

EFFECT OF THE FACTORS OF E-LEARNING ACCREDITATION SERVICES ON THE ACTUAL USE OF E-LEARNING IN PRIVATE LIBYAN UNIVERSITIES

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Abstract

This paper presents a comprehensive review of the existing literature on the impact and utilization of e-learning in higher education, with a particular focus on private Libyan universities. The review begins by exploring key aspects of e-learning, including the current technologies in use, such as Learning Management Systems (LMS), virtual classrooms, and multimedia resources. The evolution of interactive e-learning is discussed, highlighting the transition from hybrid courses to fully online courses facilitated by modern technological advancements. Various models of e-learning, such as blended learning, authentic learning, active learning, and deep learning, are examined to provide a theoretical foundation. Each model is analyzed in detail to understand its role and effectiveness in the e-learning environment. This research investigates the factors influencing the adoption and actual use of e-learning in private Libyan universities, focusing on accreditation services. The study aims to identify key factors such as technological infrastructure, faculty readiness, student engagement, and institutional support that impact the successful implementation of e-learning. Through a detailed review of existing literature, this paper discusses the effectiveness of e-learning from multiple perspectives, including student outcomes, instructional quality, and overall educational experience. Furthermore, the research addresses the development of interactive e-learning and its role in enhancing educational quality and accessibility. By synthesizing findings from various studies, this paper provides insights into best practices and strategies for implementing effective e-learning programs in higher education institutions. The goal is to contribute to the ongoing discourse on e-learning by offering a comprehensive understanding of its benefits and challenges, particularly within the context of Libyan private universities.

Keywords: e-learning, interactive e-learning, higher education, Libyan universities, accreditation services.

Introduction

The adoption of e-learning in private Libyan universities is influenced by factors such as accreditation services, which ensures high-quality e-learning platforms, which can boost adoption rates among students and faculty due to confidence in their reliability and effectiveness.

Private Libyan universities may invest in infrastructure, technology, and faculty training to meet accreditation requirements, enhancing the e-learning experience and infrastructure, making it more attractive and practical for users.

Accreditation boosts the credibility of private universities' e-learning programs, attracting students and employers, and potentially increasing demand for such programs.

Private Libyan universities may face pressure to comply with accreditation standards, leading to increased adoption of e-learning technologies. This pressure may come from regulatory bodies, funding agencies, or competition with other accredited institutions. Accreditation standards may emphasize faculty qualifications, professional development, student support services, interactive learning experiences, and accessibility. However, burdensome requirements or barriers to implementation may hinder e-learning adoption. Understanding the dynamics between accreditation services and e-learning adoption requires detailed analysis of institutional contexts and stakeholder perceptions.

Literature Review of e-learning

Education is a humanitarian project whose purpose is to help individuals learn. It is a group of incidents that affect speaking in a way that leads to the facilitation of learning. Usually, the incidents are consecutive as they are outside the learner's scope: printed, recorded, or spoken.

It also supports the internal processes of the learner and supports a selective, purposeful social process in which all elements interact and are concerned with the educational process, including administrators, supervisors, teachers, and students with the aim of the learner's growth and responding to his desires, characteristics, and methods of learning by using activities and procedures that suit his ability and capabilities and lead to his higher growth, that education is a process of conducting learning and acquiring Knowledge, skills and principles Beliefs and customs include systems of study and learning according to the curricula, which in turn is defined according to the school's presentation (Mhannah et al., 2022)(mushaqaq jamal, Al-Saeed & Al-Laishi, 2022). The subject of e-learning is one of the important topics that has become a concern for those interested in the educational field in general, so this study came to shed light on it by highlighting its importance in ensuring a basic right for all, which is the right to education, especially after the pandemic that the world has known (the Covid-19 pandemic) that denied An important number of individuals, in general, are from education, so it has transformed e-learning from a matter of choice to an urgent necessity. He also tried to highlight its importance through the need to take advantage of the great development that the world has known in the field of technology. The researcher(Shkheidim. et al., 2020) believes that e-learning is the process of replacing distance learning using electronic means of communication with face-to-face interaction in the classroom to achieve the planned educational outcomes.

The Covid-19 pandemic has had a significant impact on a wide range of societal, economic, and social systems, as well as on the healthcare system. Education is no exception, thereby to respond to the catastrophic effects of the Covid-19 pandemic, the education system must be reformed and evolved. Accordingly, online classes have gradually displaced traditional classes (an minh ngoc pham, 2023).

Everyone sees (Abukhalil et al., 2021) e-learning is an educational method aimed at achieving educational results using technology that provides sound, image, films, and interaction between demand, content, and educational activities at the right time and place.

Here, the researcher explains the types of e-learning, which are as follows:

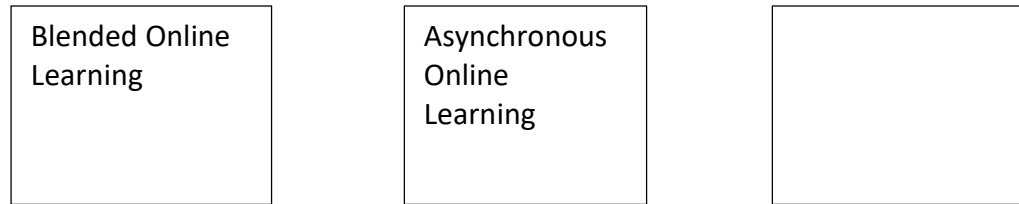


Figure 1

Types of interactive e-learning (Rawashdeh et al., 2021)

Types of interactive e-learning

Simultaneous/synchronous e-learning

It is when the professor meets with two students at the same time so that they can communicate with text, audio, or video at the same time.

It is a method and technique of education based on the global network of information «Internet» to connect and exchange lectures and research topics between the learner and the teacher at the same time. The actual time for teaching the subject through its various tools, namely: Real-Time Chat, Virtual Classroom, Videoconferencing, Interactive White Board, and Chatting Rooms.

Asynchronous E-Learning

It is the exchange of information between the lecturer and the student. The professor can place resources on the educational site along with a teaching plan and assessment, and the student can join the site at any time and follow the teacher's instructions without having a simultaneous connection with the professor, and e-learning is generally done utilizing the two modules.

Through it, the learner obtains courses or classes according to a planned study program in which he selects the times and places that suit his circumstances by employing some e-learning methods and tools, such as E-mail, World wide web, Mailing lists, Discussion Groups, File exchanges, and CDs.

Blended E- Learning

It is a blended learning environment, which combines face-to-face instruction with online learning tools (Agyemang, 2022).

Blended synchronous learning refers to a teaching and learning approach that combines both synchronous (real-time) and asynchronous (self-paced) learning activities. This approach can be used in both face-to-face and online learning environments. Blended synchronous learning has been gaining popularity in recent years due to its ability to offer flexibility to learners, while still providing real-time interaction and collaboration opportunities (an minh ngoc pham, 2023).

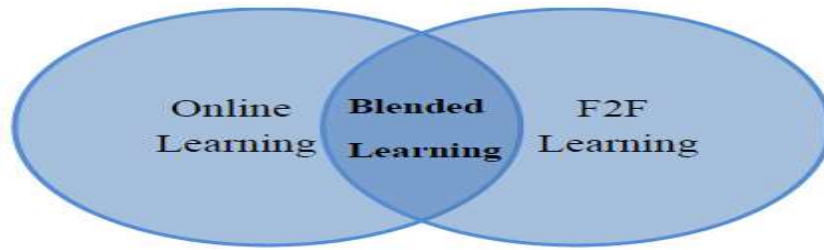


Figure 2

blended learning definition(Alebaikan, 2010)

In(AI-Malah1 et al., 2021) it is also defined as a type of virtual education by its means, realistic with its results. This type is related to electronic means and information and communication networks, the most famous of which is the International Information Network (Internet), which has become an effective medium for electronic education.

In (Al-Malah1 et al., 2021) referred to eLearning as the use of technology and technological means in education by relying on them as an integrated educational system, and harnessing it to the student's self and collective learning and making it the focus of the educational process.

Modern technical education encompasses all educational system requirements, including decisions, curricula, methods, classrooms, and communication using information and communication technology, including information management systems, software, and training programs.

In addition,(Al-Malah1 et al., 2021) defines it as a program designed to organize and manage the teaching and learning processes that are conducted in the classroom, calling this environment electronic classes. Moreover, Several studies have discussed face-to-face and online chatroom approaches that use email in e-teaching and online learning to determine which of these approaches has the most appropriate learning outcomes and student satisfaction rate(Alwan & Bashir, 2022).

No	The differences	Traditional Education	Interactive E-learning
1	The focus of the educational process	Teacher is the basis of the learning process or the most active element.	It helps the student to be the focus of the educational process or the most active element.
2	Commitment to a specific place or time	Commitment to the specified time and place for any education Direct.	Not sticking to a specific place or time.
3	There are no determinants	There are limitations in terms of attendance and regularity in lessons throughout the days week in terms of the age of the learner.	Learning is open to all and can be adapted to work.

4	Educational content	It is presented as a printed book.	It can be in the form of an e-book or video.
5	Communication	Communication between the student and the teacher is specific.	More freedom of communication between the student and the teacher.
6	The role of the teacher	Conveyor and telecaster of information.	He is the guide, mentor, and mentor.
7	Different cultures	A student is not allowed to learn about different cultures.	A student is allowed to meet new friends from outside his country.
8	Student services	Present in the presence of the student in a human way.	Submit electronically and remotely.
9	Update educational materials.	It remains unchanged for many years. It remains unchanged for many years.	Easily update electronically with what's new.
10	Individual differences	Failure to take into account individual differences in a single explanation for all.	Considering individual differences, it is based on the principle of individualization of education.

Table 1

Modern education is much more fluid and therefore demanding and requires a combination of multiple educational theories to achieve effective results(Samarakou et al., 2018).

However, there are unknown factors in enhancing the full-spectrum learning experience and addressing causes of concerns such as dropout rates and superficial formative feedback for massively open online courses, when studying at a school in Nusa Dua Badung -Bali (Putri, 2019). There are recent trends in e-learning during the COVID-19 pandemic for effective and efficient e-learning practices to improve teaching and learning practices and integrate it into daily educational life (Asra & RKAR. Kariapper, 2023).

The study recommended conducting more research for quality regulators in higher education institutions to understand their visions and perceptions about the adoption of online teaching and learning in higher education institutions(Budiningsih, 2023).

The distance education has been emerged to fulfill the demand of pedagogy for those who were not being able to participate in physical or face to face education. Distance education encompasses a variety of ways to enable students learning through different paths (Alom et al., 2023).

History of E-Learning

Science has significantly advanced, particularly in technology, with the computer playing a crucial role in the twenty-first century, as knowledge has doubled and scientific outcomes have increased.

There is a general agreement locally, nationally, and globally that e-learning plays an important role in various educational situations such as training, practice, practical explanations, and problem-solving (Hayam Amir, 2021). The Corona-19 pandemic has accelerated the transition from face-to-face classes to e-learning systems in higher education, necessitating increased teacher training on digital technology to adapt to the global educational climate (Rashid & Yadav, 2020). The e-learning revolution has brought about and will bring positive future changes in the field of education, which made many countries spend a lot of money in this regard. And a picture, graphics, search mechanisms, and electronic libraries, and this in turn leads to the improvement and development of the educational process to achieve the desired goals. We must look at the modern communication mechanisms of a computer and its networks as an integral part of the teaching and learning process, without which the desired benefit will not take place.

In (Aguilera-Hermida, 2020) Education development is crucial for achieving a modern civilizational renaissance in the era of globalization, meeting age challenges and keeping pace with technological advancements.

In response to the era of globalization (Hayam Amir, 2021) E-learning revolutionized educational systems by introducing new philosophy and advantages in teaching and learning processes. It is an opportunity that nations invest in, sacrificing time, effort, money, and perseverance, rather than an existing thing.

E-learning, a digital education tool, replaces traditional education, promoting communication and distance education for equality and justice. It's especially important in Libya, where the Corona pandemic has exacerbated the world's unique circumstances. In addition, it is also defined (N.Fayadhm et al., 2021) as a type of education that relies on electronic media to perform many scientific tasks. It is communication and receiving information to acquire skills and interactions between the student and the teacher on the one hand and between the student and the school on the other hand.

This type of education does not require classrooms and eliminates all components of physical education (N.Fayadhm et al., 2021) (Ammar et al., 2020).

On this, the current study focuses, as it studies the extent of the impact and intervention of the application of the e-learning system in Libyan universities.

There are many advantages of e-learning, (Muhammad et al., 2018) the most important of which are:

1. Help solve the problem of the knowledge explosion and the increasing demand for education.
2. Being able to train, educate and rehabilitate workers without leaving their jobs.
3. It provides an interactive learning environment and allows for flexibility in the time and place of education.

4. Provides a fertile learning environment with live interviews and discussions, and provides up-to-date information consistent with the learners' needs.

5. Providing simulation programs, animated pictures, interactive activities and exercises, and practical applications.

The primary objective is to improve learning, develop individuals, and cater to students' needs, offering comprehensive content access across all disciplines and rapidly spreading interactive e-learning(Mhannah et al., 2022)

Education has both advantages and disadvantages, with high costs for infrastructure, software, training, and electronic material design. It requires interactive environments, joint conferences, shared screens, and direct electronic boards for effective communication and interaction (Muhammad et al., 2018).

It refers to the challenges facing interactive e-learning in general Of which: Classroom size, University infrastructure, Internet speed, Computer labs and equipment, Blackouts, The inability of traditional education institutions to accept all those who wish to study, Relative shortage of faculty members in certain disciplines.

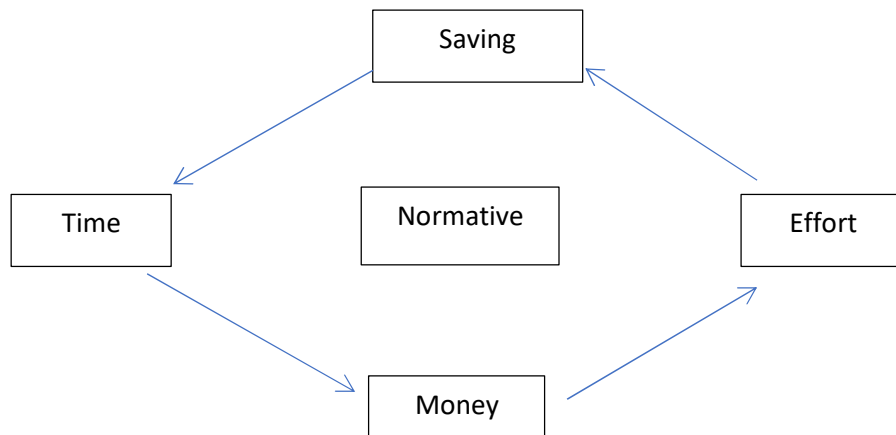


Figure 3
e-learning standards(Mhannah et al., 2022)

The contents of e-learning and its software need their standards, and they are available now, although they still did not reach the level of a comprehensive global standard from ISO, despite the existence of a new standard of AISE, it does not include all aspects of e-learning(Mhannah et al., 2022)

E-learning standards (normative)

It is noted that the development of e-learning specifications and standards, and these learning Cmodels and systems show us significant changes in the direction of the learning community in particular, meaning that contemporary society has begun to recognize the importance of the

available specifications and standards and the possibility of their application in e-learning models and systems, with the many advantages and benefits they offer and future issues.

As for the currently accepted standards in the field of e-learning, it does not amount to a degree A standard endorsed by the International Standards Organization and still serves as specifications, standards, or guidelines. Which: Saving, Time, Effort, and Money.

The importance of educational standards

1- Availability of international information to measure the extent to which educational institutions comply with the requirements of educational standards International.

2- Reducing international disputes regarding academic and professional qualifications, with ease of movement between countries.

3- Laying the foundations and controls for preparing a qualified professional according to the specifications specified by (IFAC), which are illustrated by the following figure:

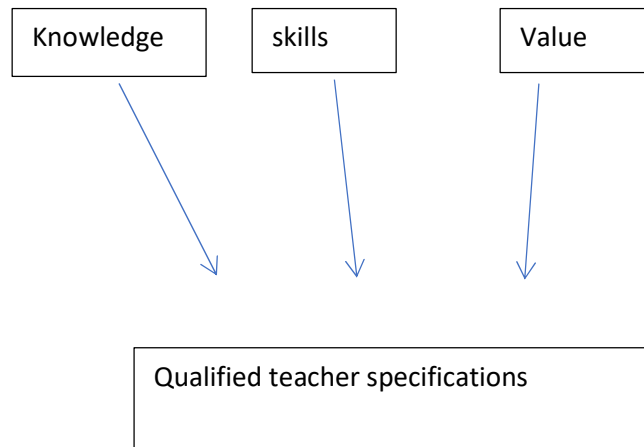


Figure 4

Qualified teacher specifications according to IFAC(Al-Sharif, 2022)

It is noted from the previous figure that it included the professional components of the accounting profession represented in the following aspects (the scientific aspect, the professional aspect, and the ethical aspect).From the above, it can be said that (IAESB) contributes to achieving the mission of the International Federation of Accounting E-Learning by laying the foundations and controls for the scholar and those who use it.

Development of e-Learning

Previous studies were divided into two parts: e-learning development in higher education before Corona, and e-learning development in higher education during the Corona pandemic and after the Corona pandemic.

1- e-learning development in higher education before Corona

The study (Jabr, 2019) dealt with e-learning in African higher education institutions in light of the prospects of Islamic education, taking the International University of Africa in Khartoum as a model, and aiming at identifying the university's experience in this field through means, experiments, and obstacles, and reached results, the most important of which is the weakness of the structure Infrastructure in the field of networks, communications, and software, and the lack of experience of faculty members in using modern electronic media in teaching, and the lack of qualified staff to lead e-learning at the university.

The study (Hamboub, 2022) also emphasized the need to transform from a paper institution to an electronic one, and from this, the Algerian government sought to do so with a set of reforms, whether in the intellectual aspect or through practices, both in the central and decentralized framework, and as these reforms touched Several sectors The study stated that during the previous years, e-learning has become one of the common methods used in education, especially distance education, and many teaching programs have improved as a result of the application of e-learning tools.

In (Vate-U-Lan & Masouras, 2018) the main objective of this study was to survey online students' attitudes towards communication for e-learning on social networking sites. Specifically, the results confirmed that Facebook is the most popular social networking site. It also found a statistically significant difference between the attitude of the two sexes, as the attitude of females was scored higher than that of males, both of which were positive. Higher attitude obtained from the survey which concluded that students believe that social networks support the potential of e-learning Participants with experience in both formal and informal e-learning showed a higher attitude towards e-learning on social networking sites compared to participants who used non-learning e-learning official only.

2- E-learning development in higher education during the Corona pandemic and after the Corona pandemic

The results of most studies confirmed that e-learning is generally beneficial. the study aimed (ELAINE YONG, 2020) investigates how eLearning tools are associated with students' self-efficacy connection with their college instructors. But, the study (Abbasi et al., 2020) aimed at the problems that center around the 77% students have negative perceptions towards e-learning. 76% of the students use mobile device for their e-learning. Students did not prefer e-teaching over face-to-face teaching during the lock down situation. Administration and faculty members should take necessary measures for improving e-teaching for better learning during lock down. This exceptional circumstance (the Corona pandemic), which requires the effectiveness of the professor, student interaction, and the availability of the Internet at the same time, means that the future of the quality of higher education in its default style in Algeria is contingent on the availability of several solutions that are mainly related to the organizational nature, the provision of technology and the guarantee of training.

The role of open education and distance education emerge as one the alternatives that provide an educational pattern that allows more room to absorb the excess demand for university education (Simamora et al., 2020).

Also in study (Al-Senussi, 2021) the quality of e-learning in light of the spread of the Corona pandemic, from the point of view of faculty members at the Faculty of Science - Omar Al-Mukhtar University in Libya, was less than average, and the interaction of students in using e-learning was low, and the study recommended the need to hold training courses in the field of education E-learning for both faculty members and students and work to get rid of all the difficulties that prevent the benefit from the e-learning system, and call for the integration between direct education and e-learning in institutions of higher education.

Private Higher Education in Libya

The establishment and emergence of university education in Libya was not the result of itself, or the product of mere contemplation occurring in a vacuum on the part of the theories of innovation and educational and developmental development, and its programs and content were not automatically made from the inclinations of its professors and students and their activities, but rather that this emergence and development came in response to societal needs imposed by it. The challenges that faced Libyan society since the fifties of the last century continue to this day.

Libya is one of the few countries that have made great leaps in enrollment rates in education in all its stages, including university education, while the available statistics for the academic year 2019/2020 indicate that the number of students enrolled in university education in Libyan government universities has reached 371666 students and student (Bed & Al-Araibi, 2022).

The high demand for knowledge called for the existence of private education in all stages and its follow-up from the Libyan Center for Assurance and Quality.

Private universities: These mean universities that adopt educational views and theories that were transferred from their countries of origin and planted in some Arab countries, despite the great difference between the Arab environments and the original environments of these universities. The United States of America is the first to establish these universities, as it is one of the most prominent capitalist countries that It seeks to establish the subordination of these countries to it (Keller & Keller, 2001).

Libya has made significant gains in providing free education on a large scale. However, the country's education and training system face a variety of challenges such as weak management, insufficient educational facilities, a lack of qualified teachers, and a lack of alignment of educational outcomes with the labor market and national needs (Al-Brahmi, 2022).

Academic programs and training courses that are offered through partnership programs with international institutions with academic expertise are designed to raise the level of cadres working in the Libyan public sector to meet emerging regulatory standards during the stages of establishing a permanent university campus and its branches.

With 70% of the employed workforce employed in the public sector or state-owned or owned entities, improving the skills of those working in the public sector is critical to the future of Libya. This new private institution is preparing talented young Libyans for positions in public service where they can transform their communities and their country actively and with dedication.

A beacon of hope for the group of private training institutions dedicated to educating the next generation of Libyan leaders exists a long-running rivalry that impedes the full implementation of this bold initiative.

Article (3) of the Libyan Universities Law No. (4) for the year 2020 AD emphasized the importance of developing the education sector, as it stipulated that:

1-Human knowledge and positive interaction with society and its institutions.

2-Localization of science and technology.

Therefore, in the year 2022, the Minister of Higher Education and Scientific Research issued a decision to stop several private higher education institutions and their branches from practicing their educational activities because they did not meet the conditions required by the National Center for Quality Assurance and Quality.

The National Center for Quality Assurance and Accreditation of Educational and Training Institutions is one of the main pillars of the Ministry for the reform and development of education. In Libya, as the body responsible for spreading the culture of quality, developing local standards in line with international standards, accrediting educational and training institutions, improving their outputs, increasing their competitiveness locally and internationally, and accrediting educational institutions (institutional/programmatic), and it is the body responsible for recognition and equivalence. Academic qualifications with the corresponding national qualifications (Al-Zanati & Ali, 2021).

The National Center for Quality Assurance and Accreditation audited and accredited only 7 private universities.

Also, the Minister of Education issued a decision in 2019, "Private higher education institutions are obligated to teach the courses that are taught in their corresponding public higher education institutions according to the study plan set by the public higher education institution." Despite the report published by the "University World News" website in 2021 on higher education news in Africa and its follow-up, he indicated that this vision comes within the framework of efforts to control the rapid increase in unaccredited and low-level private universities, which produce unemployed graduates in Libya.

A study (Mohamed et al., 2018), indicates the importance of identifying and treating technical, technical, administrative, and financial problems and difficulties, as it indicates the importance of providing the infrastructure for the educational and research environment in Libya, which it considers an important step that anticipates the optimal application to create a relationship and interaction between science and technology, society and the environment, and this enhances The importance of employing the STS method of learning (Science-Technology-Society)

One study conducted by (Bouraoui et al., 2021) aimed to explore Libyan university students' experiences and perceptions of e-learning during the COVID-19 pandemic. The study found that many Libyan students faced significant challenges with e-learning, including limited access to the internet, lack of appropriate devices, poor quality of online lectures, and difficulty with time management. However, many students also reported positive experiences with e-learning, such as increased flexibility, convenience, and the ability to review course materials at their own pace.

Overall, the studies suggest that Libyan students have mixed perspectives on e-learning and online learning during the COVID-19 pandemic. While many students have faced challenges, including limited access to technology and difficulty with time management, others have found online learning to be a viable alternative to traditional classroom teaching, offering increased flexibility and convenience.

Empirical and Theoretical Literature of e-learning

The e-learning system often faces challenges related to improving the resources that can be dealt with, and many previous studies touched on the subject of e-learning and dealt with it from different angles, and these studies varied between Arabic and foreign, and this study will review several studies that have been benefited Among them, about its most prominent features, with a comment on it that includes aspects of agreement and disagreement, and an indication of the scientific gap that the current study addresses. The researcher would like to point out that the studies that will be reviewed came from the time between 2019 to 2023, and included some countries and countries, which indicates their temporal and geographical diversity.

These studies have been classified according to the main variables of the study. Then the scientific gap is clarified by recognizing the difference between the current study and previous studies. Finally, the aspects of benefiting from previous studies in the current study.

The COVID-19 pandemic has disrupted traditional modes of education worldwide, and Libya has been no exception. With schools and universities closed to prevent the spread of the virus, e-learning and online learning have become essential for students to continue their education. There have been several studies examining Libyan students' perspectives on e-learning and online learning during the pandemic.

The study(Him & Meligy, 2017) aimed to analyze students' behavioral intentions and study the effectiveness of the technology acceptance model as a theoretical basis for understanding these behaviors. Students of Saudi public and private universities used the e-learning system. The results of the field study showed the validity of the technology acceptance model as a theoretical background that would help in understanding and clarifying the students' behavioral intentions towards e-learning, and the results showed that the behavioral intentions were affected by the students' attitudes, personal standards, and the accessibility of the system, while it was not directly affected by the perceived ease of use and the expected benefits of the system. The results also showed that the students' attitudes were affected by all variables, including the expected benefits of the system, personal criteria, accessibility of the system, ease of use, and effectiveness of the system.

In study(Kharousi et al., 2017) showed that no direct relationship was found for extrinsic motives on behavioral intention.

Administrative and financial challenges in Libyan universities make them not train faculty members to use e-learning, as well as the lack of ability and competence of students to use e-learning. Several workshops, conferences, and scientific seminars should be held that contribute to increasing awareness of the importance of applying e-learning in Libyan universities (Bayoud, 2018). Similarly, a study by (Hazell et al., 2018) found that cognitive behavioral therapy

significantly improved attention and working memory performance in university students in an online learning environment.

Regarding the quality of e-learning at the Algerian university and its relationship to quality standards in higher educational institutions in Algeria related to students and teaching staff, and it has a positive impact (Al-Shahrani et al., 2022) . In the same context was the study (Rebhi et al., 2019). This study added the prospects for e-learning in Algeria, the requirements for the transition from the traditional university to the virtual university.

There is a positive effect of ease of use and perceived benefit, which confirms the effectiveness of the TAM model in Determining the factors for using the e-learning system (Rebhi et al., 2019).

Online education requires significant investments in various online education platforms, technologies, and infrastructure, which creates obstacles to achieving the online education strategy of many developing countries(Aburagaga et al., 2020).

In a study(Mousa et al., 2020) that studied the readiness of higher education institutes towards adopting e-learning using technology, the acceptance model in Iraq was for students and professors in private and public sectors. The results showed their willingness to adopt e-learning despite their weak capabilities.

Obstacles that prevent the generalization of e-learning in the Algerian university, due to the lack of an impact on the experience of using technology and the effectiveness of technology on ease of use and perceived benefit (Dabab & Brewis, 2019).

E-learning was useful and effective for university students during the Corona pandemic, and as the writer mentioned, the emergence of e-learning as one of the patterns of education imposed by the scientific and technological changes that the world is currently witnessing, and traditional methods and methods are no longer able to keep pace with these changes (Al-Qasabi, 2022).

E-learning is beneficial to students and society as a good measure, as schools and universities have resorted to online learning known as e-learning as a means to contain the situation spreading against the COVID-19 disease from the author's point of view (Toquero, 2020).

the teaching method of faculty members and their scientific participation. And that there are strong positive trends for faculty members in Libyan universities towards the methods and strategies of academic development applied by international universities to confront the Corona pandemic (Bosnina & Al-Bazzar, 2020).

The Covid-19 pandemic affected the work of faculty members, due to concern over the spread of the epidemic.

The researcher (Demuyakor, 2020) studied the effect of e-learning on students and teachers of two universities in India. Quality and timely interaction were found to be important to teacher and student satisfaction with online classrooms. E-learning provided technical support, organized online classroom units, and modifications to accommodate action-behavior classes.

The unplanned transition to e-learning in the time of COVID-19 has divided students into two types, some of whom lack the technology, connectivity, and devices to participate in e-learning, while others enjoy significant benefits. Here the concept of justice in education changes color and study (Priyanka Biswas, 2020).

The e-learning system often faces challenges related to optimizing the resources that can be dealt with, in the study (Demuyakor, 2020), showed that students from Ghana who study in higher education institutions in Beijing (China) are satisfied with e-learning via the Internet and how Ghanaian students deal with this kind of education. The study showed that there is a high cost to participating in online learning. One of the obstacles to e-learning is that the internet connection was slow for students outside the dormitory in various universities in China.

Students and university teachers in India view quality and timely interaction as important to teacher and student satisfaction with online classrooms and availability of technical support, structured online classroom units, and modifications to accommodate classroom action behavior (Nambiar, 2020).

E-learning and taking online classes for higher education play a major role in the continuous study during the COVID-19 pandemic. The study showed the effects of e-learning practice such as difficulty in observation and changing students' learning behaviors (Zhang et al., 2020).

Social and cultural trends refer to ideological considerations, tolerance, support and rejection or against this type of education through campaigns, rumors and propaganda. With regard to the educational and psychological effects, unpreparedness and incompetence in the use of technologies may lead to the abandonment of e-learning (Lily et al., 2020).

Replacing classrooms with e-learning to ensure continuity of education, as a result of the Covid-19 pandemic, and that some teachers have discovered effective online teaching methods to provide a good and useful educational experience for teaching students at home.

Through an online survey during the COVID-19 pandemic that has led to the partial and complete closure of schools and universities with the aim of understanding and assessing the daily life, activities, learning patterns and mental health of young students in India during this crisis. How do they adapt to the new e-learning methods and how do they manage their social lives? It is a successful e-learning experience (Khattar et al., 2020).

in Egypt distance education has a role in solving the problems of the emerging Corona epidemic, which is considered one of the successful means to deal with the education problems resulting from this epidemic, where the traditional environment is the transfer of education from a university to e-learning, which is a phenomenon developed by modern education with the rapid technological development in the world, and aims To make education available to students who cannot obtain it in traditional conditions on an almost daily basis (Mahmood, 2020).

In Morocco, after the spread of the epidemic, which contributed to raising the morale of achievement and performance among e-learning students, it led to the development of positive trends. The most important obstacle to its use from the point of view of a group of teachers and students after the spread of the Corona virus epidemic is the reliance on e-learning, which was more comprehensive to conduct the educational process and complete the school year, It has also underscored the importance of ensuring equitable access to education, particularly in times of crisis (Khalid & Boubker, 2022).

The existence of an indirect significant effect between perceived benefit and ease of use in increasing the interest of Egyptian universities in their own components because of its beneficial effect when adopting e-learning (Al-Tablawi, 2020).

(Yulia, 2020) (Basilaia & Kvavadze, 2020) believes that e-learning can be effective if teachers organize educational content, choose appropriate teaching aids, identify measurement tools, individualize learning and meet different learning needs and styles. and professional growth. the article by Yulia H. discusses the use of online learning as a means to prevent the spread of the COVID-19 virus in Indonesia. The article describes the method of online learning in Indonesia and the challenges associated with implementing it. The author also suggests ways to address these challenges to ensure that online learning is an effective alternative to traditional classroom teaching in Indonesia.

The use of e-learning facilitates cooperation between students on the one hand, and between students and the teacher, and some believe that the education sector will flourish if e-learning is used successfully (Islam et al., 2017).

A study to explore the readiness of e-learning students for academic achievement in online distance learning. His sample was students from a Turkey university. The results of the study indicated that readiness for e-learning is an important indicator of academic achievement in distance learning. The study suggests that institutions should provide support and training to students to enhance their e-learning readiness and improve their academic performance (Torun, 2020).

few studies showed a positive characteristics associated with student learning through the Internet, including: time management, learner autonomy, and self-regulatory characteristics (Monk et al., 2020).

According to (Elmansori & Ishak, 2021) The results of the structural model indicated a significant positive effect of perceived ease of use, perceived usefulness, information technology knowledge, and facilitation of conditions on behavioral intent while the effect of security on behavioral intent was found to have a negligible effect.

Other researchers claimed that students' opinions about the effectiveness of e-learning during the Corona pandemic indicate that the rapid and random shift to e-learning. The majority of students cannot access the internet due to technical and financial problems. In addition, there are other challenges that students faced, such as the lack of face-to-face interaction with professors, the inability to study effectively from home, and the poor infrastructure of universities, which in turn led to their inability to switch to distance learning properly for studying (Hanish, 2021).

E-learning in university education in the United Arab Emirates. E-learning provides scientific material in an enjoyable way for students. It increases the possibility of communication between students among themselves and between students and the teacher. Acharali that due to the increase in social isolation, they spend more time in front of technical means to account for social interaction and face-to-face communication with others. There is also electronic illiteracy among parents, which reduces their ability to follow up on their children electronically. It is essential for prospective e-learners to understand the differences between an e-learning classroom setting and a traditional classroom setting as there are advantages and disadvantages of e-learning in both

environments that are likely to affect their overall performance as a student (Rawashdeh et al., 2021).

there are studies conducted on the effects of attention training techniques on mental wandering and academic performance in university students in online learning environments, they provide insight into the potential benefits of attention training techniques for university students in online learning environments.

These studies have generally shown that attention training techniques, such as mindfulness meditation and cognitive behavioral therapy, can be effective in reducing mental wandering and improving academic performance in online learning environments.

a study conducted by (Sharma, 2021) found that a mindfulness-based intervention program significantly reduced mental wandering and improved academic performance in university students in an online learning environment.

They have benefited and are knowledgeable about digital technologies and e-learning mobile applications for Ghanaian public university students. However, due to power outages and internal network vulnerabilities in rural areas, as well as the high prices of mobile phones and laptops, the use of e-learning is of great benefit to students in their education stage (Demuyakor, 2021).

To increase students' satisfaction and confidence in electronic platforms for e-learning, it is necessary to increase students' technological awareness and train them on the optimal use of distance education tools and programs (Atwa et al., 2022).

A study showing that e-learning from the point of view of school teachers in basic education in the Sultanate of Oman, that e-learning was a successful experience as it benefited high students, and recommended the need to integrate e-learning with traditional education and the need to intensify workshops and training courses for teachers and students in general (Alsabaei, 2022).

The ease of use does not have a direct impact on the intention of using the system among professors in Algerian universities, that e-learning is still being discovered in those universities, especially when it is used in the Corona pandemic.

Its effectiveness is represented in the ease of transmission of lessons and lectures in an effective and noticeable manner, It helped the student develop his skills and broaden his perceptions, increase his motivation, transfer him to the interactive environment, and integrate with the wonderful capabilities offered by digital communication tools quickly and efficiently (Yato, 2022). The e-learning students of the Department of Information Studies at Sultan Qaboos University in Morocco. which use a range of electronic platforms. The students agreed that some courses, such as field training and indexing and classification courses, are not suitable for e-learning. The lack of constant availability of the Internet, and that there is a need to teach some courses traditionally (Shehata et al., 2022).

Within the framework of the importance of the infrastructure to facilitate the use of e-learning to develop creative thinking among faculty members and the ease of using e-learning applications that contribute to the development of courses with the aim of benefiting students in the educational stages (Zorob & Madi, 2022).

In light of the widespread use of e-learning among all students in the different educational stages, this use was not limited to ordinary students only, but also included students with disabilities, and the requirements of e-learning must be adapted to suit their different educational needs. He studied the deaf students' use of e-learning in Saudi schools, according to the Technology Acceptance Model (TAM), represented in the perceived benefit factor, followed by the behavioral tendencies factor, then the actual use of e-learning factor, and finally the perceived ease of use factor (Al-Ghanim & Al-Turki, 2022).

Paying attention to the development of digital literacy for all students, using e-learning, so that the disparity in the level of their use of technologies does not constitute an obstacle in the processes of evaluating the extent of their achievement and understanding of a lesson (Al-Bakri, 2022).

In Kenya, as in many other countries, there are hard-to-reach students who face significant challenges in accessing education and succeeding academically. These challenges can include poverty, limited access to resources, lack of parental support, and cultural beliefs that prioritize other aspects of life over education (Schueler & School, 2022).

E-learning has the potential to significantly improve access to education and enhance learning outcomes in Malawi's higher education sector. However, there are significant challenges that need to be addressed (Gama et al., 2019).

There have been countless negative impacts on teaching and learning at the higher education level that have coincided with the onset of the Covid-19 pandemic (Budiningsih, 2023).

most of the countries have significant issues with technological infrastructure in rural areas which may hamper the quality of online education as well as a critical issue that needs essential attention (Alom et al., 2023).

There is a lack of understanding of the factors affecting students' acceptance and use of these systems. A survey was conducted to collect data on perceived usefulness, perceived ease of use, and behavioral intention, and the results showed that perceived usefulness and ease of use were significant predictors of students' intention to use e-learning systems, and behavioral intentions had a direct impact on the actual use of e-learning systems (Tawafak et al., 2023).

The study (Mustafa & Ali, 2023) urges the theoretical application of the technology acceptance model to behavioral intention and actual use. It became clear that it is mainly used in universities and effectively improves student performance, behavior and satisfaction.

Assessment of The Various Technology 'Tools Offered by the University to The Students According to Technology Acceptance Model 3 in Turkey. The results showed that the TAM3 model was fit for this kind of problem. Moreover, the results of the statistical analysis show that the magnitude or volume relationships of variables by the model were significant and precise except for the subjective norm from Result demonstrability that was not supported, and users are satisfied with the performance of the technology tools that are used in their universities (Abraham et al., 2023).

Previous studies were diverse in terms of titles, but they were distinguished by their proximity to the same problem. All previous studies focused on studying the effect of applying e-learning in higher education. From the point of view of faculty and students at universities around the world.

Its objectives varied between studying the impact of e-learning in universities before and after the Corona pandemic, as some concerned students and others concerned faculty members in universities around the world.

This study is similar to previous studies in its discussion of e-learning, but this study was distinguished from previous studies in that it examined the impact of using e-learning in Libyan universities and ways to reduce these problems after the Corona virus from the point of view of students in Libyan private universities.

Theoretical Background

The researcher attempted to provide a simple overview of the e-learning user model in private higher education in Libya. This is a sufficient summary of the theoretic ales because it is applied to research in nature. In this part, the theories used by the researcher in his study appears and explains how it relates to the variables of his research.

To solve this problem, many technologies have been proposed, for example, the technology acceptance model (TAM), the Theory of Reasoned Action (TRA), and the theory of Planned Behaviour (TPB) . Of these approaches, the technology acceptance model (TAM) has become one of the most popular and widely used techniques to elaborate on the rationality of users when they accept to use of a certain information system. During the past decades, TAM has been successfully applied to lots of research domains and related applications and has proven its capacity and validity in explaining user behavior toward the adoption of information systems(Abusef & Kumar Tarofder, 2021).

Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) is a widely used theoretical framework that explains how users perceive and adopt new technology. It was first developed by Fred Davis in the late 1980s, and has since been refined and expanded by other researchers.

According to TAM, a user's acceptance of a new technology is largely determined by two factors: perceived usefulness and perceived ease of use. Perceived usefulness refers to the user's belief that the technology will improve their performance or productivity in some way, while perceived ease of use refers to the user's perception of how easy the technology is to learn and use.

this study attempts to examine the relationship between user acceptance of accounting information systems and two antecedent factors: perceived usefulness, and perceived ease of use, to see if the earlier results are still valid after recent advances in system and technology affecting system usage. Technology Acceptance Model provided a theoretical base in this study for examining the factors contributing to technology acceptance in organizations.

TAM proposes that these two factors have a direct impact on the user's attitude towards the technology, which in turn influences their intention to use it. In other words, if a user perceives a technology as useful and easy to use, they are more likely to have a positive attitude towards it and

intend to use it. A model (TAM) was proposed for this study that contains several factors, as shown in Figure 9.

TAM has been used to study the adoption of a wide range of technologies, from simple consumer products to complex enterprise software systems. It has also been used to explore the factors that influence technology adoption in different contexts, such as healthcare, education, and e-commerce.

Overall, the Technology Acceptance Model has been a useful tool for understanding how users perceive and adopt new technology, and has contributed to the development of user-centered design practices that prioritize ease of use and perceived usefulness.

TAM is tailored to IS contexts and was designed to predict information technology acceptance and usage on the job. The study of human decision-making has resulted in models that posit the mental processes that humans use to make decisions. Most of these have been used by organizational researchers to predict which employees are likely to accept new technology and why. In particular, the Theory of Planned Behavior and the Theory of Reasoned Action have been used to predict many types of behavior, but have been less successful in predicting technology acceptance. This led to the advancement of the Technology Acceptance Model (Willis, 2008).

As per (Willis, 2008) as technology becomes more intrinsic to the functioning of organizations as a whole, the ability of employees to integrate new technology into their workflow becomes an ever-larger determinant of success. Organizations that can anticipate and predict which of their workers will accept the technology changes that the organization has implemented are at an advantage over those that adopt a wait-and-see approach. Communication technology is among the most visible areas where workplace technology is advancing. To one degree or another, computer-mediated communication is part of most a student' daily activity. E-mail and other computer-mediated communication now comprise a large percentage of workplace communication, but were met with considerable resistance when they were initially introduced.

There is an ordinary tendency for people to view new technology in a positive light.

Because of this, organizations sometimes adopt new technology when it is in their best interest to do so. (DiFonzo & Bordia, 1998) discusses this phenomenon of technology in terms of a pro-innovation bias that often results in the adoption of inefficient technologies that are expensive to implement but do not add value to the organization. The justification of any technological innovation in economic terms is problematic, however, in part due to unknown implementation costs, which can be much greater than the cost of the technology itself. (DiFonzo & Bordia, 1998) presents a framework to evaluate the economic value of a new technology based on system factors as well as organizational factors.

Information technology adoption has been a central concern in information system research and practices. Brilliant progress has been made over the past decades in disclosing and predicting acceptance of information technology in organizations. (Martin Monje & Bárcena Madera, 2015) developed technology acceptance model and disclosed substantial proportion of variance in intention and behavior and also compared with alternative models like Theory of Reasoned Action (TRA) and Theory of Planned Behavior (TPB) (Viswanath Venkatesh, 2000).

In another extension of TRA, (Davis, 1989b) introduced the TAM, which described an individuals' acceptance of information technology. The goal of TAM is to provide an explanation of the determinants of computer acceptance among users. TAM replaced TRA's attitude beliefs with the two technology acceptance measures:

Perceived usefulness (PU) refers to the degree to which a person believes that using a particular system would enhance his/her job performance.

Perceived ease of use (PEOU) refers to the degree to which a person believes that using a particular system would be free from effort (Davis, 1989b).

External variables

These factors refer to a set of variables such as objective system design characteristics, training, computer self-efficacy, user involvement in the design, and the nature of the implementation process (Viswanath Venkatesh, 2000).

The TAM determines the causal relationships between system design features, perceived usefulness, perceived ease of use, attitude toward using, and actual usage behavior.

Overall, the TAM provides an informative representation of the mechanisms by which design choices influence user acceptance, and should therefore be helpful in applied contexts for forecasting and evaluating user acceptance of IT (Davis, 1993).

In studying user acceptance and use of technology, the TAM is one of the most cited models (Chuttur, 2009). TAM was developed by Davis and jointly extended with (Fichman, 2004) to explain computer-usage behavior.

TAM is an Information System theory that models how users come to accept and use a technology; the model suggests that when users are presented with a new software package, a number of factors influence their decision about how and when they will use it, notably Perceived Usefulness (PU) and Perceived Ease of Use (PEU). Technology with a high level of PU and PEU is more likely to induce positive perceptions. The relation between PU and PEU is that PU mediates the effect of PEU on attitude and intended use.

As an Information system enhances workplaces, home, and classrooms, research on user acceptance of new technologies has started to receive more attention from professionals as well as academic researchers (Lee et al., 2003).

Developers and software industries are beginning to realize that lack of user acceptance of technology can lead to loss of money and resources (Lee et al., 2003).

TAM was developed by (Davis, 1989a). He drew on research from a wide variety of fields including diffusion of innovations, marketing, human-computer interaction, and self-efficacy theory to investigate the causes underlying user adoption of IT. According to (Davis, 1989a) there existed a striking convergence among the wide range of theoretical perspectives supportive of a conceptual and empirical distinction between usefulness and ease of use. As a result, he focused on providing improved measures of perceived usefulness and perceived ease of use. (Davis, 1989a) defined usefulness as "the degree to which a person believes that using a particular system would enhance his or her job performance" and ease of use as "the degree to which a person believes that using a particular system would be free from effort".

Studies on IT continuously report that user attitudes are important factors affecting the success of the produced system. For the past several decades, many definitions of attitude have been proposed. However, all theories consider attitude to be a relationship between a person and an object (Davis & Venkatesh, 2004) In the context of information system theories these suggest users formulate a positive attitude toward the technology when they perceive the technology to be useful and easy to use (Magsamen-Conrad et al., 2022).

TAM has generally been seen as a prudent and well-tolerated model that predicts acceptance of an information technology. TAM has mostly been tested within the US context which is by far the earliest and most extensive user of what we still think of as “new technology”. The applications of TAM in e-management research could be read as a means to assess and determine the role of socio-cultural and technological factors affecting the adoption and dissemination of e- management.

Although the technology acceptance models including TAM, TRA and TPB focus on numerous factors that investigating the consumer behavior in technology adoption.

The TAM specifies the causal relationships between system design features, PU, PEU, attitude toward using, and actual usage behavior. However, the TAM provides an informative representation of the mechanisms by which design choices influence user acceptance, and should therefore be helpful in applied contexts for forecasting and evaluating user acceptance of IT (Davis, 1993).

The relationship between TAM’s four major variables (PU, PEOU, BI and B) is hypothesized to use PU as both: a dependent variable affecting BI directly; and as an independent since it is predicted by PEOU. Actual Use or Behavior is usually measured by: amount of time using, frequency of use, actual number of usages and diversity of usage.

Over the years, TAM has been empirically tested, and given its empirical focus on the use of multiple-item scales, it continues to exhibit a high degree of convergent, discriminant, and nomological validity when looking at factors such as ease of use and perceived usefulness (Yiu et al., 2007).

TAM was developed after the introduction of information systems into organizations. Davis’ approach differed from Aizen’s approach. Information systems people claim that TAM is a model developed in the information systems field while TRA and TPB were developed in the psychology field. During the past two decades TAM has become well-established as a robust, powerful, and parsimonious model for predicting individuals’ acceptance of new technologies (Fogarty & Rose, 2000). The following limitations are observed:

TAM has been widely used over the past decade as a means of forecasting the extent to which new technologies will be adopted in the field of information system, with the findings of many studies being consistent with TAM applications (Davis & Venkatesh, 2004). In their numerous applications of the model, a number of studies have found that end-user perceptions of usefulness and the ease-of-use of a system are two key antecedents of technology adoption and usage. Also TAM has been suggested for Elearning (Hsia & Tseng, 2008); E-banking (Cheng et al., 2006) ; Ehealth (Dünnebeil et al., 2012); E-commerce (Prasetya et al., 2019).

Based on a review of the existing literature on IT adoption in e-environment, a framework will be developed and used to classify various issues and factors that affecting intention to adopt/use EM in Libyan education sector. This model merely comprises different aspects of internal and external IT adoption factors.

Because the theory of the acceptance model of technology has occupied all the studies related to the adoption of technology in organizations, this theory has been subjected to additions and development, where they came Technology Acceptance Model 2 (TAM2) Venkatesh and Davis (2000) and Technology Acceptance Model 3 (TAM3) Venkatesh and Bala (2008). Figure (2.4) is showing the change in three models of TAM.

Theory of Reasoned Action (TRA)

The Theory of Reasoned Action (TRA) is a social psychological theory that explains how individuals make decisions and take actions based on their attitudes, beliefs, and subjective norms. The theory was proposed by Fishbein and Ajzen in 1975 and has since been used extensively in various fields including health, marketing, and environmental studies.

According to TRA, an individual's behavior is determined by their intention to perform that behavior. This intention, in turn, is influenced by two primary factors: their attitude towards the behavior and the subjective norm surrounding the behavior.

Attitude refers to an individual's positive or negative evaluation of a particular behavior. It is determined by their beliefs about the behavior and the outcome of performing it. For example, an individual's attitude towards quitting smoking may be positive if they believe it will improve their health and reduce the risk of lung cancer.

The subjective norm, on the other hand, refers to the perceived social pressure to perform or not perform a behavior. It is determined by the individual's perception of how others in their social group view the behavior. For example, an individual may feel pressure from their friends to continue smoking because it is seen as a cool or social activity.

Together, attitude and subjective norm determine an individual's intention to perform a behavior. If an individual has a positive attitude towards a behavior and perceives social support for that behavior, they are more likely to intend to perform that behavior. Conversely, if they have a negative attitude towards the behavior and perceive social disapproval, they are less likely to intend to perform the behavior.

Justified Action Theory (TRA), which is considered one of the theories of social psychology. From the attitude (attitude) and subjective norms (subjective norms), and both the attitude and the personal criteria are determined from the beliefs and perceptions (beliefs) about the results of the action, and about the important persons of the one who acts (Ajzen & Fishbein, 1975).

Overall, TRA provides a useful framework for understanding and predicting individual behavior. It suggests that interventions aimed at changing attitudes and subjective norms can effectively influence behavior change.

Acceptance model have been developed from several base theories stemming from the Theory of Reasoned Action (TRA). According to this theory behavioral intention is able to predict

performance of behaviors that are under the individual’s control. According to theory of reasoned action, external variables that influence behavior to do so directly influence attitude, subjective norms or their relative weights.

The theory was extended to two directions, leading to the Technology acceptance model (TAM) and the Theory of Planned Behavior (TPB). As both the Technology acceptance model and Theory of Planned Behavior (TPB) extracted from the Theory of Reasoned Action (TRA), it makes sense to integrate both model into one and form a decomposed model. TAM and TPB had been used in many studies for the development of new scales (Teo, 2010). According to TRA attitude and subjective norms influence intentions to perform a behavior. Attitude is influenced by beliefs that are perceptions about the characteristics of behavior. According to (Ajzen & Fishbein, 1975), “the person may or may not be motivated to comply with any given referent. The normative beliefs and motivation to comply lead to normative pressures”. The total normative pressures are known as subjective norms . The theory of reasoned action (TRA) helps to predict behavioral intentions related to the acceptance of technology and assess causal links between beliefs, attitude, opinions of referent others, motivation to comply, subjective norms and behavioral intentions (Lai, 2017). According to Ajzen and Fishbein (1980), “attitude towards subjective norms can influence behavioral intention”. “Individuals when are intended to perform behavior when they evaluate positively and when they believe that crucial other things should perform it” .

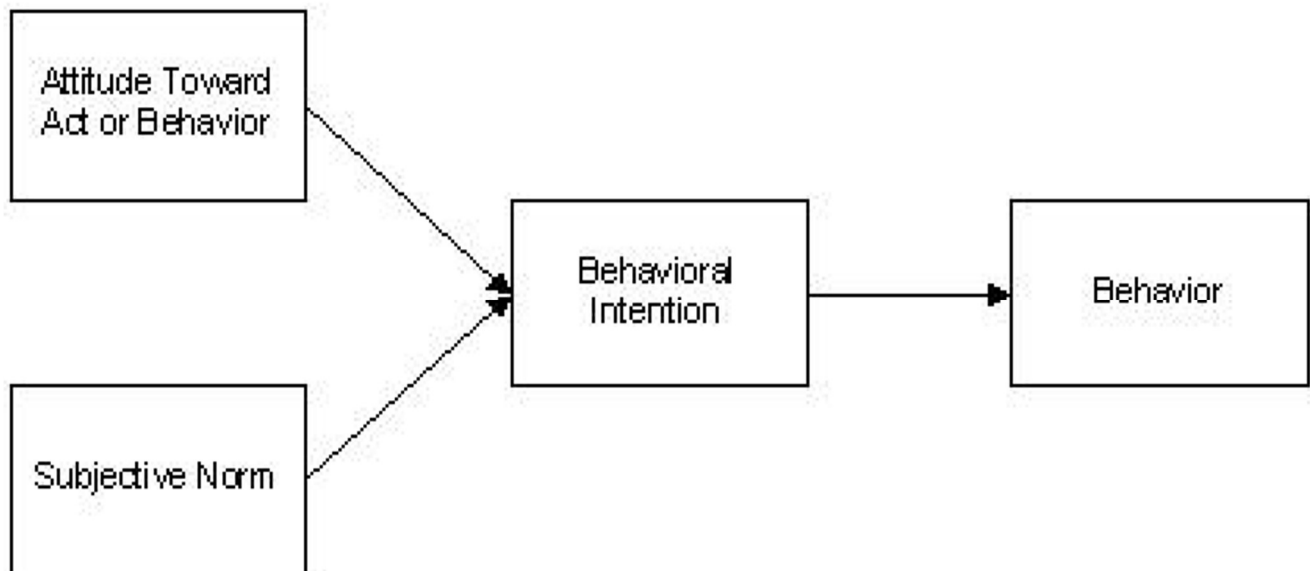


Figure 5

The theory of Reasoned Action (TRA) is one of the earliest models used to explain technology acceptance. It was developed in the social psychology field. The work can be traced back to the period 1918-1970 when scientists were trying to explain individuals’ behavior through the impact of attitude. The TRA is a widely studied model from social psychology, which is concerned with the determinants of consciously intended behaviors (Ajzen & Fishbein, 1975); (Vallerand et al.,

1992). It is composed of attitudinal, social influence, and intention variables to predict behavior. Fishbein and Ajzen (1975) originally developed the TRA in 1975, before later comprehensively refining it with empirical evidence to support its validity and reliability (Vallerand et al., 1992). The theory suggested that:

- An individual's behavioral intention is the immediate determinant of behavior.
- His/her attitude and subjective norm are mediated through behavioral intention.
- His/her behavioral and normative beliefs are mediated through attitude and subjective norm respectively.

Therefore, Ajzen & Fishbein (1980) argued that this theory assumes that individuals are rational and will make systematic use of the information available to them to take action. Individuals consider the implications of their actions before they decide to engage or not engage in a given behavior. According to this theory, this person's attitude towards e-environment is a function of the strength with which he/she holds these beliefs (the person's subjective probability that e-management is related to the different attributes) and his/her evaluation of each attribute.

Theory of Planned Behavior (TPB)

The Theory of Planned Behavior, also proposed by Fishbein and Ajzen, extends the TRA by incorporating an additional factor: perceived behavioral control. TPB suggests that individuals' behavioral intentions and subsequent behaviors are determined by their attitudes, subjective norms, and perceived behavioral control. Perceived behavioral control refers to an individual's belief in their ability to perform the behavior successfully, taking into account factors such as skills, resources, and external constraints.

The TPB theory of planned behavior posits three conceptually independent determinants of intention. The first is attitude towards behavior and refers to the degree to which a person has a positive or unfavorable assessment or assessment of the behavior in question. The second predictor is a social factor called the subjective norm; Refers to perceived social pressure to perform or not perform a behavior. The third factor of intention is the degree of perceived behavioral control, which refers to the perceived ease or difficulty of performing the behavior and presumably reflects past experience as well as expected obstacles and obstacles. As a general rule, the more favorable the situation and subjective norms are in relation to the behavior, and the greater the perceived behavioral control, the stronger the individual's intention to perform the behavior under study should be than expected. and attitudes. Thus, in some applications it can be found that only attitudes have a significant influence on intentions, in others that attitudes and perceived behavioral control are sufficient to explain intentions, and in others that all three predictors make independent contributions. Planned behavior theory deals with the antecedents of attitudes, subjective norms, and perceived behavioral control, the antecedents that in the final analysis determine intentions and actions. At its simplest level of explanation, the theory posits that behavior is a function of salient information or beliefs, relevant to behavior. These salient beliefs are the dominant determinants of a person's intentions and actions. Three types of salient beliefs are distinguished: behavioral beliefs that presumably influence attitudes toward behavior, normative beliefs that are primary determinants of subjective norms, and control beliefs that provide a basis for cognition.

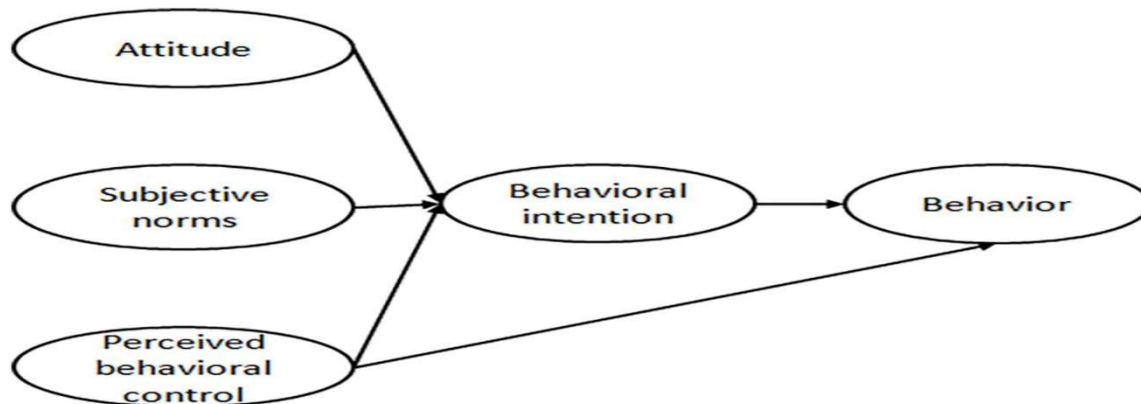


Figure 6
Attributes of the Variables

The Technology Acceptance Model (TAM) is a popular theoretical framework for understanding the acceptance and use of new technology. When examining the effect of e-learning in the private higher education system in Libya, several variables can be considered within the TAM framework.

Perceived usefulness: This variable refers to the degree to which e-learning is perceived to be useful in achieving learning goals. In the context of private higher education in Libya, students may view e-learning as a way to access course materials, communicate with instructors, and collaborate with peers more efficiently.

Perceived ease of use: This variable refers to the degree to which e-learning is perceived to be easy to use. Students may view e-learning as user-friendly if it is accessible on a variety of devices, has clear instructions, and allows for easy navigation.

Attitude towards technology: This variable refers to the overall attitude that students have towards technology. In the context of e-learning in private higher education in Libya, students with positive attitudes towards technology may be more likely to embrace e-learning and engage with it more frequently.

Subjective norm: This variable refers to the influence that social norms have on the use of technology. Students may be more likely to adopt e-learning if they perceive that their peers and instructors expect them to use it.

By considering these variables within the TAM framework, researchers can better understand the factors that influence the acceptance and use of e-learning in the private higher education system in Libya.

Actual Use is a term commonly used, is the tangible utilization, actual use refers to how student engage with e-learning after use it, including its functionality, performance, and overall satisfaction. The concept of actual use is important for assessing the effectiveness, value, and impact of various entities in practical settings by (Al-Bakri, 2022). according to the Technology Acceptance Model (TAM), represented in the perceived benefit factor, followed by the behavioral

tendencies factor, then the actual use of e-learning factor, and finally the perceived ease of use factor(Al-Ghanim & Al-Turki, 2022).

The primary objective of this study is to enhance users' knowledge and behavior towards the use of e-learning systems. According to the study, motivation and perception play a significant role in shaping users' intentions to adopt e-learning. Similarly, Regarding the perception of user's, variables like perceived usefulness and perceived ease of use were extracted from the technology acceptance model.

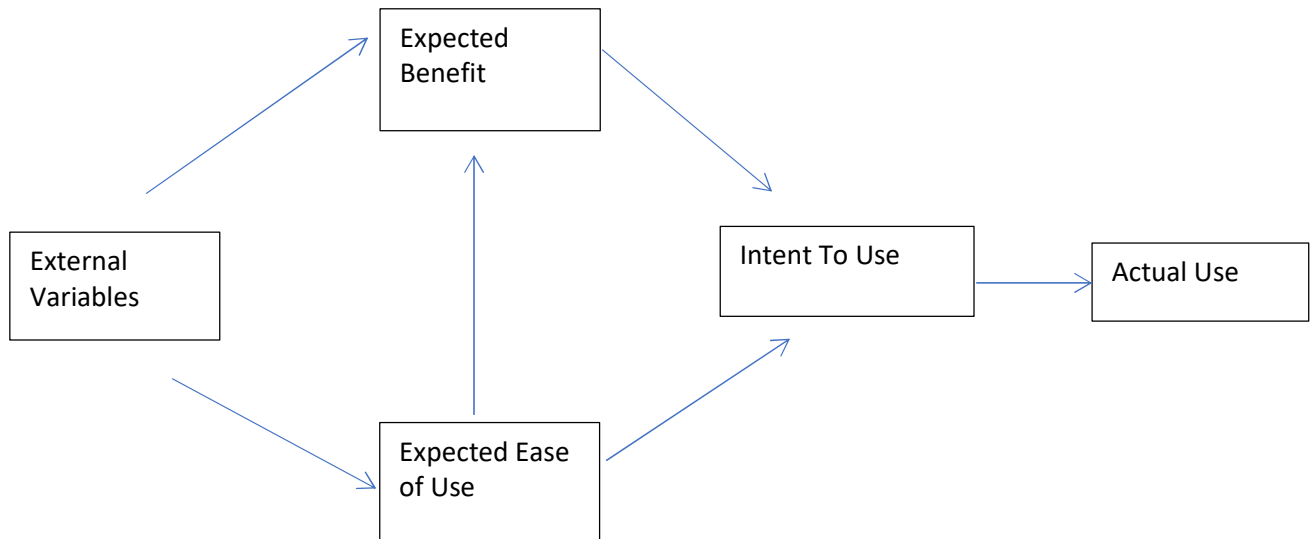


Figure 7

Figure No (8) the latest revised version of the Technology Acceptance Form (Lai, 2017).According to the findings of the literature review related to adoption theories, the study developed the model by including the critical factors that describe the adoption and use of ICTs and the attitudes of users in Libyan higher education institutions.

Justifications of the use of variables and dimensions

The research in this part explained the justification for the use of e-learning and its relationship with the rest of the variables in the study.

Justifications of Perceived usefulness

The perceived usefulness is an important concept for understanding user behavior and designing better technology. By considering users' perceptions of usefulness, we can create technology that is more likely to be adopted and used successfully.

Justifications for using the Perceived ease of use

The perceived ease of use is a valuable construct in UX research as it can provide insights into user behavior, satisfaction, and productivity, which can help organizations make informed decisions about their products and services.

Justifications for Attitudes Towards Technology

Attitudes towards technology will depend on personal experiences, values, and beliefs. While some people may view technology as a positive force, others may have concerns about its impact on society and the environment.

Justifications for using the subjective norm

The subjective norm is an important concept that reflects the social pressure and influence on individuals' attitudes and behaviors. It can provide insight into why individuals may engage in or avoid certain behaviors and can be useful in developing interventions to promote behavior change.

Justifications for Behavioural intention

The behavioral intention is a fundamental construct in the TAM framework, as it helps researchers and practitioners comprehend the cognitive processes and motivations that underlie users' decisions to adopt or reject a technology. By studying behavioural intention, we can gain valuable insights into the factors that drive technology acceptance and inform the design of more user-friendly and widely adopted technological innovations.

Justifications for Actual use

The inclusion of the actual use component in TAM enables researchers and organizations to gain a more comprehensive understanding of technology adoption and its effects, making it a valuable model for studying the dynamics of technology acceptance and use.

Empirical Review Table

Author	Title	Variables	Methods	Results
(ABBASSI, 2022)	Students' Perceptions about ESP Teaching Quality in Higher Education	-Student satisfaction level -Factors affecting the quality of digital education -Methods of providing digital education	Quantitative research	- Participants are satisfied with the quality of e-learning. -Technical problems, lack of interaction with trainers and peers, and insufficient e-learning training.

Author	Title	Variables	Methods	Results
(Bouraoui et al., 2021)	Improving the response speed of websites to search engines: the website of Misurata University (Libya) as a model	-Access to technology, - Student engagement, quality of education, -Academic performance	quantitative surveys and qualitative interviews	The transition to online learning presents significant challenges for students, including limited access to technology and resources, difficulties adapting to online learning platforms, and lack of interaction with colleagues and faculty.
(Demuyakor, 2020)	coronavirus(covid-19)and online learning in higher institutions of education:a survey of the perceptions of ghanaian international students in china	-COVID-19 and online learning, -perceptions of Ghanaian international students in China	survey questionnaire	Students found online learning difficult due to poor internet connectivity, language barriers, and lack of face-to-face interaction. Despite these challenges, he believes online learning has been essential during the pandemic. Most of the students preferred a hybrid model of learning
(Priyanka Biswas, 2020)	The Digital Divide in Education: Unequal Access and Implications for Justice in the Time of COVID-19	-Digital divide, -Education, access, -COVID-19, justice	literature review	The COVID-19 pandemic has exacerbated the digital divide in education and disparities in academic achievement, as

Author	Title	Variables	Methods	Results
				students from low-income families have difficulty accessing online learning resources
(Abdul-Rahman Al-Malah et al., 2020)	The Interactive Role Using the Mozabook Digital Education Application and its Effect on Enhancing the Performance of eLearning	-user interaction -personalized learning -Accessibility -cooperation	Divided into two groups: the experimental group, and the control group.	that the use of the Mozabook application had a positive impact on the students' performance in terms of their engagement, motivation, and achievement. The results of the performance test showed that the experimental group outperformed the control group.
(Demuyakor, 2020)	Coronavirus(COVID-19) and Online Learning in Higher Institutions of Education: A Survey of the Perceptions of Ghanaian International Students in China	-Level of Student Knowledge -Satisfied the Students -Expected Challenges - interactive e-learning	survey	Poor internet connection was the most common challenge reported. Students have lost the social interaction and face-to-face contact that came with traditional learning. - Some students found online learning beneficial in terms of convenience and flexibility.

Author	Title	Variables	Methods	Results
(Nambiar, 2020)	The impact of online learning during COVID-19: students' and teachers' perspective	-Access to technology, -learning style, -Environment, - Technological competence, -Workload, -Student participation, teach online	Investigative descriptive research	-Many students reported feeling disconnected from their teachers and peers, which affected their learning experience. -Some students experienced the excess of screen time and the lack of structure and routine that in-person learning provides. -Many have appreciated the flexibility that e-learning provides.
(Zhang et al., 2020)	Mental Health and Psychosocial Problems of Medical Health Workers during the COVID-19 Epidemic in China	-e-learning practice -Learning behaviors -Learning outcomes -Control variables	Cross-Sectional Study	Difficulty observing, interacting, and communicating with peers and teachers. E-learning had an impact on student behavior.
(Lily et al., 2020)	Variables affecting the effectiveness of e-learning. Journal of Educational Technology Development and Exchange (JETDE)	-Student motivation -Course design -Technology use -Instructor presence -Student learning style	systematic review	It is important to consider the technical infrastructure, the learning environment, teacher presence and support, student motivation and engagement, and learning outcomes.

Author	Title	Variables	Methods	Results
(Priyanka Biswas, 2020)	Worldwide Scenario Of Unplanned Transition To E-Learning In The Time Of Covid-19 And Students' Perception: A Review	e-learning, students, covid-19	Detailed syllabus review	Its most prominent results are that e-learning digitally divides students into distinguished and non-distinguished sections. Some students who lack technology, connectivity, and devices struggle to participate in e-learning, while others enjoy significant benefits.
(Shkheidim. et al., 2020)	The effectiveness of e-learning in light of the spread of the Corona virus from the point of view of teachers at Palestine Technical University (Khadoori)	-Digital Infrastructure -Teacher's Competencies -Students' Preparedness -Pedagogical Approaches -Support and Resources	Analytical descriptive	field of e-learning continuity, the field of obstacles to the use of e-learning, the field of interaction of faculty members with e-learning, and the field of student interaction in the use of e-learning average
(Hanish, 2021)	Views of Libyan students on e-learning (online education) during the Corona pandemic	-Attitudes towards e-learning -perceived ease of use -perceived benefit -Internet and academic self-efficacy	Descriptive method	The perceived ease of use and perceived usefulness had a significant positive impact on students' attitudes towards e-learning.

Author	Title	Variables	Methods	Results
(Bosnina & Al-Bazzar, 2020)	The Impact of COVID-19 Pandemic on Universities' Academic Performance: Empirical Evidence from Libya	-online learning, -Technology infrastructure, -student engagement, -academic performance	survey method	Universities in Libya need to continue improving their online learning platforms and technology infrastructure to ensure continued academic performance and success for their students.
(Nambiar, 2020)	The impact of online learning during COVID-19: students' and teachers' perspective.	-Online learning. -students' and teachers' perspectives	Quantitative method.	Among its most prominent results, it aimed that quality and timely interaction are important for teachers' and students' satisfaction with online classes, and the availability of technical support.
(Atwa et al., 2022)	Online, Face-to-Face, or Blended Learning? Faculty and Medical Students' Perceptions During the COVID-19 Pandemic: A Mixed-Method Study	- Infrastructure and Technology -Teaching Methods and Pedagogy -Student Motivation and Engagement -Faculty Support and Training -Assessment and Evaluation	Quantitative method	-The students agreed that some courses, such as field training and indexing and classification courses, are not suitable for e-learning. -Insufficient or continuous availability of the Internet

Author	Title	Variables	Methods	Results
		-External Factors		
(Rawashdeh et al., 2021)	Advantages and Disadvantages of Using e-Learning in University Education: Analyzing Students' Perspectives	- Demographics - Learning style - Course content - Instructor involvement - Technical support	survey questionnaire	-The majority of students believe that e-learning has many advantages such as flexibility in scheduling and location, self-paced learning, and the ability to revise material as needed. -Some students have expressed concerns about the quality of e-learning materials and the lack of interaction with teachers and peers.
(Elmansori & Ishak, 2021)	Factors influencing e-government services adoption in Libya: An empirical study	Trust in internet Government disposition of trust risks	Quantitative method	The measurement model showed a good fit index of 0.899, which is slightly below the suggested cut-off point of 0.90, and a chi good fit index of 0.874, which is higher than the cutoff point of 0.80
(Alsabaei, 2022)	The reality of e-learning in light of the spread of the Coronavirus from the point of view of teachers of basic education schools in the Sultanate of Oman	Coronavirus, teachers, basic education,e-learning.	Descriptive analytical method.	Among its most prominent results, e-learning was a successful experience, and the need to intensify workshops and training courses for

Author	Title	Variables	Methods	Results
				teachers and students in general.
(Al-Qasabi, 2022)	The effect of attention training technique on mental wandering and academic integration of university students in e-learning environment	-Attention training techniques -e-learning -Individual differences	Experimental research	-effectiveness of attention training in reducing wandering. -There is an effect on attention training in improving students' academic integration during e-learning.
(Zorob & Madi, 2022)	The impact of using cloud computing on the possibility of developing accounting education based on Technology Acceptance Form TAM (Field Study)	-Cloud Computing -Technology acceptance model -Behavioral attitudes and intentions -The expected benefits -Perceived ease of use	Analytical descriptive	-E-learning works to develop creative thinking among faculty members -Ease of using cloud computing applications that contribute to the development of accounting major courses.
(Al-Bakri, 2022)	Problems facing teaching art education remotely in light of the Corona pandemic, from the point of view of the subject teachers	Limited access to art materials. -Limited interaction -Limited technology -Limited physical space -Limited time -Limited motivation -Limited collaboration	descriptive method	Teaching art remotely during the COVID-19 pandemic presents many challenges, but with the right strategies and support, it is still possible to provide a meaningful and engaging learning experience for students.

Author	Title	Variables	Methods	Results
(Al-Ghanim & Al-Turki, 2022)	Factors affecting the use of deaf female students for e-learning according to the Technology Acceptance Model TAM	-Accessibility -Social influence -Technical support -Perceived usefulness -Perceived ease of use -Attitudes towards technology	Survey descriptive method	the TAM can be a useful framework for understanding the factors that influence the use of e-learning among deaf female students.experiences of this population when designing and implementing e-learning programs.
(Budiningsih, 2023)	Lessons from COVID-19: A Silver Lining for Teaching and Learning in Selected Lesotho Institutions of Higher Learning	-Curriculum development and design - Harmonization of teaching and assessment policies -Align them with online learning and teaching	survey	-Implementation of online teaching and learning has positive impacts on higher education institutions in Lesotho with the majority of respondents in the sample supporting the intervention. -The COVID-19 pandemic has exposed deficiencies such as lack of staff capacity for online teaching, adoption of blended learning, and education and infrastructure readiness in higher education institutions.
(Alom et al., 2023)	The Covid-19 and online learning process in Bangladesh	-Students Perception -Pragmatic examples	Survey	-That questions and answer session

Author	Title	Variables	Methods	Results
		-Faculty IT expertise -Applications of Zoom features -online learning using blended model -enhancing students engagement		-Using Google Classroom is already successful -Zoom classes enhance student engagement
(Abraham et al., 2023)	Assessment Of the Various Technology ‘Tools Which Offered by University to The Students According to Technology Acceptance Model 3 (TAM3)	-Approval for users of learning management systems -Information quality -jobs -Accessibility -User interface design -Computer fun -Facing towards the goal of education - enjoy	Use the questionnaire as a data collection tool	TAM can be applied to accredit and explain the student's acceptance of e-learning technology, where PU was found to affect (users' attitude and intention towards using e-learning technology).

Table 2

Summary of Empirical Review

By reviewing the research gap in previous studies, we point out that the current study agrees with previous studies in its main theme and general objective, but it differs from it in several aspects, including the method of research and data collection, the countries in which the studies were conducted, and some differences in variables.

Theoretical Review

The study aimed to find out the impact of e-learning on the

technology acceptance model and its use in understanding the academic adoption of e-learning, to attract more academics to accept active e-learning in Libyan higher education. Context. The limited validity of the model in an educational context led to this study. The advent of internet-based technology has changed the way people live, work and study. Technological platforms such as e-learning contain advanced educational systems by enhancing the experience of the learner while benefiting the students in many ways.

Explanations of TRA, TAM and TPB

The Theory of Reasoned Action (TRA), the Technology Acceptance Model (TAM), and the Theory of Planned Behavior (TPB) are psychological models that aim to explain and predict individuals' attitudes and behaviors toward adopting and using technology. While there are similarities between these models, they also have distinct features and focus areas.

While TRA, TAM, and TPB share a common foundation in understanding human behavior, they differ in their emphasis and scope. TRA focuses on general attitudes and subjective norms, whereas TAM concentrates specifically on technology acceptance and usage. TPB extends the TRA by incorporating perceived behavioral control, which accounts for the individual's perceived ability to perform the behavior.

In the study (Davis, 1989a) compared the Technology Acceptance Model (TAM) with Theory of Reasoned Action (TRA) and resulted in the convergence of TAM and TRA. A model based on perceived usefulness, ease of use, and behavior intention, found social norms weak as a determinant of intention. TAM does not include social norms (SN) as a determinant of behavior intention (BI), which is an important determinant, theorized by the Theory of Reasoned Action TRA and the Theory of Planned Behavior (TPB).

explained(Davis, 1989a) That measures of social norms may not exert any influence on consumers' behavioral intent, study comparisons confirmed that the technology acceptance model was easy to apply across different research settings indicated that TAM ability use was positive compared with TRA and TPB.

In study (Lai, 2017) Mathieson(1991) and Yi, Jackson, Park, and Probst (2006) argued that human and social factors could play a role in the adoption of technology using the TPB model. the TAM could be extended with constructs from the TPB to incorporate the social factors that could explain technology adoption. Nevertheless, the TPB indicated that the social norm and behavioral intent to use outcomes were negative and did not support that the social norm would influence the behavioral intent. Also, the subjective criterion had a significant influence on the behavioral intent to use in a coercive setting.

In terms of similarities, all three models recognize the importance of attitudes and intentions in predicting behavior. They also acknowledge the influence of social factors, such as subjective norms, on individual decision-making processes. Moreover, they are all based on the assumption

that individuals are rational decision-makers who consider various factors before engaging in a particular behavior.

A comparative analysis of these models could highlight the strengths and limitations of each approach. For example, TAM's focus on perceived usefulness and ease of use provides valuable insights into technology adoption, but it may overlook other factors that influence behavior. TPB's inclusion of perceived behavioral control adds a crucial element to the prediction of behavior, considering personal constraints and resources. TRA provides a broader framework applicable to various domains beyond technology.

Researchers often employ these models in combination or modify them to fit specific contexts and research objectives. By considering the strengths of each model, researchers can develop a more comprehensive understanding of individuals' attitudes and behaviors towards technology adoption and usage.

Create an ATM model that determines whether the user will be able to accept these new technologies and the extent to which they can be dealt with. ATM depends on two important elements: Perceived Usefulness and Ease of Use. Acceptance of information systems by individuals is achieved by two main variables: the perceived benefit, and the perceived ease of use (Ali, 2017), when the beneficiary believes that the use of a particular system will enhance and ensure his functional development, then this will be an important factor to increase the acceptance of any new system and thus lead to the use of Examples of this new technique. Integration with the other element (ease of use), will lead to a faster understanding of the new systems, and thus add a sense of satisfaction to the beneficiary, who will not find complications that may hinder him from performing his daily work, which will reflect positively on work performance and achieve a return benefit from the system used, so it must be taken into account Considering that the failure of new systems is often due to the user's refusal to deal with them, either because they do not see the desired benefit from using them, or because they see a great complexity in them, which causes them a lot of trouble in dealing with them, and thus the inability to perform their daily tasks as required. It is a system failure.

The TRM theory was developed to better understand the relationships between attitudes, intentions, and behaviors, as many previous studies that looked at these relationships revealed that there is a relatively low relationship between each of the attitudes and behaviors, as some theorists suggested excluding Attitudes as an essential complement to defining behavior, so Fishbein developed in 1975 the JustifiedAction Theory (TRA) to distinguish between attitudes towards a specific object (object) and attitudes towards behavior, so he believes that the individual's attitude or attitude towards behavior is the best way to predict that behavior.

	The main concept	Applications
Technology Acceptance Model (TAM)	The model aims to clarify the user's behavior and the extent	The model has been very popular in studies of the use

	of his acceptance of a particular technology through his psychological and behavioral attitudes toward that technology. And it depends on having two characteristics: perception of benefits and ease of use.	of information technology in various fields. It has also been used as a tool for evaluating distance education and educational programs related to public health.
Theory of Reasoned Action (TRA)	The theory is based on the idea that an individual's behavior is influenced by his or her will and intentions. It depends on the subject-verb approach matrix.	They are used to explain and predict an individual's behavior on topics such as health, the environment, and consumption.
Theory of Planned Behavior (TPB)	This theory focuses on the idea that an individual's behavior is affected by his intentions and his ability to control those intentions. The differences are secret control, available capabilities, and traditions.	The primary application of this theory focuses on how individuals influence others and encourage them to adopt the best behaviors. Scientific studies usually emanate from specific high-success cases.

Table 3

The TRA Theory emerged from attitudes measurement, indicating attitudes are determined by expectations or beliefs about an object's attributes. Expectancy-value conceptualizations, including learning, attitude, and decision-making theories, are widely applied in Psychology. (Montaño & Kasprzyk, 2015). Therefore, this theory came to emphasize that the primary determinant of behavior is intention. Behavioral Intentions are determined by two main factors, which are personal attitudes and standards associated with behavior.

Justifications of use Theoretical development model acceptance theory MAT, The Theory of Reasoned Action TRA and Theory of Planned Behavior TPB

The Theory of Reasoned Action (TRA), the Technology Acceptance Model (TAM), and the Theory of Planned Behavior (TPB) are three conceptual frameworks that explain how people adopt or reject new technologies. TRA, developed in the late 1970s, suggests that a person's behavior is determined by their attitude and subjective norm, while TAM, developed in the 1980s, suggests that a person's intention to use a technology is determined by its perceived usefulness and ease of use. Both TRA and TAM assume rational decision-making, but TRA emphasizes social influence.

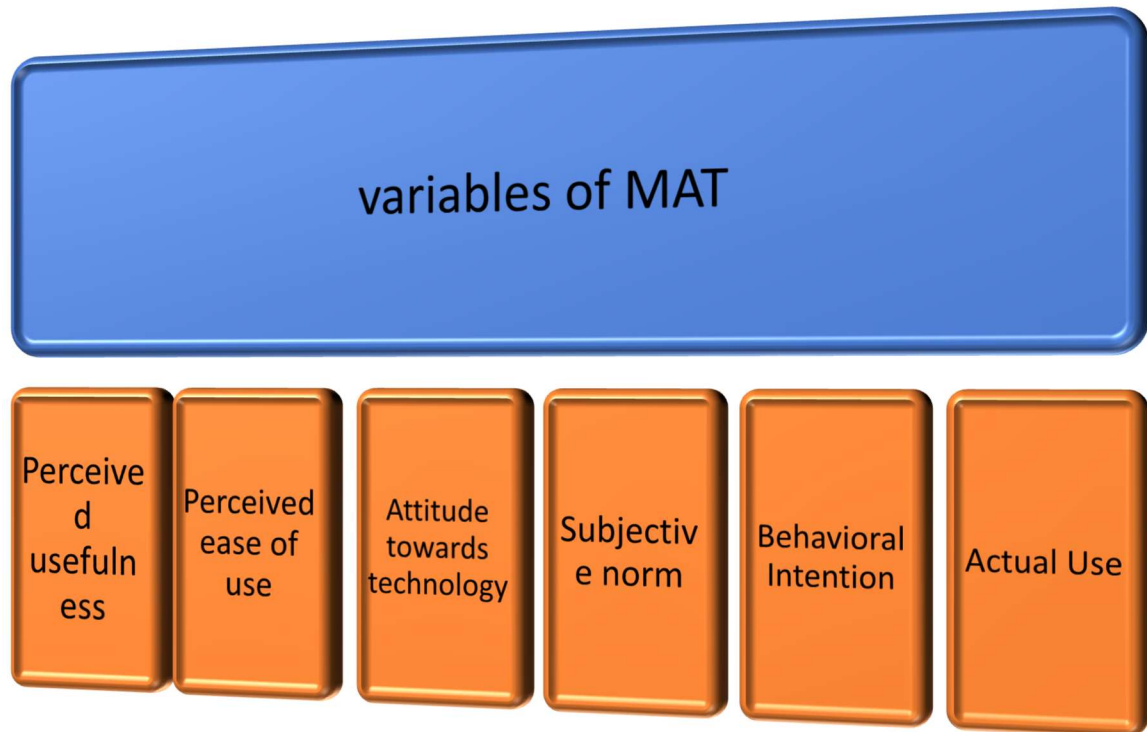


Figure 8

Theoretical Justifications TAM and Relationship e learning

The TAM framework provides a useful theoretical lens for understanding the factors that influence learners' acceptance and adoption of e-learning technologies, while relationships can play an important role in shaping the design and effectiveness of e-learning platforms.

Rationale of relationship between Variables

In this part, we will talk about the justifications for the relationship between the variables.

Rationale of relationship between Behavioral Intention and perceived benefit

The relationship between behavioral intention and perceived benefit is a key concept in behavioral psychology and marketing. Behavioral intention refers to an individual's readiness and willingness to perform a specific behavior, while perceived benefit refers to their subjective evaluation of the positive outcomes they expect from engaging in that behavior. The theory of reasoned action and planned behavior suggest that an individual's intention to perform a behavior is influenced by their attitude towards the behavior and their subjective norms. A positive attitude increases the likelihood of forming a favorable intention to engage in the behavior. Understanding this relationship can help businesses design effective marketing campaigns and tailor offerings to meet their target audience's needs and desires.

Justifications of the relationship between Behavioral Intention

and expected usability

The relationship between expected usability is a critical determinant of users' Behavioral Intention to use a system. It influences user satisfaction, trust, performance, loyalty, and word-of-mouth recommendations. Organizations and designers should prioritize usability testing and user-centered design to enhance the perceived usability of their systems and ultimately drive positive user behavior and adoption.

Rationale of the relationship between perceived utility and expected ease of use

The Technology Acceptance Model (TAM) suggests that perceived utility and expected ease of use are crucial factors in user acceptance and adoption of new technologies. Perceived utility refers to a product's perceived benefits in achieving goals or solving problems, while expected ease of use refers to its ease of use. Factors such as functionality, performance, and features influence perceived usefulness, while simplicity, learnability, and user-friendliness influence ease of use. Therefore, a technology's perceived utility and expected ease of use are critical in determining adoption and acceptance.

Rationale of the relationship between perceived benefit and intent to use

Perceived benefit refers to an individual's belief that a product or service will provide positive outcomes or solve a problem. Intent to use, on the other hand, is the willingness or likelihood to use the product or service. A strong relationship exists between perceived benefit and intent to use, supported by theories like the Theory of Reasoned Action and the Technology Acceptance Model. Perceived benefit can also influence an individual's attitude and subjective norms, influencing their intention to use the product or service.

Justifications of the relationship between expected ease of use and intent to use

The expected ease of use is a crucial factor in a user's intent to use a technology. It influences their perceived usefulness, reduced anxiety, familiarity, perceived control, and time and effort savings. Users are more likely to adopt and use a technology if it is easy to learn, less anxious, and perceived as saving time and effort. Ease of use also influences their level of confidence in their ability to use the technology, which can increase their intent to use it. Overall, the perceived ease of use of a technology is a key factor in user intent.

Justifications of the relationship between intent to use and actual use

the relationship between intent to use and actual use is complex and multifaceted, and is influenced by a variety of factors including attitudes, beliefs, expectations, and social norms. However, research suggests that a strong intent to use a product or service is generally a good predictor of actual use.

Theoretical Review Table

(Davis, 1989a) worked on developing the Technology Acceptance Model as a method for measuring technology acceptance. The model relies on the fact that whenever the user perceives the new technology as easy to use and useful, the more there is a positive trend toward it, and thus the availability of desire or motivation. The last version consists of its use, (Alsaysi, 2022), modified from the Technology Acceptance Model (TAM)(Viswanath Venkatesh, 2000).

The technology acceptance model is one of the most important theories that explain the behavior of individuals towards technology. This model was invented in 1986 and developed in 1989. It aims to find factors that accept information technology. The following are the stages of model development:

number	Model developer and year	stage	basic factors
1	Fred.D.Davis&Paul,R,1989 (Davis, 1989a)	TAM1	*perceived benefit *Ease of use
2	Venkatesh&Davis,2000 (Lai, 2017)	TAM2	*perceived benefit *Ease of use *Intent to use *Usage behavior or actual use
3	Venkatesh&Bala,2008 (Lai, 2017)	TAM3	*perceived benefit *Ease of use *Intent to use *Usage behavior or actual use * Setting usability variable selectors

Table 4

Summary of Theoretical Review

By reviewing the theoretical literature from previous studies and published scientific research that emphasized the importance of e-learning and its great impact during and after the Corona pandemic and its necessity in developing education in particular and in general all over the world.

Conclusion

The literature review demonstrates that e-learning, grounded in the utilization of information and communication technology, has significantly transformed educational paradigms by designing and producing digital education tools. Interactive e-learning, in particular, aims to provide an alternative to traditional education, offering a more flexible, accessible, and personalized learning experience. This shift from conventional classroom settings to digital platforms has broadened the scope of education, making knowledge accessible to a diverse and extensive audience.

E-learning has successfully facilitated access to knowledge for a vast number of individuals. By leveraging digital tools and resources, educational institutions can transcend geographical and temporal limitations, allowing learners to engage with content at their own pace and convenience. This democratization of education is particularly beneficial for non-traditional students, such as working professionals, parents, and those living in remote areas, who may find it challenging to participate in traditional classroom-based education.

The integration of e-learning into educational systems has retained many fundamental principles of classic educational models while enhancing them with the advantages of digital technology. For instance, the role of the learning officer or educator remains crucial; however, their function has evolved from being the sole source of knowledge to a facilitator and guide in the learning process. This shift empowers learners to take a more active role in their education, fostering a sense of autonomy and self-directed learning.

Moreover, the strategic role of e-learning in educational institutions cannot be understated. It serves as a pivotal tool in achieving institutional goals such as expanding reach, improving educational quality, and enhancing learner engagement. By adopting e-learning, institutions can offer a wider range of courses and programs, including those that may not be feasible in a traditional setting due to logistical or financial constraints. Additionally, e-learning platforms often incorporate analytics and feedback mechanisms, enabling educators to monitor student progress and tailor instruction to meet individual needs.

The potential of e-learning to empower millions around the world and bridge the digital divide is immense, provided it is adopted in its current, evolving form. The flexibility and scalability of e-learning make it an ideal solution for addressing educational disparities and ensuring inclusive education for all. However, to realize this potential fully, it is essential to address challenges such as digital literacy, infrastructure, and access to technology. Efforts must be made to ensure that all learners have the necessary resources and support to participate in e-learning effectively.

In conclusion, e-learning represents a significant advancement in the field of education, offering numerous benefits and opportunities for learners and institutions alike. By continuing to innovate and adapt to the changing educational landscape, e-learning can play a crucial role in shaping the future of education, making it more accessible, inclusive, and effective for everyone.

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