in general, as educational technology, if used optimally, can play an effective role in developing the educational system, and reducing educational problems for all school levels.

The results of this study may reveal ambiguities in the concept of educational technology, and may change the negative perception of its role in the educational process and limit it, reinforce the positive aspects, and push to propose solutions to get rid of these negative points.

1.3 The Aims of the Study

The current study aims to:

- Knowing the extent of awareness of faculty members at Albaydha University about the concept of educational technology.
- Exposing the trends of faculty members at Albaydha University towards educational technology.
- Knowing the effect of the variable years of experience in education on the awareness of faculty members at Albaydha University about the concept of educational technology.
- Knowing the impact of the variable years of experience in education on the level of attitudes of faculty members at Albaydha University towards educational technology.
- Revealing the nature of the relationship between the awareness of faculty members at Albaydha University about the concept of educational technology and their attitudes towards it.

1.4 Limits of the Study

The limits of the current study are as follows:

- Human limits: This study was limited to the (96) faculty members in the College of Education and Science in Radaa - Albaydha University.

- Spatial limits: College of Education and Science in Radaa, Albaydha University.
- Subject limits: The subject of this study was limited to studying the awareness of faculty members at Albaydha University about the concept of educational technology and their attitudes towards it.
- Time limits: This study was conducted in the first semester of the academic year (2020/2021).

1.5 Procedural Definitions

Educational Technology: defined by the American Society for Educational Communication Technology as "theory and practice, the design, development, use, and management of processes and resources for learning" (Ghazzawi 2007: 63).

In this research, it is defined as an integrated organization that includes the tools, devices, materials and educational situations that the teacher uses in order to improve the teaching and learning process.

Awareness: is the level of familiarity of faculty members with an appropriate degree of knowledge of the concept of educational technology and its use in university teaching.

Direction: It is a set of ideas, beliefs and knowledge (the perceptual component), which includes a positive or negative evaluation of feelings, or emotion that does not charge the idea (the emotional component), and thus a state of readiness to action (a behavioral element) is formed.

2 Previous Studies

The two researchers reviewed some studies closely related to the subject of the current study, and they were arranged chronologically, and the most prominent of these studies are the following:

Abdul Majeed (2000) This study aimed to find out the extent of awareness of science teachers in the preparatory stage of the innovations of educational technology and their trends towards its use in the field of education. To achieve this goal, the researcher prepared a list of the most important innovations in educational technology in the field of science education, and a questionnaire to measure science teachers' awareness of educational technology innovations and a scale to measure their attitudes towards its use. Then, he applied these tools to a sample of (365) middle school teachers in some educational departments in the governorates of Cairo, Giza, Qalyubia and Menou-fia.

The results indicated:

- The low level of awareness of science teachers in the preparatory stage of educational technology developments.
- The existence of a positive relationship between awareness of educational technology innovations and the trend towards its use.

The Al-Kadiri and Shdeifat Study (2002).

The study aimed to determine the level of culture attained in the educational computer of the managers and teachers of the Northern Badia in Jordan, and the extent of its difference for them according to their gender, job type, level of qualification, and teaching experience.

To achieve the aim of the study, the researcher used a tool to measure the level of culture, which consisted of (57) items, and the study sample consisted of (196) individuals, including (77) managers and directors, and (119) teachers.

The results of the study showed:

- The low level of culture obtained in the educational computer among the members of the study sample in general.

The study of Hong et al. (Hong et al. 2003):

This study aimed to find out the university students' attitudes towards using Internet technology as an educational method. The sample of the study consisted of (88) male and female students, who are studying in five colleges at the University of Malaysia. To achieve the goal of the study, the researchers used a scale of seven items to measure their attitudes towards using Internet technology as an educational tool.

The results of the study showed a positive trend towards the use of Internet technology in education, and there were no differences in this trend between the sexes, nor be-tween the high and low in the GPA, while there were statistically significant differences related to the type of college, as the trend increased among students of the Faculties of Engineering, Science and Technology in a significant way for students of the College of Human Development.

Al-Ghishan Study (2005):

This study aimed to find out the degree of interest of teachers of basic education in public schools in the Amman Directorates of Education in educational technology, and the difficulties and problems that teachers and learners face when using educational technology in the field. The study sample consists of two groups, namely all teachers of the tenth grade in public schools in Amman, whose number is (3444) teachers, and all students of the tenth grade in government schools in Amman, whose number is (25390). To achieve the aim of the study, two questionnaires were constructed, one for teachers and the other for students.

The results of the study showed that:

- There is an interest in the study sample in educational technology.
- There is no difference between the study sample individuals in their interest in educational technology due to gender.

Hakami's study (2010):

The study aimed to identify the reality of the culture and use of faculty members in scientific colleges at Umm Al-Qura University for information and communication technology in teaching. The researchers adopted the descriptive and analytical approach, and used the questionnaire as a tool to measure the goal of the study. The study sample consisted of (126) faculty members in the scientific colleges at Umm Al-Qura University. The study concluded with a set of results, the most important of which are:

- The awareness of the teaching staff in the scientific colleges of information and communication technology was moderate.
- The degree of use of information and communication technology by faculty members was moderate.
- There are no statistically significant differences between the opinions of faculty members on the culture and use of information and communication technology according to the variable of sex, type of college, rank, and number of years of experience.

Al-Qahtani and Al-Muaither study (2016):
This study aimed at identifying the awareness of the faculty members at Princess Noura University in the Kingdom of Saudi Arabia with stereoscopic imaging technology (hologram) in distance education by measuring the importance of holograms, the difficulties facing its application and their attitudes towards using this technology in teaching. The study tools were applied to a sample of the faculty members at Princess Nora University, the number of which reached (100) faculty members in all the colleges of the university. The study questionnaire was designed from three axes, and one of the most important results of the study was the approval of the study sample on the im-portance of applying hologram technology in teaching. While there were no statistically significant differences in the attitudes of the sample members about all the study axes according to the difference in the degree variable, the type of college and the number of years of experience, which confirms the awareness of the faculty members of the importance of applying these modern techniques in teaching.

The Sharif Study (2018):
This study aimed to measure and determine the extent of awareness of digital and smart educational technologies for faculty members in Saudi universities and their attitudes towards them. The researcher followed the descriptive approach, and used two research tools: a questionnaire on the extent of awareness of faculty members in Saudi universities about digital and smart educational technologies in education. The number of the study sample reached (15) members of the faculty in three Saudi universities. The research reached several results, the most important of which were: there were no statistically significant differences in the degree of awareness of faculty members in Saudi universities about digital and smart educational technologies due to the basic effect of the degree or gender. The results also found that there are statistically significant differences in the attitudes of the faculty members due to the basic effect of the academic degree.

Al-Shair's study (2020):
This study aimed to reveal the awareness of home economics students about employing the latest educational and information technology and their motivation for achievement. To achieve the aim of the study, the researcher used the descriptive approach. The research community consisted of (1309) male and female students, who were randomly selected, and consisted of (240) male and female students. The researcher also prepared the study tools (questionnaire on educational and information technology innovations and the measure of motivation for achievement) and they were applied to the study sample members. Statistical treatment methods were applied using the (SPSS) program,

and the study results demonstrated the study sample's awareness of employing educational and information technology innovations. The results also showed an increase in students' motivation for achievement.

Muhammad's study (2020):
The study aimed to know the extent of awareness of using e-learning in the education of students with special needs in the Dhofar Governorate of the Sultanate of Oman, according to the following indicators: type of disability, degree of disability, educational level, and the gender of the teacher on which the study questions were based. The researcher used the descriptive approach due to its suitability for the purposes of the study. The sample of the study consisted of (50) male and female teachers who are currently teaching students with special needs in the Dhofar Governorate. The study reached a number of results, the most important of which is that the academic preparation does not train teachers sufficiently to use e-learning and then direct it to students with special needs, which led to a decrease in the awareness of teachers who use these methods with students with special needs.

El-Gohary Study (2020):
This study aimed to measure the awareness of faculty members at Prince Sattam bin Abdulaziz University using the e-learning platform in light of the outbreak of the covid 19 virus and their attitudes towards learning by deduction. The researcher used the descriptive and quasi-experimental approach and the statistical demographic variables for their relevance for the purposes of the study. The sample of the study consisted of (100) faculty members at Prince Sattam bin Abdulaziz University, who were chosen in a stratified random manner. The results of the study showed that the awareness of the faculty members at Sattam bin Abdulaziz University about the e-learning platform was high, and their attitudes towards the learning environment in the survey were also high.

General comment on previous studies:
By reviewing what has been presented from previous studies, the two researchers concluded the following:

- Some studies that dealt with the issue of awareness, culture, or the importance of the concept of educational technology revealed contradictions in the results as follows:
- The results of some studies showed low awareness of the study sample members of educational technology, such as the study of (Abdul Majeed (2000), Al-Qadri and Al-Shdeifat (2002). There are also statistically significant differences in the degree of awareness due to the variable of years of experience in favor of fresh graduates and those with short experience. The results of the study of Hakami (2010) and Muhammad (2020) showed the study sample's awareness of educational technology, but with a medium degree, in addition to the absence of differences attributable to the years of experience variable, while the results of some studies showed a high awareness and interest in educational technology, such as the study of both the fog Al-Qahtani and Al-Muaither (2016), Al-Sharif (2018), Al-Saeed (2020) and El Gohary (2020), in addition to the absence of statistically significant differences due to the years of experience variable.

- Some studies revealed positive trends towards educational technology, such as the study Hong et al. (2003), Al-Sharif (2018) and El Gohary (2020), while the trends towards educational technology were neutral in the results of Abdul Majeed (2000) and Al-Saeed (2020).
- Abdul Majeed's study (2000) revealed a positive correlation between awareness of the concept of educational technology and the trend towards it.
- It is evident through the presentation of previous studies that there is a difference in the results reached by some studies, and the researcher did not find, according to his knowledge, any study dealing with this topic in the Republic of Yemen. That is why the two researchers tried through this study to identify the extent of awareness of faculty members at Albaydha University about the concept of educational technology and their attitudes towards it.

3 Methodology and Procedures

Study methodology: The researcher used the descriptive and analytical method because it is one of the most appropriate scientific research methodologies suitable for the nature of this study to answer its questions on the one hand, and to achieve its objectives on the other hand. It is the approach that studies a phenomenon or an existing issue from which information can be obtained that answers the research questions without the interference of the researcher, in order to describe and interpret the results of the research (Al-Agha and Al-Ustaz 2002: 83).

Study population: The study population consists of faculty members at Albaydha University for the academic year 2020–2021, whose number is approximately (190) faculty members. Study sample: The study sample consists of all faculty members in the College of Education and Science in Radaa, who actually carry out the teaching process in the college, whose number is (96) faculty members (Table 1).

Table 1. Distribution of the study sample according to years of teaching experience

Number	Experience (in years)	
	More than 5 years	Less than 5 years
96	64	32
Percentage	67%	33%

Study tool: The researcher prepared the study tool (questionnaire), through the following:

- Review the educational literature related to the subject of study.
- Relying on the opinions and ideas of those with experience in the field of educational technology, curricula and methods of teaching.

In light of what was included in the previous sources, the study tool (the questionnaire) was prepared, and the number of items is (38) organized and distributed on two domains according to the requirements of the current study.

The study tool consists of two parts:

Section One: General information related to years of experience in education.

The second section: It includes the questionnaire domains, which are as follows:

The first domain: It relates to the concept of educational technology and contains (16) items.

The second domain: It relates to the attitudes of faculty members towards educational technology and contains (22) items.

The validity of the study tool (questionnaire) prepared by the researcher was verified by presenting it to a group of juries with specialization in the field of educational technology, curricula and teaching methods. They were asked to express their opinion on the study tool in terms of the linguistic formulation, the extent of clarity and scientific accuracy of each item, the extent to which the paragraphs belong to the domain they fall under, as well as the extent of the comprehensiveness of each domain of the questionnaire, and to make any observations they deem appropriate.

Based on the opinions of the juries and their observations, the linguistic wording of some items was modified, some items were deleted, and new ones were added. The items that got (80%) from the juries' consensus were kept as appropriate items to measure the goals for which they were set.

The stability of the study tool (questionnaire) prepared by the researcher was also confirmed by applying it to a pilot sample consisting of (15) teachers. Then, the same study tool (the questionnaire) was applied again to the same sample two weeks after it was applied for the first time. The correlation between the two applications was calculated using Pearson's coefficient, with a correlation coefficient of (0.86). This ratio is considered an acceptable stability factor for the purposes of this study. The internal consistency factor of the stability of the paragraphs of the resolution was also calculated using the Cronbach Alpha equation, with a value of (0.88). These reliability coefficients were considered sufficient for the purposes of this study. After making sure of the validity and reliability of the study tool, the researcher applied it to the study sample.

Statistical Analysis:

To answer the study questions, arithmetic means, standard deviations, percentages, and T-test in addition to the Pearson correlation coefficient were used wherever necessary. The researcher adopted the pentagonal gradient to know the extent of the study sample's awareness of the concept of educational technology and the direction towards it, and this gradient was classified according to the arithmetic averages, as shown in the following Table 2:

Table 2. Classification of scores within the arithmetic means

The numerical category of the arithmetic mean	Value
1–1.80	Strongly agree
1.81–2.60	Agree
2.61–3.40	Neutral
3.41–4.20	Disagree
4.21–5	Strongly disagree

4 Results

Results related to the first question, which stated: To what extent are faculty members at Al Baydha University aware of the concept of educational technology?

To answer this question, the researcher calculated the arithmetic averages and T-test for one sample, as well as the standard deviation to find out the degree of consensus or disparity of opinions among the members of the research sample towards each of the items of the scale of awareness of the concept of educational technology, as shown in the following table:

Table 3. The averages, deviations, percentages, and "c" values for the items of the Awareness Scale

#	Item	Arth. mean	Std. Dev.	"T" value	Sig.	Mean	Materiality	Level to mean
			0.50	14.370	0.00	0.93	49.40	Low
			0.52	13.124	0.00	0.85	51.00	Low
3	Educational technology is the same as educational aids	1	Seeing educational technology as an effective means of transmitting information	2.47	0.00		0.65	Average
4	Think of educational technology as a subject in itself	2	Teaching aids are part of the educational technology system	2.55	0.00	0.97	48.60	Low
5	No matter how advanced educational technology can be, it will not be a catalyst in education	2.73	0.66	7.819	0.00	0.67	54.60	Average
6	Consider pre-made educational programs and materials an integral part of educational technology	2.53	0.51	13.344	0.00	0.87	50.60	Low
7	Educational technology is nothing but a set of educational devices that can be used in education	2.78	0.61	7.790	0.00	0.62	55.60	Average
8	Educational technology is concerned with the practical aspects only	2.60	0.53	11.754	0.00	0.80	52.00	Low
9	I agree to join any training course that helps in training in the use of technology in education	2.67	0.57	9.923	0.00	0.73	53.40	Average
10	I am able to teach what I want without the use of educational technology	2.48	0.50	14.090	0.00	0.92	49.60	Low
11	I see that educational technology helps solve many educational problems	2.50	0.53	13.826	0.00	0.90	50.00	Low
12	I think it is inappropriate to waste my lecture time showing an educational film that is directly related to the subject I am studying	2.58	0.56	12.724	0.00	0.82	51.60	Low

(*continued*)

Table 3. (*continued*)

#	Item	Arth. mean	Std. Dev.	"T" value	Sig.	Mean	Materiality	Level to mean
			0.50	14.370	0.00	0.93	49.40	Low
			0.52	13.124	0.00	0.85	51.00	Low
13	I want to increase my knowledge about the concept of educational technology and its educational applications	2.70	0.67	8.075	0.00	0.70	54.00	Average
14	I see educational technology as everything that influences the educational situation	2.73	0.58	10.000	0.00	0.67	54.60	Average
15	Educational technology means the orderly application of scientific knowledge	2.38	0.52	15.036	0.00	0.102	47.60	Low
16	I use educational technology because of its importance in expanding students' perceptions during education	2.63	0.52	11.428	0.00	0.77	52.60	Average
Total Score		2.59	0.56	2.800	0.00	0.81	51.80	Low

It is evident from the data of Table 3 that the arithmetic averages in general for the items of the level of Awareness Scale came at low rates, as the total arithmetic mean of the items of the scale was (2.59), with an approval of the content of the items that measure the level of awareness (51.80%). This confirms that the extent of the study sample's awareness of the concept of educational technology was low.

Item No. (7) related to (educational technology is nothing but a group of educational devices that can be used in education) ranked first with an average arithmetic mean of (2.78), and with an approval rate of (55.60%), on the content of this paragraph. Item (3), pertaining to (educational technology is the same as educational aids) came in second place, with an average arithmetic mean of (2.75), and with an approval rate of (55.00%) on the content of this item. Item (15) came in last place related to (educational technology means the orderly application of scientific knowledge), with a low arithmetic average of (2.38), and with an approval rate of (47.60%) for the content of this item. As for the most consistent items in the level of awareness of the concept of educational technology among the study sample, items (1 and 10) were the most consistent were the standard deviation for each of them (0.50), followed by item (6) with a standard deviation (0.51).

The results of (t) test for one sample (One-Sample Test) came in support of what was reviewed, where the average difference between the items of the awareness scale and the average approved (3.40) ranged between (0.62) and (0.102). The values of (t) at this level of difference were (7.790) and (15.036) respectively, and all of them are statistically significant values at the level of significance (0.05).

In general, the average difference between the mean of the total awareness level and the approved average value of the consciousness measure was (0.81). The value of (t) at this level of difference was (2.800), which is a statistically significant value at the

level of significance (0.05). This means that the awareness of the study sample individuals about the concept of educational technology is low.

Accordingly, it can be said that the concept of educational technology is still confused and ambiguous among the faculty members. The deficient view of educational technology as meaning educational aids only, and that it is nothing but a group of educational devices that can be used in teaching in classrooms, leading to their ineffective use, and this may reflect negatively on the faculty members adopting them in actual teaching.

This may be due to the lack of training courses for faculty members in the field of educational technology to clarify its concept, and the potentials that it can offer in developing the teaching and learning process and upgrading the performance of faculty members, if they are best used in university teaching. In addition to the low level of training programs for faculty members as these programs are traditional and distinguished by the supremacy of theoretical aspects over the process, and there is no indication of training programs in the field of educational technology. This result is consistent with the results of the study of Abdul Majeed (2000), Al-Qadri and Al-Shdeifat (2002), which showed the low level of understanding and culture of the study sample in the concept of educational technology. While the results of this study differed with the results of Hakami (2010), Muhammad (2020), Al-Gheishan (2005) Al-Qahtani and Al-Muaither (2016), Al-Sharif (2018), Al-Shaer (2020), Al-Saeed (2020) and El Gohary (2020) that showed a good, acceptable or average level of awareness of the concept of educational technology.

- Results related to the second question, which stated: Are there statistically significant differences in the awareness of faculty members at Albaydha University with the concept of educational technology attributable to years of teaching experience (less than 5 years - more than 5 years)?

To answer this question, arithmetic averages and standard deviations were calculated for the extent of the study sample's awareness of the concept of educational technology, according to the years of experience variable (less than 5 years - more than 5 years), and the (t) test was used to find out the significance of the differences between the arithmetic averages. And the results were as shown in the following table:

Table 4. Arithmetic averages, standard deviations and the value of (t) test for differences between the averages of the study sample's awareness of the concept of educational technology according to the years of experience in education variable

#	Teaching experience variable	No.	Mean	Sig.	T value	Level of significance
1	Less than 5 years	23	45.52	4.42	4.178	0.000
2	More than 5 years	37	39.05	6.55		

It is evident from the results of Table 4 that there is an effect of the variable years of experience in education on the level of awareness of the concept of educational technology, where the total arithmetic average of the awareness of the study sample who have less than five years' experience reached (45.52), with a standard deviation of

(4.42). While the total arithmetic mean of the awareness of the study sample who have more than five years' experience was (39.05), with a standard deviation of (6.55). The value of "T" was (4.178), with a significant level of (0.000). This indicates the existence of statistically significant differences at the level of significance ($\alpha = 0.05$) between the average awareness level and in favor of the study sample who had less than five years of experience. This means that faculty members who are new to education have an awareness of the concept of educational technology, more than faculty members who have been in education for five years or more.

The researcher attributes this perhaps to the fact that the (new) faculty members have acquired their culture about the concept of educational technology more broadly than the old faculty members, due to the newness of the era of educational technology and its continuing development, through their study, perhaps for courses in this field or the use of their professors in universities for educational technology and training them during university studies. This is consistent with the results of the study of (Abdul Majeed (2000), Al-Qadri and Al-Shdeifat (2002), which showed differences in the level of awareness in favour of those with short experience, while it differs with the results of Hakami (2010) and Muhammad (2020), which showed no differences in the level of awareness attributed to years of teaching experience.

- Results related to the third question, which states: What are the attitudes of faculty members at Albaydha University towards educational technology? To answer this question, the researcher calculated the arithmetic averages and a T-test for one sample, as well as the standard deviation of it to find out the degree of consensus or disparity of opinions among the study sample individuals towards each paragraph of the measure of the trend towards educational technology, as shown in the following table:

Table 5. The arithmetic averages, deviations, percentages, and "t" values for the paragraphs of the trend scale

#	Item	Mean	Std. Dev.	"t" value	Level of significance	Mean average	Materiality	Level to mean
1	I use educational technology when I'm not convinced of its usefulness	2.92	0.46	8.107	0.000	0.48	58.40	Average
2	I do not like to use educational technology in my teaching, because preparing it requires time, effort and preparation in advance	3.67	0.51	4.052	0.000	0.27	73.40	High
3	I only use educational technology to please my superiors	2.95	0.43	8.128	0.000	0.45	59.00	Average
4	I tend to use educational technology to encourage my students to participate in the topic of the lesson	3.63	0.58	3.109	0.003	0.23	72.60	High
5	Educational technology can be dispensed with in teaching	2.80	0.40	11.522	0.000	0.60	56.00	Average
6	The use of educational technology in teaching leads to the loss of the educational process of its human character	3.73	0.61	4.254	0.000	0.33	74.60	High
7	I do not enjoy using educational technology to teach students	2.92	0.38	9.816	0.000	0.48	58.40	Average

(*continued*)

Table 5. (*continued*)

#	Item	Mean	Std. Dev.	"t" value	Level of significance	Mean average	Materiality	Level to mean
8	With educational technology, I can bring the outside world into the classroom	3.63	0.52	3.478	0.001	0.23	72.60	High
9	I fear that my students will get messy when I use educational technology	3.02	0.57	5.235	0.000	0.38	60.40	Average
10	I do not tend to use educational technology to teach difficult subjects	2.85	0.52	8.272	0.000	0.55	57.00	Average
11	I think using educational technology in teaching wastes time, effort and money	2.77	0.43	11.502	0.000	0.63	55.40	Average
12	Educational technology helps increase the linguistic wealth of my students	3.70	0.46	5.028	0.000	0.30	74.00	High
13	A successful teacher is one who can communicate information to his students without the help of educational techniques and methods	3.63	0.49	3.719	0.000	0.23	72.60	High
14	It is difficult for educational technology to succeed in contributing to the teaching of humanities and literature	3.70	0.50	4.671	0.000	0.30	74.00	High
15	The expected return from using educational technology in teaching is much less than the costs of obtaining it	3.68	0.60	3.680	0.001	0.28	73.60	High
16	I like to use educational technology in my teaching when I feel that my students are showing boredom	3.58	0.53	2.679	0.010	0.18	71.60	High
17	I see in the scientific disciplines a wide scope for using technology in education	2.85	0.36	11.831	0.000	0.55	57.00	Average
18	I think that the use of educational technology limits the development of the creativity and innovation elements of the learners	3.58	0.62	2.295	0.025	0.18	71.60	High
19	The adoption of educational technology helps me take into account the individual differences between my students	2.98	0.54	6.016	0.000	0.42	59.60	Average
20	I tend to use educational technology because it transforms the teacher's role from a mentor to a mentor	3.68	0.77	2.850	0.006	0.28	73.60	High
21	I believe that a successful teacher is one who adopts the concepts of educational technology in word and deed	3.77	0.47	6.114	0.000	0.37	75.40	High
22	The use of educational technology is a threat to my work as a teacher	3.05	0.59	4.561	0.000	0.05	61.00	Average
Total degree		3.32	0.26	4.25	0.000	0.08	66.40	Average

It is evident from the data of Table 5 that the arithmetic averages in general for the paragraphs of the trend toward educational technology measure came in average proportions, where the total arithmetic average of the scale paragraphs reached (3.32), and with an agreement on the content of the paragraphs that measure the trend (66.40%), and this confirms the existence of a trend positive average level among the study sample towards educational technology.

Item (21) related to (I believe that a successful teacher is one who adopts the concepts of educational technology in word and deed) ranked first with a high arithmetic average of (3.77), and an approval rating of (75.40%) for the content of this paragraph.

Item (6) related to (the use of educational technology in teaching leads to the loss of the educational process of its human character) came in second place with a high arithmetic average of (3.73), and with approval (74.60%) for the content of this paragraph. Item (11) came in the last place related to (I believe that the use of educational technology in teaching wastes time, effort and money) with an arithmetic average of (2.77) and a percentage of approval (55.40%) for the content of this paragraph.

As for the most consistent paragraphs in the trend towards educational technology among the study sample, item (17) was its standard deviation (0.36), followed by item (7) with a standard deviation of (0.38).

The results of (t) test for one sample (One-Sample Test) came in support of what was reviewed, where the average difference between the items of the trend scale and the approved average (3.40) ranged between (0.05) (0.63) and the (t) values were at this level of the difference is (4.561) and (11.502), respectively, and all of them are statistically significant values at the significance level (0.05).

In general, the average difference between the average score of the overall trend and the value of the approved average of the trend scale was (0.08), and the value of (t) at this level of the difference was (4.25), which is a statistically significant value at the level of significance (0.05), which means that there is a positive trend at an average level among the study sample individuals towards educational technology.

This may be mainly due to the information that reaches the faculty members in various ways, such as the media such as television, radio, newspapers, or from experts, about the possibilities of educational technology and its role in the teaching and learning process to support education and enhance learning and provide the opportunity for both the teacher and the learner to use this technology in the form. The appropriate and to achieve the educational goals.

This result is consistent with the results of the study by Hong et al. (2003), Sharif (2018) and El Gohary (2020), which showed positive trends towards educational technology.

- Results related to the fourth question, which stated: Are there statistically significant differences in the attitudes of faculty members at Albaydha University towards educational technology due to years of teaching experience (less than 5 years - more than 5 years)?

To answer this question, the arithmetic averages and standard deviations of the study sample's attitudes towards educational technology were calculated according to the years of experience variable (less than 5 years - more than 5 years), and the (t) test was used to find out the significance of the differences between the arithmetic averages. The results were as shown in the following table:

Table 6. The arithmetic averages, standard deviations, and the value of the t-test to indicate the differences between the averages of the study sample trends towards educational technology according to the years of experience in education variable

#	To the years of experience in education variable	No.	Mean	Std. Dev.	T value	Level of significance
1	Less than 5 years	23	76.87	3.88	4.624	0.000
2	More than 5 years	37	70.76	5.55		

It is evident from the results of Table 6 that there is an effect of the years of experience in education variable on the level of the trend towards educational technology, where the total arithmetic mean of the level of the study sample who have less than five years' experience reached (76.87), with a standard deviation of (3.88). While the total arithmetic mean of the level of trend of the study sample who have more than five years' experience was (70.76), with a standard deviation of (5.55), and the value of "T" was (4.624), with a level of significance (0.000). This indicates the existence of statistically significant differences at the level of significance ($\alpha = 0.05$) between the mean level of the study sample's attitudes towards educational technology, and in favour of the study sample who have less than five years of experience.

The reason for the high level of trend towards educational technology among faculty members who have less than five years of experience may be attributed to the knowledge component that they possess through their academic study of university courses, as the educational technology subject has become a compulsory requirement for all students. This is in addition to the duties that might have been requested from them through databases and the Internet, which led to the creation of a positive trend towards educational technology in the education process more than the old faculty members who may not have been exposed to studying any courses in the field of educational technology during their university studies.

This differs with the results of the study of Abdul Majeed (2000) and Al-Saeed (2020), which showed that there are no statistically significant differences between the sample members due to the variable of years of experience in education.

- Results related to the fifth question, which states: Is there a total relationship between the awareness of faculty members at Albaydha University about the concept of educational technology and their attitudes towards it?

To answer this question, the Pearson correlation coefficient was calculated between the extent of the study sample's awareness of the concept of educational technology, and their attitudes towards it, as shown in the following table:

Table 7. Pearson correlation coefficient between the average level of awareness about the concept of educational technology and the trend towards it

#	Domain	Total mean	Correlation coefficient	Level of significance
1	Awareness	2.59	0.409	0.001
2	Trend	3.32		

It is noticed from Table 7 that there is a positive and statistically significant relationship between the level of awareness of the concept of educational technology and the level of trend towards it, as the results indicate that the correlation coefficient reached (0.481), and this correlation is positive and statistically significant at the level of significance ($\alpha = 0.001$), which confirms the strength of the relationship between the level of awareness of the concept of educational technology and the trend towards it. Accordingly, it appears that the higher the level of awareness of the concept of educational technology among the faculty members, the more positive attitudes they have towards it. This is consistent with the results of Abdul Majeed (2000) study, which

showed a positive relationship between awareness of the concept of educational technology and the trend towards it.

Suggestions:

In light of the findings of this study, the researcher recommends the following:

- Developing the awareness of faculty members about the concept of educational technology, and its role that it can play in the teaching and learning process if it is used properly.
- Conducting training courses to familiarize faculty members with educational technology and train them in its use.
- Work to change the negative attitudes of faculty members towards educational technology, by making them aware of the importance of their role in light of educational technology.

References

Ashteiuh, F.F., Olayan, R.M.: Instructional technology, theory and practice, 1st edn. Safaa House for Publishing and Distribution, Amman, Jordan (2010)

Agha, I., Usthath, M.: Educational research design, 4th edn., Gaza, Palestine (2002)

Al-Jamal, M.H.: The reality of using educational technology and information in learning resource centers in schools in the Kingdom of Bahrain, from the point of view of the learning resource centers' specialists. J. Educ. Psychol. Sci. **6**(1), 121–151 (2004)

El Gohary, H.K.A.G.: The awareness of faculty members at Prince Sattam bin Abdulaziz University using the e-learning platform in light of the outbreak of the Covid 19 virus and their attitudes towards inquiry learning by investigation. Arab J. Sci. Res. Dissemination. J. Educ. Psychol. Sci. **4**(46), 40–63 (2020). Arab Journal of Science and Research Publishing

Haji Issa, M.: The reality of educational and professional preparation and the reality of United Arab Emirates schools in the field of educational technology. Ajman University's J. Sci. Technol. **6**(3), 205–222 (2001)

Hakami, T.T.: The reality of the culture and use of ICT faculty members at Umm Al-Qura University in teaching, an unpublished master's thesis, Umm Al-Qura University, Saudi Arabia (2010)

Salem, A.M.: Education and e-learning technology. First Edition. Al-Rashed Library Publishers, Riyadh (2004)

Salem, A.M., Saraya, A.: Education Technology System. 1st floor, Al-Rashed Library, Riyadh, Saudi Arabia (2003)

Al-Saeed, B.A.-B.A.: Attitudes of faculty members at Jazan University towards employing electronic learning tools, the blackboard platform in the educational process in line with the implications of the Coronavirus, the Arab Journal of Science and Research Publishing. J Educ. Psychol. Sci. **4**(7), 1–19 (2020)

Salama, A.H.: Communication and education technology. I 1. Al-Yazuri Scientific House, Amman, Jordan (2001)

Salama, A.H.: Communication and education technology. Al-Yazuri Scientific House, Amman, Jordan (2007)

Al-Shaer, M.F.M.: The extent to which students of home economics are aware of employing the latest educational and information technology and their motivation for achievement. Arab Res. J. Fields Specific Educ. (Seventeenth Issue), 349–381 (2020)

Sharif, B.b.N.M.: The extent of awareness of digital and smart educational technologies for faculty members in Saudi universities and their attitudes towards them. J. College Educ. Al-Azhar Univ. (179), Part 1, 601–650 (2018)

Shami, N.S., Ismail, S.S., Muhammad, M.A.S.: Introduction to educational technology. First floor, Dar Al Fikr, Amman, Jordan (2008)

Abdul Majeed, M.M.: The extent to which science teachers are aware of educational technology innovations and their trends towards employing them. In: Fourth Scientific Conference (Scientific Education for All), from July 31 to August 13, vol. 1, pp. 309–338. Egyptian Association for Scientific Education (2000)

Ghazzawi, M.Y.: Educational technology between theory and practice. The Modern World of Books, Irbid (2007)

Al-Ghishan, R.I.: The degree of interest of primary school teachers in public schools in Amman's education directorates in education technology, and the students' attitudes towards it. Ph.D. thesis, University of Jordan, Amman, Jordan (2005)

Al-Qadiri, S.A., Shdeifat, Y.: The level of education attained in the educational computer of managers and teachers working in the Northern Badia Education Directorate. Damascus Univ. J. **18**(2), 149–184 (2002)

Al-Qahtani, A.S., Al-Muaither, R.A.: The awareness of the faculty members at Princess Noura University with stereoscopic imaging technology (hologram) in distance education. Arab Stud. Educ. Psychol. (71), 299–333 (2016)

Muhammad, A.H.A.: The extent of awareness of teachers with special needs about the importance of e-learning in the Sultanate of Oman. J. Humanit. Soc. Sci. Gener. (66), 151–168 (2020)

Hong, K., Ridzuan, A., Kuek, M.: Students' attitudes toward the intern for learning: a study at a University in Malaysia. Educ. Technol. Soc. **6**(2), 45–49 (2003)

Clark, K.D.: Urban middle school teachers' use of instructional technology. J. Res. Comput. Educ. **33**(2), 178–195 (2000)

Labusch, A., Eickelmann, B.: Computational thinking and problem-solving – a research approach in the context of ICLLS 2018. In: Langran, E., Borup, J. (eds.) Proceedings of Society for Information Technology & Teacher Education International Conference, pp. 3724–3729 (2018)

Sultan, M.A.: The need to go beyond "Techno Centrism" in educational technology: implementing the electronic classroom in the Arab world. In: Billeh, V., Mawgood, E. (eds.) Educational Development through Utilization of Technology, pp. 165–173. UNESCO Regional Office for Education in the Arab State, Beirut (2001)