Faculty Members' Perspectives on the Impact of Educational Technology on the Teaching and Learning Process at the University of Sharjah

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Abstract: Educational technology is increasingly being employed in universities to boost students' learning and performance. It became a key component of communication, information storage and transmission, audio-visual media usage and creation, and knowledge sharing. The purpose of the study is to determine the impact of modern educational technologies on education quality and development at the College of Arts and Humanities at Sharjah University from the perspective of faculty members by developing a questionnaire with (20) items and distributing it to a random sample of (91) faculty members. According to the study's findings, the usage of educational technology has a significant impact on education, not just in terms of boosting instructors' communication skills, instructional techniques, and advising students on how to utilize this technology. We actively support the employment of as much information technology as possible in the classroom in order to increase instructors' abilities and students' knowledge.

1. Introduction

The university is an important contributor to a country's economy and prosperity since it is a critical conduit for scientific advancement in civilizations. Given the rapid changes and developments in all aspects of life, particularly education, it has become necessary to implement reform and development processes for the entire educational process, based on its significance in identifying and evaluating the university's performance, as well as ensuring its effectiveness and enabling it to achieve comprehensive quality and identifying the university's potentials (Asta Kybartaite. 2010). As a result of various sectors' orientation toward adapting modern technological innovations and viewing them as a primary motivator toward quality, as well as an essential tool for development and change, it is possible to provide the community with educational output values capable of dealing with the constantly changing external labor market requirements on the one hand, while also enabling university education on the other (Raja & Nagasubramani, 2018). The sudden transition to fully online teaching and learning platforms as a result of the corona pandemic increased the usage of social computing software and active learning methodologies. Many educators transitioned from instructors to facilitators in order to boost activity-based teaching methodologies and assist students in taking ownership of the learning process through the use of various social computing technologies (Y. Melnyk, H. Drapak, Z. Sverdlyk, M. Tsilyna, V. Varenko, N. Boichuk, 2021). As face-to-face interactions grew less prevalent, there was a greater need for other methods of engaging students and fostering their academic and psychological well-being. Educational technology is the systematic and structured application of modern technologies to improve educational quality (efficiency, optimal, true, etc.). It is a systematic approach to conceptualizing, executing, and evaluating the educational process, i.e. learning and teaching, and it helps in the implementation of modern educational teaching techniques. It includes instructional materials, methodologies, organization of work and relationships, as well as the behavior of all participants in the educational process. (L. Stošić, A. Serbia, 2015). The educational quality and development of the university are primarily determined by the quality of the education elements represented by students, faculty members, courses, and the administration of the university in its faculties and departments. This either prohibits the growth and enhancement of such aspects or reduces them to the greatest extent feasible (H. Ahmad, A.G.Awan, (2020). Figure 1 shows the use of technology in teaching process.

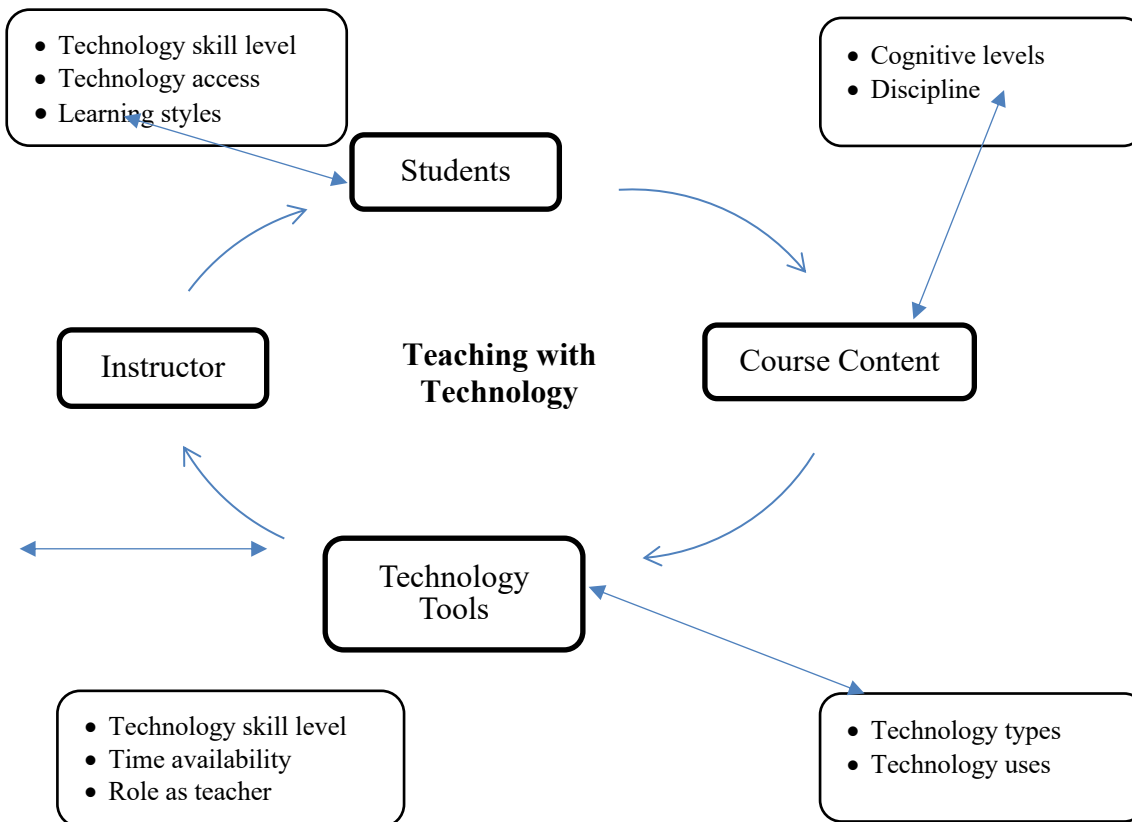*Corresponding author e-mail: whamdi@sharjah.ac.ae

Fig. 1: Teaching process using Technology.

1.1 Study problem and questions

The University of Sharjah, like the rest of the universities in the United Arab Emirates, recognized the importance of modern educational technologies in the educational process and that their adoption in any educational system is no longer a luxury, but rather a necessity and an integral part of the structure of the education system, as well as one of the methods used to ensure educational quality. Despite the university administration's efforts to provide contemporary educational technology and train teachers in its use, the researchers discovered considerable technical challenges that faculty members faced while employing electronic tools in the classroom. In addition to its use in the educational learning process because of its role in improving educational quality and development, which has been confirmed by many previous studies, such as the study (Raja & Nagasubramani, 2018), which revealed that there are many difficulties that limit the use of modern educational technologies in university education, such as a lack of adequate equipment, a lack of infrastructure that supports the use of these technologies in universities, and a lack of infrastructure that supports the use of these technologies in universities. The classrooms are surrounded by students, instructors' hectic study schedules, the density of courses in the curriculum, both students' and teachers' unfavorable views about these technologies, and the high frequency of malfunctions. Indeed, this dilemma compels researchers to pose numerous questions in order to articulate the research problem, which may be summarized as follows:

1. What are the most essential and useful instructional technology in the opinion of University of Sharjah faculty members?

2. According to faculty members, what influence does the employment of new technologies in the teaching and learning process have on the quality and advancement of education at the University of Sharjah?

3. Is there a statistically significant correlation (= 0.05) between faculty members' employment of new technologies and the development and improvement of educational quality at the University of Sharjah?

1.2 Scientific and practical significance of the study

They are as follows:

A. Scientific significance consists in developing a theoretical literature centered on modern technologies and the quality of university education in order to supplement libraries with a study demonstrating the degree of impact of faculty members' use of modern technologies on improving and developing the quality of university education, and to serve as an important reference and source of benefit for academics, researchers, practitioners, and students. It is also one of the studies to the researchers' knowledge that explores the extent to which modern technologies are used to improve the quality and advancement of education at the university.

B. Practical significance is represented in the following:

- Describe male and female professors' (academic staff's) awareness of new educational technologies and standards for enhancing and developing university education.

- An accurate and realistic representation of the impact relationship that exists between the use of contemporary technologies and the growth and quality of university education.

- Developing thoughts and recommendations in accordance with quality standards, and in a manner that contributes to reducing and eliminating anything that may inhibit the institution under examination from utilizing effective technology.

- Expanding scientific understanding of contemporary technologies at the University of Sharjah, as well as criteria for improving and increasing the quality of university education.

1.3 The study's objectives

The primary objective of this study is to determine the extent to which the use of modern technologies has improved and developed the quality of university education at the University of Sharjah, as represented by students, courses, teacher performance, and college/university management, as perceived by its faculty members. This may be accomplished by focusing on the following sub-objectives:

- The most significant current technology employed in university education.

- Knowing the extent to which the use of new technologies in the educational learning process affects the quality and progress of education at the University of Sharjah, as represented by students, courses/curricula, teacher performance, and college/university administration.

- The relationship of influence between teachers' use of modern technologies in the educational learning process and the quality and development of education in its dimensions represented by students, courses/course, teacher performance, and college/university administration at the university.

2. Literature Review

The quality of education is one of the topics that has gathered a lot of attention from university administration because it is a purely administrative process in which educational elements are used to achieve the university's mission and desired goals, push it towards quality, and achieve quality in the services it provides. According to (Kybartaite, 2010), the interest in incorporating twenty-first-century innovations into university teaching contributes clearly to the improvement and development of the elements of the educational process, as employing modern products is a feature of the contemporary era in the education system, as considered by (Raja & Nagasubramani, 2018) a necessity to maximize the efficiency of education images and patterns and the improvement of the educational process.

The use of modern technologies in the learning process, combined with adherence to the stipulated ethics, results in cognitive development that combines creativity, innovation, accuracy, and originality, improves the level of teaching performance, and develops higher levels of thinking and innovative thinking, as confirmed by (Harris, Al-Bataineh, & Al-Bataineh, 2016).

Universities have the option of upgrading and promoting higher education as well as strengthening their educational system. Achieving excellence and competitiveness while employing modern pedagogical methods in university education following international standards for accreditation and quality assurance is an essential pillar for improving education quality globally competitiveness (Lei, 2017). Including information and communication technology in education is also a primary goal of universities as it benefits stakeholders in education, including instructors, students, and university administration. In terms of the impact of advanced technological innovations on the learner, the study (Spears, 2012) found that they improve learning effectiveness by incorporating more than one method and source of education, diversifying and motivating students' experiences through the use of audio-visual and sensory effects, and developing modern learning methods that accommodate differences. The latent individuality among students and

facilitates the process of delivering study material to students, as well as assisting students to understand and assimilate and thus contribute to establishing the educational process's aspirations, accelerating and enriching the education process, and its role in developing students' cognitive skills. The study of (Shapley et al., 2011) emphasizes the importance of using new technologies to present information to students in a stimulating and exciting way that draws students' attention, increases their focus, improves their motivation toward learning, and makes them more ready for it, and evokes their interest. According to (Nikolic, Jurkovic, & Kalcic, 2015), the use of technology in the classroom has assisted in shifting the learner's position from a passive recipient and receiver of information to an active participant in the learning process. It is simple to refer to information and its role in developing thinking and critical thinking abilities based on inquiry, research, knowledge, deduction, and problem solving, which contributes to improving educational outcomes and student performance levels. While (Baporikar, 2016) believes that new technology can assist teachers enhance their performance by increasing their professional competence and generating an educational atmosphere conducive to the effectiveness of the educational process. In addition to its role in providing the teacher with skills that assist him in making appropriate decisions for the educational environment in terms of teaching methods, assessments, the method of providing academic content, and test setting, as well as the transformation of its role from an instructor to a directive, creative, innovative, designer, and planner of the educational situation. This necessitates the presence of a new-style instructor, a teacher with scientific qualifications who is competent of carrying out the responsibilities and activities assigned to him as well as studying, preparing, and presenting knowledge sources to the application (Vassiliou, 2014).

(Cloete, 2017) shown that one of the most significant benefits of the technology revolution is the ability to enrich courses while avoiding overloading students' minds with information. From global communication networks in the delivery, presentation, organization, and diffusion of information as fast and as easily as feasible. Despite the benefits of using technology in education to achieve and improve quality in all aspects of the education process, there are obstacles and challenges that prevent its use in teaching students and reaping its benefits. These difficulties include: not having enough experience and skill to deal with educational technologies for learners, teachers, and administration. In addition to the lack of courses, the lack of necessary training to teach them on the mechanism of using them in the classroom, the lack of moral and material backing from senior management, the lack of proper infrastructure for their usage, and the lack of necessary equipment and supplies (Suleimenov & Egemberdyeva, 2019). Computers, e-books, Internet, social networks, online mail, videos, interactive whiteboard, mobile phones and virtual environments are among the most prominent of these innovations that have proven their effectiveness and efficacy in teaching, as mentioned by (Olivier, 2014) and (Zhonggen, 2015). There are several research linked to the subject of the study that confirm the degree of influence of modern educational technologies on educational quality and development, including a study conducted by (Raja & Nagasubramani, 2018) sought to uncover the impact of technological advancements and their role in developing and enhancing education performance, as well as contributing to its quality. The study confirmed that incorporating technological innovations into the learning process contributed to changing teaching methods as well as solving all of the difficulties associated with traditional education. Furthermore, these innovations led to the automation of educational institution functions, which led to their development and empowerment access to quality in education. While the study (Akpan, 2014) examined the implications of the digital revolution on the efficiency of university lecturers and the development of the education process in public universities in Abuja, Nigeria's capital, where the descriptive analytical approach was used, a questionnaire was designed and randomly distributed to (500) university professors. The findings revealed that lecturers' use of information and communication technology in the educational process successfully contributed to boosting lecturers' efficiency, which was at a high level, and led to rapid development in the educational process. The study (Ansah, 2013) also intended to examine the impact of teachers' use of contemporary information technologies on improving performance and reaching university education quality in South African universities. The study showed several findings, the most significant was a high degree of effect of academics' use of information technology in teaching, as well as a high degree of impact on improving their performance level. It also suggested that South African institutions are seeking for the infrastructure required to capitalize on modern information technologies. Computers, projectors, social networking sites, interactive video and printers were among the technologies she listed.

Based on the preceding studies and the researchers' experience, they discovered that the University of Sharjah recognized the importance of incorporating the digital revolution and technological innovations into educational environments, as their use is no longer a luxury, but rather an indispensable necessity in the university education system. As a result, it has demonstrated a strong interest in the progress of the education system and the construction of a quality system in university education that is consistent with worldwide quality models. As a result, the University of Sharjah has always been keen on keeping up with the demands of the digital revolution and incorporating them into its instructional programs. This is due to its conviction in its relevance in increasing educational quality and creating university education results, as it is the principal way leading to educational success and improvement, as well as the tool that ensures its existence and continuity. To meet the challenges, it encounters, the University of Sharjah has no

choice but to use what the contemporary period has developed in educational environments in order to achieve and improve educational quality through the use of sophisticated technology in education. In teaching most of its courses in its humanities and sciences faculties, the goal is to attain excellence first, followed by development and progress.

As a result, the purpose of this study is to determine the extent to which modern educational technologies influence the quality and development of education, as well as to reveal the level of success of their application, employment, and goal achievement, in an effort to make advanced technology a means of developing scientific research skills, improving quality in university education, and developing its services.

3. Study Methodology and procedure

The study was carried out using a descriptive research method. The method enabled us to describe faculty members' perspectives on the quality of educational technology used for teaching and learning in this research context.

We employed a self-designed questionnaire to gather data for this study, based on existing literature and theoretical frameworks from previous studies (e.g., Raja & Nagasubramani, 2018; Al Surur, 2018). There were three sections to the questionnaire. The first section contains demographic information such as gender, college/department, academic rank, and years of service at the university. The second section has multiple-choice questions about the most significant modern technologies utilized in teaching process. In addition, the third section has twenty questions that investigate the extent to which modern technologies increase educational quality in the context of the study.

All faculty members from the University of Sharjah's College of Arts, Humanities, and Social Sciences are included in the study population. As a consequence, we distributed the questionnaire to all faculty members, with 110 filling it out. In the study's environment, this represents 40% of the entire professor population. We eliminated 19 copies that were incomplete, accounting for about 82% of the surveys received. The demographic characteristics of the respondents are shown in Table (1). As can be seen, the majority of the sample is male (68.13%), from the Foreign Languages Department (26.370%), and works as an assistant professor (30.77%). The vast majority (40.66%) have likewise been employed for more than 10 years.

Table 1: Characteristics of the study sample according to demographic variables

	Category	Total	Ratio
Gender	Instructor (Male)	62	68.13%
	Instructor (Female)	29	31.87%
Department	Arabic Language & Literature	15	16.48%
	Foreign Languages	24	26.37%
	History	17	18.68%
	International Relations	8	8.79%
	Sociology	21	23.08%
	Education	6	6.59%
Academic degree	Professor	20	21.98%
	Associate Professor	24	26.37%
	Assistant Professor	28	30.77%
	Lecturer	19	20.88%
University working years	< 5 years	19	20.88%
	From 5 to 10 years	33	36.26%
	>10 years	37	40.66%

3.1 Measurement Validity and Reliability

We distributed the initial draft of the questionnaire to five colleagues with considerable skill and knowledge in curriculum development, teaching approaches, and educational technology for feedback. We used their feedback to ensure that the questionnaire items were clear and applicable. We also used their feedback to ensure that the questions might assist us achieve the primary goal of the study. In addition, we used the alpha Cronbach coefficient to measure the instrument's item reliability. The overall reliability coefficient of the tool (Alpha = 0.94) is shown in Table (2).

Table 2: Reliability Tools Coefficient (Alpha Cronbach)

	The field	Items' Number	Alpha Cronbach Coefficient
The impact of the use of modern technologies on improving educational	Improving student learning and development	7	0.82
	Improving the quality and development of	5	0.86

quality and development.	academic courses		
	Improving the effectiveness and progress of teachers	4	0.91
	Improving the quality of college/university administration and its development	4	0.93
The tool's overall reliability coefficient		20	0.94

4. Results and Discussion

We employed descriptive statistics to analyze the data collected throughout the study. We used SPSS (version 23) to calculate the frequencies, Cronbach's alpha equation, arithmetic mean, standard deviation, multiple analysis of variance, and Pearson correlation coefficient. Several analytical approaches were used to answer the study's research questions.

According to the objectives, study problem and questions of the study findings are discussed below:

Question 1: What are the most essential and useful instructional technology in the opinion of University of Sharjah faculty members?

Table (3) shows that the most prominent teaching techniques were the use of the Blackboard Learning Management System (LMS) in addition to Microsoft PowerPoint presentations with a percentage of (16.76%) for each, followed by multimedia authoring programs and other sources with a percentage of (14.99%). E-mail ranked fourth with (13.61%), Interactive Video came in the fifth rank with (8.87%), and educational films ranked sixth with (8.28%). In comparison, audio recordings ranked seventh and penultimate with a percentage (of 7.49%), and the use of other sources ranked last at (5.13%). This is due to teachers' conviction and belief in the feasibility of advanced technologies in university teaching, as well as their effective role in establishing quality in university education and the use of other techniques to encourage students to participate and interact during the lecture, such as videoconferencing (Kahoot - Mural...). Establishing the objectives that university education seeks to achieve is also essential. Such awareness may be linked to experiences of self-knowledge or academic competencies in addition to their participation in university workshops and training courses. Because specific classes are challenging to teach without technological innovations, their role is no longer only dependent on the course or the classroom, as indicated by the findings of (Akpan, 2014) and (Ansah, 2013).

Table 3: Frequencies and Percentages of the study sample's responses to the most often used teaching techniques

Rank	Education Technologies	Frequency	Percentage
1	Blackboard LMS	85	16.76 %
2	Presentations using MS Office PPT	85	16.76 %
5	Interactive Video	45	8.87 %
6	Educational movies	42	8.28 %
4	E-mail	69	13.61 %
7	Social Media	41	8.09 %
3	Multimedia authoring software	76	14.99 %
8	Audio recordings	38	7.49 %
9	Other sources	26	5.13 %
Total		507	100 %

Question 2: According to faculty members, what influence does the employment of new technologies in the teaching and learning process have on the quality and advancement of education at the University of Sharjah?

a-   Improving student development and learning

Table (4) displays the arithmetic mean and standard deviation of instructors' responses on the degree of impact of modern educational technologies use on developing and raising the quality of education at the University of Sharjah, as well as improving students' learning and development.

Table 4: Arithmetic averages and standard deviations of the impact of modern technologies use on student learning improvement and development

Rank	Statements	Mean	Standard Deviation	Level
1	The usage of modern technologies enhances students' understanding of the courses.	3.85	1.21	High
2	The usage of new technologies strengthens students' and academics' self-learning practices.	3.82	1.24	High

3	The use of modern technologies in blended learning enables collaboration and planning among student groups in the classroom.	3.77	1.02	High
4	The use of modern technologies encourages the opportunity to ask inquiries about their specialty.	3.71	0.97	High
5	Students' ability to participate in lectures is enhanced by modern educational technologies.	3.65	0.91	Medium
6	Modern technologies motivate students to learn	3.55	0.94	Medium
7	Modern technologies give students the opportunity to participate and interact.	3.51	0.96	Medium
Overall Performance		3.69	0.68	High

According to the above Table, teachers' responses ranged from (3.51 - 3.85), the total score was high with an arithmetic mean (3.69), and paragraph No. (1), which states: "The use of modern technologies raises the level of Students' understanding of the courses," came in first place with a mean of (3.85), and at a high level. And per the researchers, this is due to teachers' awareness of the importance of using innovative technology in the educational process in terms of its role in finding many and varied ways to communicate information and skills to students, which contributes to the consolidation of information and its fixation in their brains, as well as the ease of memorizing and referring to it when needed. It may be due also to university faculty members evolving their expertise, as well as their interest in developing their technical and cognitive skills, in addition to the demand for students to learn through innovative strategies over traditional education as a result of its advantages of easy transfer and search for knowledge, containing elements of suspense and excitement, and increasing motivation and desire to learn for students' self-learning.

"Modern technologies allow students the opportunity to participate and interact," as according paragraph No. (7), was ranked last, with an average of (3.51). The result was explained by the educational environment that these technologies created, which enabled communication, social interaction, dialogue, and discussions between students and their teachers via various communication channels such as the web and social networking applications, as well as the ability for students to watch videos of materials and lectures from within their homes and listen to them at the appropriate time and place. This was confirmed by the findings of (Harris, Al-Bataineh, & Al-Bataineh, 2016), (Lei, 2017), and (Spears, 2012).

b-   Improving and developing the quality of the course

Table 5: The impact of using modern technology on raising the course's quality and progress (Arithmetic Mean and Standard Deviation)

Rank	Statements	Mean	Standard Deviation	Level
3	Modern educational technology help to connect the practical and theoretical aspects of course teachings.	3.77	0.98	High
1	The use of modern technologies increases the proportionality between the intensity of the course and the timing of its teaching	4.36	1.22	High
5	The course is compatible with the modern technologies available at the university	3.24	0.88	Medium
4	The use of modern technologies offers exciting applications for course learning	3.52	1.34	Medium
2	Modern educational technologies contribute to enriching the academic content of the curricula	3.94	1.27	High
Overall Performance		3.76	0.53	High

Table (5) reveals that instructors' average responses to the questions varied from 3.24 to 4.36, and the overall score was high, with an arithmetic mean of (3.76). The statement "The use of modern technologies enhances the correlation between the strength of the course and the time given to teaching it" came in first rank with an arithmetic mean (4.36) and a high level. According to the scientists, this is because the usage of learning innovations plays a vital part in transferring information and knowledge to students in the smallest period of time possible. Furthermore, the option to return to lecture recordings whenever it is convenient for the student, as well as listen to them more than once... On the one hand, this displays how teachers use the scientific revolution and information technology (audio and visual) in the development of academic courses. The student, on the other hand, has the flexibility to attend lectures at a time that is

convenient for him, as well as the possibility of listening to the lecture more than once, allowing him to better comprehend and understand the course while also saving time to research and delve deeper into the course's subject, enriching the student's knowledge and increasing his enthusiasm and motivation to learn.

Whereas, the statement that states "the course is compatible with the modern technologies available at the university" was in the last order, with a medium level, and its average was (3.24) due to the difficulties faced by both students and faculty members in learning how to use some modern programs and technologies (such as the Blackboard LMS and other tools), as well as internet disruptions or a lack of devices for students in some circumstances... This was demonstrated by the study findings of (Suleimenov & Egemberdyeva, 2019).

c- *Improving the quality of the teacher's performance and development*

Table 6: Impact of adopting new technology on improving the quality and development of teacher performance (Arithmetic Mean and Standard Deviation)

Rank	Statements	Mean	Standard Deviation	Level
1	The utilization of new technologies helps instructors strengthen their ability to construct and design plans and courses online.	4.15	0.97	High
2	The use of new educational technologies helps instructors in saving time and effort while delivering and presenting course.	3.98	1.16	High
3	The usage of modern technologies allows instructors to simplify materials to students.	3.95	1.19	High
4	The instructor can monitor the students' learning individually or collectively through modern educational technologies.	3.81	1.05	High
Overall Performance		3.97	0.71	High

According to Table (6), respondents' ratings ranged from (3.81 - 4.15), and the total score was high, with the paragraph "The use of new technologies helps instructors strengthen their ability to construct and design plans and courses online" ranking first, with an arithmetic average (4.15) and a high level. This might be because educators feel that implementing digital innovations would provide them with the skills they need to manage them while also polishing their scientific research abilities in their fields of specialization, instructional methodologies, and strategies. This demonstrates the instructors' eagerness and interest in staying up to date on technological changes at the institution, as well as their aptitude for selecting the optimal learning strategy for the educational environment and courses, updating, and presenting it in an interactive manner. The last rating occurred at paragraph No. (4), which suggests that "the instructor can, using modern educational tools, follow up on pupils' learning individually or collectively" with an arithmetic average (3.76). Instructors were able to adopt blended learning because of the development of digital technology in education. This confirms the preference of university teachers for individual advanced strategies and techniques such as educational phones and personal educational computers, as well as collective innovations such as exhibitions, forums, scientific seminars, educational television, audio recordings, maps, paintings and models. This is supported by the findings of (Akpan, 2014) and (Ansah, 2013).

d- *Improving the college/university administration's quality and development.*

Table 7: The impact of technological tools on the quality and development of college/university administration (Arithmetic Mean and Standard Deviation)

Rank	Statements	Mean	Standard Deviation	Level
1	The use of modern technologies has improved the outstanding education and programs of the university.	4.12	0.98	High
2	Administrative tasks are enhanced by modern technologies such as online management at the college/university.	3.91	0.91	High
3	The use of modern technologies accelerates the progress of the institution and transforms it into a smart campus.	3.83	0.95	High
4	The introduction of modern technologies contributes to a conceptual change in student educational	3.52	1.24	Medium

outcomes and academic achievements.			
Overall Performance	3.84	0.64	High

According to Table (7), the arithmetic averages of the respondents' ratings ranged (3.52-4.12), and the average total score (3.84) was highly rated, as the paragraph that states: "The use of modern technologies has improved the outstanding education and programs of the university," in first place with an arithmetic mean (4.12), and a standard deviation of (0.98). This finding may be attributed to the research sample members' awareness of the necessity to notify the university and colleges of the accreditation and quality assurance needs and standards, the most significant of which is the orientation to information technology in teaching. Perhaps this is due to the university's tendency to implement modern learning strategies because they believe that the university's reputation and program are dependent on its ability to confront successive technological developments as a pillar for the development and achievement of university studies. It may also be due to the fact that the use of educational technologies leads to the improvement of aspects of higher education quality and brings the university closer to its targets audience towards the world. While the paragraph stating that " The introduction of modern technologies contributes to a conceptual change in student educational outcomes and academic achievements" was placed last, it had an arithmetic mean (3.52) and a standard deviation of (1.24). This result is due to the fact that teaching with modern educational technologies resulted in a conceptual change in the education system at the university, which had a positive impact on the educational outcomes that forced it to adapt to the new technological progress, as it imposed the need for students to acquire the skills of using modern technologies and to bridge the gap between education and labor market requirements.

Question 3: "Is there a statistically significant relationship at the level (α=0.05) between the use of modern technologies by faculty members and the improvement and development of education quality at the University of Sharjah?"

Table 8: Pearson's correlation coefficient values between academic instructors' usage of technology and enhancing educational quality and development

fields		Degree of use of technology by academic teachers
Improving and developing students' learning	correlation coefficient	0.910**
	Significance level	0.000
Improving and developing the quality of courses	correlation coefficient	0.523**
	Significance level	0.000
Improving the quality and development of the teacher's performance	correlation coefficient	0.692**
	Significance level	0.000
Improving the quality of college/university administration and development	correlation coefficient	0.788**
	Significance level	0.000

** Statistically significant at the level (0.01)

*Statistically significant at the level (0.05)

According to Table (8), there are positive correlations between different variables and statistical significance between the overall and sub-domains of academic instructors' usage of technology. This relationship ranged between (0.523 - 0.910), with the correlation of the field of student learning improvement and development constituting the strongest correlations, reaching (0.910) with a significance level of (0.000), and the correlation of improving the quality of academic courses and its development being considered the weakest, reaching (0.523) with a significance level of (0.000). This is strong and positive evidence that proves the correlation between learning innovations and university education quality standards. As the university, represented by its administration, has a serious desire to implement the quality management system in all its faculties, including the College of Arts, Humanities and Social Sciences in its various departments, and to keep pace with contemporary educational trends to ensure its transformation into a scientific, knowledge and technological reality, based on the university's interest in updating its policies and modifying its procedures, and its real desire to reach the local and international classification providing infrastructure using technology based on the modern technology protocol to raise the level of education. This is confirmed by the study of (Akpan, 2014) and (Raja & Nagasubramani, 2018), which confirmed the significant impact of information and communication technology on increasing the quality of services in general, and the quality of higher education in particular.

5. Conclusion

The use of educational technology in the teaching and learning process has had a significant impact on education in

recent years. Technology has improved access to education, allowing it to be accessible to many students who previously had limited access due to distance, expense, or other constraints. Because to the internet's online learning platforms and educational resources, students may study from anywhere at any time (Bates, 2015). It also improved learning outcomes including student engagement, information retention, and academic performance (Means et al., 2013). Technology may personalize learning by providing students with unique learning paths and adapting to their learning requirements, styles, and preferences. This customized approach has the potential to increase student motivation and engagement (Chen et al., 2018). Technology, regardless of their physical location, has the potential to foster cooperation among students and between students and teachers. By fostering communication, collaboration, and a feeling of community, this can improve learning outcomes (Dabbagh & Kitsantas, 2012). Educational technology may help instructors provide more effective instruction and evaluation by providing tools and resources to enhance learning, such as learning management systems, online quizzes, and interactive multimedia materials (Kay & Greenhill, 2011).

Overall, the use of educational technology in teaching and learning has the potential to change education and improve student outcomes. Nonetheless, it is critical to emphasize that technology alone cannot guarantee improved learning outcomes, and that effective technology use necessitates adequate training, support, and pedagogical strategies (Ertmer et al., 2012).

6. Recommendations

A solid grasp of technology and the approach to online teaching frameworks benefits educational technologies and concepts. Human intelligence has an important part in the development of strategies and information. Educational technologists' primary and more prevalent goal is to increase productivity, which includes intellectual growth and simplifying the academic process. In the educational field, technology is altering the conventional function of the instructor in the classroom. As a result, parents, the community, the government, and all members and sectors should assist in pushing teachers and pupils to use technology.

Following the findings of the research, a number of recommendations were made, the most prominent are as follows:

1. The study's findings demonstrated that current educational tools were often used by university faculty members. As a consequence, the study recommends that the university provide all educational environment needed for the use of new educational technologies, as well as train students and instructors on computer use and the use of information and communication technologies in teaching.

2. Enhance and increase students' learning by allowing them to participate and interact during lectures, as well as stimulating their motivation towards learning.

3. Holding training courses for faculty members to improve skills and technical competence by the University's Department of Educational Technologies to support the university's educational process.

4. Developing and producing new technologies and tools for use in teaching courses, as well as the necessity to provide attractive applications for learning the courses in order to contribute to enhancing the academic content of the courses.

5. Conducting more research on new educational technologies with the purpose of confirming the effectiveness of university education in various aspects and assuring the improvement of university education achievements.

Acknowledgments

Conflict of interest

The authors declare that there is no conflict regarding the publication of this paper.

References

[1]   Akpan, C. (2014). ICT Competence and Lecturers' Job Efficacy in Universities in Cross River State Nigeria. International Journal of Humanities and Social Science,4 (10), 259-266.

[2]   Ansah, S. (2013, September). Application Of Information And Communication Technology (Ict): A Comparative Analysis Of Male And Female Academics In Africa. Library Philosophy and Practice.

[3]   Asta Kybartaite. (2010). Impact of modern educational technologies on learning outcomes application for e-learning in biomedical engineering. Tampere University of Technology, Tampere. ISBN 978-952-15-2385-4. ISSN 1459-2045.

[4]   Baporikar, N. (2016). Technology integration and innovation during reflective teaching. International Journal of Information and Communication Technology Education, 12(2),14–22. DOI: https://doi.eric.ed.gov/?id=EJ1167858

[5]   Belonovskaya, I. D., Matvievskaya, E. G., Saitbaeva, E. R., Ksenofontova, A. N., Usmanov, S. M., Zatsepina, M. B., & Bakshaeva, E. V. (2020). Digital Communication in Educational Process: Development Trends and New Opportunities. *Online Journal of Communication and Media Technologies, 10*(2), e202008. https://doi.org/10.29333/ojcmt/7928

[6]   Chen, B., Seilhamer, R., Bennett, L., & Bauer, S. (2018). Students' perspectives on the use of individualized technology to enhance their learning. Journal of Educational Technology Development and Exchange, 11(1), 1-14

[7]   Cloete, A.L. (2017, August). Technology and education: Challenges and opportunities. HTS Teologiese Studies/ Theological Studies, 73(4), pp.4589.

[8]   González-Gómez, F., Guardiola, J., Rodríguez-Sedano, F., & Alonso-Álvarez, M. (2016). Gender differences in e-learning satisfaction. Computers & Education, 94, 134-142.

[9]   Ertmer, P. A., Ottenbreit-Leftwich, A. T., Sadik, O., Sendurur, E., & Sendurur, P. (2012). Teacher beliefs and technology integration practices: A critical relationship. Computers & Education, 59(2), 423-435.

[10]   H. Ahmad, A.G.Awan, (2020). A study of emerging technologies and their impact on teaching-learning process. Global Journal of Management, Social Sciences and Humanities. Vol 6 (3) July-Sept, 2020, pp. 710-734.

[11]   Harris, J., Al-Bataineh, M. & Al-Bataineh, A.(2016). One to One Technology and its Effect on Student Academic Achievement and Motivation. Contemporary Educational Technology, 7(4), 368-381. DOI:10.30935/cedtech/6182.

[12]   Iryna Piatnytska-Pozdnyakova; Halyna Kolomoiets; Andrii Furdychko; Oleksandr Sazhiienko; Anatolii Rebryna; Oleh Dykyi, (2021). Distance education: the introduction of new computer technologies in the learning process. Laplage em Revista (International), vol.7, n. 3A, Sept. - Dec. 2021, p.156-162

[13]   K. Bhakta, N. Dutta, (2016). Impact of Information Technology on Teaching-Learning Process. International Research Journal of Interdisciplinary & Multidisciplinary Studies (IRJIMS)

[14]   L. Stošić, A. Serbia. (2015). The importance of educational technology in teaching. (IJCRSEE) International Journal of Cognitive Research in Science, Engineering and Education. Vol.3, No.1.

[15]   Lei, Q.(2017).Modern Educational Technology Theory and University Quality Education, Advances in Intelligent Systems Research, 7th International Conference on Management, Education and Information,156, pp.287-291.

[16]   Moore, J. L., Dickson-Deane, C., & Galyen, K. (2014). E-learning, online learning, and distance learning environments: Are they the same? The Internet and Higher Education, 14, 129-135.

[17]   Nikolic, G., Jurkovic, M. & Kalcic, T.(2015). Modern Approaches to Higher Education Based on the Development of Information and Communication Technologies, Conference: Međunarodna naučno-stručna konferencija: KVALITET I IZVRSNOST U OBRAZOVANJUAt: Belgrade, Serbia, pp. 332-341.

[18]   Olivier, E.(2014).Theological education with the help of technology. HTS. Theological Studies, 70(1),1–7. DOI: http://dx.doi.org/10.4102/hts.v70i1.2643

[19]   R. Raja, P. C. Nagasubramani. (2018). Impact of modern technology in education. Journal of Applied and Advanced Research, https://dx.doi.org/10.21839/jaar.2018.v3S1.165   ISSN 2519-9412 / © 2018 Phoenix Research Publishers.

[20]   Shapley, K., Sheehan, D., Maloney, C., & Caranikas-Walker, F. (2011). Effects of technology immersion of middle school students, learning opportunities and achievement. Journal of Educational Research, 104(5), 299-315. DOI: https://doi.org/10.1080/00220671003767615

[21]   Spears, S. A. (2012). Technology-Enhanced learning: The effects of 1:1 technology on student performance and motivation, (pp. 1-114). University of West Florida, Florida.

[22]   Suleimenova, K., Suleimenov, I & Egemberdyeva., Z. (2019). Modern Information Technologies in Higher

Education: What Might The Role of a Teacher Look Like in a Modern University?. In Sinteza 2019-International Scientific Conference on Information Technology and Data Related Research (pp. 70- 76). Singidunum University. DOI: https://doi.org/10.15308/Sinteza-2019-70-76

[23] Vassiliou, A. (2014).High Level Group on the Modernisation of Higher Education, New modes of learning and teaching in higher education. Report to the European Commission, Publications Office of the European Union.

[24] Voogt, J., Knezek, G., Cox, M. J., Knezek, D., & ten Brummelhuis, A. (2017). Under which conditions does ICT have a positive effect on teaching and learning? A call to action. Journal of Computer Assisted Learning, 33(5), 1-14.

[25] Y. Melnyk, H. Drapak, Z. Sverdlyk, M. Tsilyna, V. Varenko, N. Boichuk, 2021. Experience of Theory and Practice of the Process of Implementing Information Technologies in the Educational Environment. IJCSNS. https://doi.org/10.22937/IJCSNS.2021.21.4.11

[26] Zawacki-Richter, O., Marín, V. I., Bond, M., & Gouverneur, F. (2019). Systematic review of research on artificial intelligence applications in higher education – where are the educators? International Journal of Educational Technology in Higher Education, 16(1), 1-28

[27] Zhonggen, Y.(2015). Blended learning over decades. International Journal of Information and Communication Technology Education (IJICTE),11(3), 1–19.

[28] Al Surur, N.(2018). The use of modern technology in the educational process in Saudi Arabia and its role in improving the performance of teachers and students. Journal of Educational and Psychological Sciences, 4 (2), 18-35.

[29] S.Badrakhan, H.Ahmad (2020). The degree to which the use of modern educational technologies on the quality of education and its development in Al-Ahliyya Amman University from the viewpoint of faculty members. Al Balqaa Journal, 23 (2), pp 65.