The challenges facing E-Learning in educational institutions: Case study of the Secondary Technical School (STS)

التحديات التي تواجه التعليم الالكتروني في المؤسسات التعليمية في دولة الإمارات العربية المتحدة: المدرسة الثانوية الفنية في العين (دراسة حاله)

by

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Abstract

The purpose of this research is to explore the challenges of E-Learning in the contact of the Secondary technical school (STS). The research questions the E-learning status of the UAE, the current challenges/barriers that E-learning is facing in the UAE and attempts to propose suggestions to make further progress in e-learning in the UAE. The research, thus, deploys a mixed methodology (quantitative and qualitative) to be distributed among teachers, administrative, directors, teachers and supervisors in the STS. A questionnaire was designed to explore the cultural and technical challenges facing STS E-Learning program. The questionnaire was distributed among 75 participants from whom we collected only 50 completed answers. In addition, the interview was distributed among 5 administrative personnel. The research found that the E-learning program follows a strategic philosophy which entails the spread of E-learning to all school levels. Also, E-learning philosophy encourages students to pull information to themselves to a high degree. The research also found that the directors and students are comfortably incorporating technology-based tools in their daily life. E-learning directs all resources to generate learning. The research also found that there is a technical team who helps drive the initiative and oversees its implementation and administration. Respondents' answers gave high value for the availability of technical teams in the STS and their role in facilitating the learnability and teachability processes. The research has some limitations pertinent to the sample size which was rather small to give a generalization for the results. The research suggests implementing e-learning in an environment that is in harmony with the traditional learning so as not to dispense with the traditional, but complement each other, especially children at an early age so as not to affect other aspects such as the decline in the level of handwriting and adopting a

unified Arab project to provide textbooks with electronic copies, including training programs from theoretical questions, pictures, videos and slides.

الملخص

الغرض من هذا البحث هو استكشاف التحديات التي تواجه التعلم الإلكتروني في المدرسة الثانوية الفنية (STS). ويتطرق البحث إلى حالة التعلم الإلكتروني في دولة الإمارات العربية المتحدة، والتحديات الحالية التي يواجهها التعلم الإلكتروني في دولة الإمارات العربية المتحدة، ويحاول إبراز بعض الاقتراحات لإحراز المزيد من التقدم في التعلم الإلكتروني في دولة الإمارات العربية المتحدة. وبالتالي، فإن البحث يستخدم منهجية البحث العلمي المختلطة (كمية ونوعية), فهي دراسة استقصائية واستكشافية تستخدم اسلوب المقابلة والاسئلة الاستقصائية والتي تم من خلاللها توزيع الاستبانات على المعلمين والإداريين والمديرين والمشرفين في المدرسة الثانوية الفنية (STS). تم تصميم استبيان لاستكشاف التحديات الثقافية والتقنية التي تواجه برنامج التعليم الإلكتروني في المدرسة الثانوية الفنية. وقد وزع الاستبيان على 75 مشاركا جمعنا منهم 50 إجابة كاملة فقط. وبالإضافة إلى ذلك، وزعت المقابلة على خمسة موظفين إداريين. وخلص البحث إلى أن برنامج التعلم الإلكتروني يتبع فلسفة استراتيجية تستتبع انتشار التعلم الإلكتروني على جميع المستويات المدرسية. فلسفة التعلم الإلكتروني تشجع الطلاب على جذب المعلومات لأنفسهم إلى درجة عالية. كما توصل البحث إلى أن المديرين والطلاب يدمجون بشكل مريح الأدوات القائمة على التكنولوجيا في حياتهم اليومية. التعليم الإلكتروني يوجه جميع الموارد من أجل التعلم. ووجد البحث أيضا أن هناك فريقا فنيا يساعد على الدفع بمبادرات التعلم الالكتروني ويشرف على تنفيذها وإدارتها. أعطت إجابات المستجيبين قيمة عالية لتوافر الفرق الفنية في المدرسة الثانوية الفنية ودورهم في تسهيل عمليات التعلم والتعليم. واجه البحث بعض القيود والتعقيدات ذات الصلة بحجم العينة التي كانت صغيرة إلى حد ما واللتي لا يمكن من خلالها تعميم نتائج البحث. ويقترح البحث تطبيق التعلم الإلكتروني في بيئة تتفق مع التعلم التقليدي حتى لا يستغني عن

الاسلوب التقليدي في التعلم، ولكي يكمل كل منهما الآخر,كما يقترح البحث اعتماد مشروع وطني وعربي موحد لتقديم الكتب المدرسية مع نسخ إلكترونية، بما في ذلك برامج تدريبية من الأسئلة النظرية والصور والفيديو والشرائح للطلاب العرب.

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CHAPTER ONE

Introduction

1-Introduction

The history of humanity is marked by great moments of change that, on several occasions, have been related to the possibility of using tools as an extension of man's ability(Guerrero 2001). Beginning the millennium, a new technological revolution has generated the need to complement the knowledge acquired, with others valid and necessary to understand, interpret, act and participate in a new environment that is based on the so-called New Information and Communication Technologies (Goh, 2004).

In the last decade, mass communications and education systems have undergone changes due to the development and diffusion of new information technologies and, above all, the broad diffusion of the Internet. This type of technology is called "New Information and Communication Technologies(Goh, 2004). This set includes content in various formats which can be accessed from different media, through its electronic distribution

Information and Communication Technologies (ICTs) introduce new development strategies in the teaching / learning environment, with e-learning being one of the most attractive training strategies to study, due to the combined use of ICTs with elements of Learning(Goh, 2004). Likewise, e-learning is fundamental for educational, pedagogical and technological development and the adequate transfer of knowledge between both aspects is the essential objective when undertaking this plan.

The capacity of generation and distribution of information exceeds our capacity of interpretation. Education faces the great challenge of responding to this cultural reality both to recover the relevance of its contents and for all citizens to have opportunities to access and generate information and knowledge. There are many demands for education, updating and professional training. From the higher levels of education we see the need to incorporate better modalities, procedures and technologies that allow us to increase the quality of the academic projects that our institutions support. This new scenario demands new competencies, while at the same time it provides us with the tools to face the demands of permanent improvement. One of the objectives of schools and universities, that to favor the insertion of the graduates in the current and future labor field is complemented with preparing them for the formation throughout the life.

Information and communication technologies (ICT) are the main lever of transformations unprecedented in the contemporary world. In fact, no other technology has caused such great mutations in society, culture, and economy (Alrawi, 2010). Humanity has been significantly altering ways of communicating, entertaining, working, negotiating, governing and socializing, based on the diffusion and use of ICTs on a global scale. It is also universally acknowledged that ICTs are responsible for previously unimaginable increases in productivity in the most varied sectors of business activity, and prominently in the economies of knowledge and innovation. With regard to personal behavior, new technologies are also revolutionizing perceptions of time and space; In turn, the Internet reveals itself intensely social, unleashing shock waves in the way people interact with each other on a planetary scale.

According to Alrawi, (2010), humanity is currently at the "turning point" of an unprecedented technological transformation. The period of ICT installation that took place in the last thirty

years - with its process of creativeness and generalization of a new social paradigm, the information and knowledge society - can follow a time of implementation and flourishing the full potential of the new triumphant paradigm.

The condition of quality in education is considered as a pertinence for individual and collective development where the central resources to achieve this goal are the New Technologies of Information Technology and Communication (Alrawi, 2010). These elements are fundamental in Virtual Education, understood as an integrated vision of styles of action and opportunities that respond to lifelong education needs, under the reality that learning occurs in a variety of environments and reflecting the use of technology in terms of how it can facilitate and satisfy educational opportunities (Farrel, 2005). Under these circumstances, the psychology of learning is placed as a fundamental resource from which to perform analytical research that contrasts its conceptual categories to strengthen theoretical proposals or to open the opportunity in the development of conceptual systems that serve as an interface of a Situational synthesis.

To exploit the potential of technology and thus accelerate economic growth, countries need to invest in education, open up to new technologies through foreign trade and investment, and encourage research and development within the private sector (Alrawi, 2010). Governments are called upon to take urgent action on the deficit in the area of skills and technology and thus increase their productivity - a key to improving growth prospects. The lack of income growth in developing countries is due to a productivity gap, which in turn is due to the inability to take the step in adopting new technologies in their processes and the slow updating of skills. In order to close this gap, it is not enough to simply import the latest technology; it is necessary to ensure

that the educational and skills level of the population is adequate to exploit their full productive potential (Guerrero, 2001)

In the context of education, this means that it is not enough to import technology; rather, it is necessary to ensure that the level of education and skills of academics and students is adequate to exploit the full productive potential(Moore & Benbasat 2001). The UAE government expresses in the 2020 education strategy its conviction of the central role of education in public policies, noting that it is not possible to aspire to build a country where everyone has the opportunity to have a high Standard of living if the population does not have the education that allows them, within a competitive environment, to plan their destiny and act accordingly(Alrawi, 2010).

1.2-Research problem

E-learning is becoming a new channel to generate learning both in the educational world and business. Although some authors consider their design should take into account the individual characteristics of learning style, most e-learning programs are developed without considering them. It can be one of the great sources of its failures. Technology facilitates a process, but if this process is not clearly identified, the use of technology can be dysfunctional and cause the individual to reject it. That is why before we embark on any program that enhances learning through the use of technology, the first step will be to understand both individual learning style as its teaching style.

1.3-Research objectives

E-learning has been long neglected by educational institutions although Information and communication technology is widely spread in the UAE; therefore, the usefulness and or challenges of e-learning have not been examined by these institutions. Public education in the UAE has made remarkable strides in the deployment and exploitation of e-learning but private education has not reaped the fruits of E-learning yet. This research questions the challenges facing E-learning in the sphere of the UAE educational institutions, thus, it aims to:

1- Identify the status of E-learning in the United Arab Emirates
2- Identify the challenges of E-Learning in the United Arab Emirates
3- Suggest some E-Learning practices to improve e-learning in the context of the UAE's educational institutions.

1.4-Research questions

This research questions the following:

1- What is the E-learning status in the UAE?
2- What are the current challenges/barriers that E-learning is facing in the UAE?
3- What are possible suggestions that can make further progress in e-learning in the UAE?

1.5-Background of the Secondary technical School/Al-ain

The Secondary technical School was first coined in 2010 in Abu Dhabi and later in the same year the Al-Ain STS was established to undertake the same role. The STS aims to provide UAE nationals with high levels of technical education and training(STS, 2017). The establishment of the STS has provided students with another choice to government and private school through which students can further gain their diplomas from Abu Dhabi Vocational Education & Training Institutes (ADVETI) in the following institutions;

- Al Jazira
- Al Jaheli
- Al Reef
- Baynounah
- Al Sharjah Institute
- AAIAA

-Vision:

To be the leading provider of skilled UAE nationals for the local market

-Mission:

To empower the UAE youth with the competencies needed for employability and life-long learning

The STS enjoys an amazing educational system which favors and deploys E-Learning as its basic educational method for the betterment of quality learning (STS, 2017).

CHAPTER TWO

Literature review

2-Literature review

In this chapter an introduction on the basic notions of Electronic Learning is presented from the view point of literature. E-learning is a term that has become increasingly popular with digital and online training. E-learning means more than just digital transmission of online knowledge, or computer-based training through the WWW Network (Moore & Benbasat 2001). It refers to two important components:

- The learning experience.
- Electronic technology.

According to Moore G. Benbasat (2001)the experience gained from e-learning highlights the importance of training methodologies and techniques that:

- make the student want to investigate the subject further.
- Provide simulated practice of skills and procedures.
- Help, support and direct students
- allow the student to interact with others who are also learning

According to Tyler K., (2001) the term "e-learning" comes from two acronyms in English; the e-learning "e" corresponds to the word "electronic" in English, thus forming a compound noun whose core is the word learning which translates as learning. Given this combination the term is appropriately translated as "Electronic Learning" or learning by electronic means.

E-learning is a means that helps to adopt methods and strategies of modern educational and patterns to support the academic process, which is used to improve the educational environment

and also leads to improve education management and increase efficiency. E-learning enhances schools' ability to transcend geographical boundaries to reach students in remote areas and e-learning helps to solve the educational problems related to the lack of academic competencies, the scarcity of teachers, increase the number of students, and contributes to the solution of students who seek to improve their level of academic problems.

E-education is an important ICT application that provides a good environment for the use of technology in education. E-learning also facilitates cooperation between universities and professors in teaching and research. It is also considered as one of the most important means of human and economic development. The universities have devoted many academic experts to work in task forces to achieve the goals of these universities and convey their messages. Traditional education at the moment does not add new educational content to generations because it alone can not keep pace with contemporary thought. The Arab world needs a shift in learning quality for the students of the 21st -century. The level of education is very low compared to other countries. This is not limited to the UAE, but to all countries in the region. Therefore, I found that the approach to implementing educational mechanisms that support traditional education, such as e-learning, has the ability to improve, support and build a distinct generation.

This new concept refers to learning through electronic equipment, such as a computer, e-mail, related equipment and services, the WWW network and CD-ROM technology; Offering a new and better possibility to train the students and the staff of a certain organization, who need to learn new techniques and assimilate new information quickly, to compete effectively in the present and not to remain isolated(Jay & Chatzkel, 2003).

E-learning refers to the remote educational process from the perspective of the student. It is assumed that E- Learning is planned and normally occurs in a place other than the place of teaching, as a result it requires special techniques in the design the courses, special teaching techniques, special methods of communication assisted by technology and other organizational and administrative

Distance education is seen as a new concept for many current educators (Shaikh & Khoja, 2011). However, this concept has an approximate 160-year history. Peters (2003) wrote that virtual universities use new media technology with which they can complete the process of teaching and learning through an integrated system. While Johnson, M., & Liber, O. (2008) agreed stressing that increasingly there are students with labor, social commitments and family using this system, with a clear tendency to increase.

The theory of transactional distance defines distance not in terms of geographic proximity but in relation to dialogue and structure(Moore, 1993). The transactional distance refers to the psychological space or communication gap between the student and the teacher. This space or lagoon must be covered for learning to occur. A decrease in transactional distance corresponds to an increase in critical thinking and high level. Moore argues that online forums can help decrease transactional distance by increasing dialogue between students and the teacher (Moore, 1993). Later we will recover the concept of transactional distance when we refer to the analysis of social presence in asynchronous communication.

Communication in an on-line environment differs from face-to-face communication in that the distinction between speaker / writer and listener / reader is not so clear. The distinction between spoken and written language also changes. And there are some differences that affect the

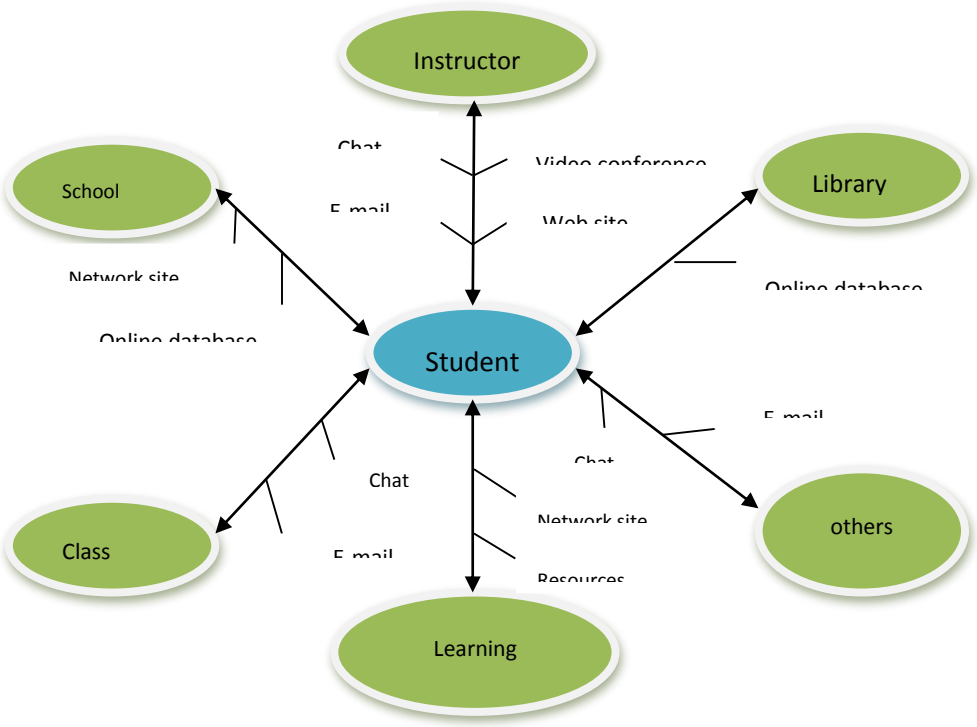
interaction. In language written in online forums, there are no paralinguistic cues, such as nonverbal communication. Also, the mechanisms of conversation, such as taking the word, take a different form(Moore, 1993). Thus, one participant can not interrupt another, and At any time can be added to the conversation. The technology also allows different topics to be addressed simultaneously, something that does not normally occur in face-to-face communication. Internet-based forum research literature, as we have seen above, identifies student-student interaction as an essential form of interaction in the classroom. The opportunity for interaction with other students, both in structured and informal contexts, is one of the main advantages of using asynchronous text-based communication(Moore, 1993).

2.1-Components of E-Learning

E- Learning combines different elements of a pedagogical model that articulates and integrates ICT with the conventional curriculum of school teaching as a situated, distributed and student-centered pedagogical innovation, with the hope that it improves and increases the effectiveness of learning, now electronic compared to conventional achievements(Jay & Chatzkel, 2003). Thus, the elaboration and inclusion of mid-level electronic learning contexts incorporating different monitoring and evaluation instruments, as characterized by the present project, has recognized some parameters of good practices believed to be transferable in a relevant way to other proposed contexts to incorporate ICTs for school training of students in different areas, to materialize an improvement of educational quality with increasing social equity (Colleen Longstreet & Winkley, 2011).

According to Colleen Longstreet & Winkley, (2011)E-learning is the learning acquired with information through the use of some Technology, whether by network (Internet, intranet or

extranet) or CD-ROMs. The information is based on the delivery of contents, through a structured scheme, practical exercises, cases study, evaluations, consultancies and simulations(Davis, 2006). E-learning directs all resources to generate learning. These resources are: the instructor, the library, classes, organizations and others. With the use of the technology various formats for the delivery of the material of learning can be applied. The most widely used format is multimedia, including images, video, sound, Text, etc. The technological means used for the delivery of information are: Web, online databases, conferences with satellites, electronic whiteboards, messaging (E-mail, chat, etc.)(Davis, 2006).



Source: Davis, 2006: ifets.info/journals

Figure 1

E-learning is focused on any level of education: basic, average or higher. At the moment it is used a lot in diverse schools, colleges and universities, presence and at a distance, but its great

outbreak is occurring in the business world.)(Davis, 2006). Various definitions have been generated on e-learning and some terms that are such as web-based learning ('Web-based learning'), learning Computer-based learning, technology-delivered learning ('Technology-based learning'), on-line learning, courses presented on the web ("Web-delivered courses"), etc. Table 1 presents a summary that defines the most commonly used terms

2.3-Differences between e-learning and traditional education

The difference between e-learning and traditional education is the use of technology as a means of transmitting information and knowledge. The differences Table 1, as well as in the subsequent exposure, do not consider specific factors and situations of learning as the effort of the teacher and student and the fidelity of the contents.

-Table 1, Differences in e-learning with traditional education

Traditional education	E-learning
• The instructor is the center of attention • Control by the instructor • Synchronous • Established hours	• The apprentice is the center of attention • Student Responsibility • Asynchronous and / or synchronous • Just in time

The traditional class often focuses on the instructor, because information tends to flow from the instructor to the students and, consequently, may be more passive for students, and considers the instructor as an expert. However, there are many traditional instructors use a framework of participant as in the case method(Davis, 2006)

In e-learning, the instructor becomes a guide, investing more time in providing students with resources that deliver content, and students have more responsibility in their task to learn. E-

learning, with its broader range of technologies, media and forms of interaction can help instructors solve a broader range of student needs.(Davis, 2006)

By e-learning, the instruction can be synchronous or asynchronous, unlike traditional education, which can only be synchronous. Some examples of the means used in synchronous distance training are communication by satellite, with live instructor and even audience videos, Internet or instant messaging as "chat". For asynchronous training is not necessarily direct communication; for this reason, all types of training are based on Computer, CD-Rom, websites, videos or emails. For Smith and Trude (2000) it is estimated that an asynchronous discussion class can be as effective as one traditional discussion, since participants may have more time to formulate comments and thoughts.

One aspect that e-learning allows, unlike traditional education, is the delivery of training just in time, that allows to provide information to solve problems. This is how many companies, such as the Secondary technical School (STS) delivers multimedia training capsules to Computer desktops according to their needs, instruction of various programs such as Internet browsers, Windows 2000 and others.

Training Magazine reports that corporations save between 50-70% on costs when they replace the coach with the alternative of electronic Information. Gilbert S., Jones MG (2001) say that in spite of all these differences, e-learning is not a substitute for traditional education, but the use of technology makes it possible to employ a broad toolkit that can add educational value to all traditional learning systems. Tyler K., (2001) also believes that e-learning should be seen as a supplement to traditional education. Kaufman believes that the instructor is an integral part of learning, and the role it represents must be assessed.

In this context, the researcher provides the advantages of learning by traditional settings and E-learning settings as follows:

Students in traditional learning, learn by:	Students in E-learning, learn by:
• Lecturer gives instructions inside the classroom	• learners get instructions from the lecturers without viewingthem in classroom through (email; virtual classroom)
• Lecturer interact face to face with students	• Chat rooms or emails are used to ask questions
• Lecturers ask questions and students ask	• Ask and answer questions in virtual class room such as (chat room, on the electron boar)
• Discussing classroom issues with others face to face.	• Using forums for discussion
• Solve curriculum exercises in classroom	• Answer exercises online and get feedback electronically
• Tests and exams are taken inside classroom	• Take online tests
• Referring to external material	• Use online libraries, for instance electronic journals
• Preparing for exams	• Taking online past papers and mock exams

2.4-E-learning in the UAE

The modern educational systems began to spread globally, and began to take its normal position like traditional educational systems, which require a presence in the classroom (Gilbert & Jones M2001). These modern systems have emerged due to the requirements of the accelerated life, and as a result of the existence of class students who wish to continue their education, but their work or other circumstances prevent their investigation of this matter, in traditional education. From here, E-Learning has become a requirement of professional development for staff at the level of the various institutions.

For this, the UAE has kept pace with these developments in the field of education, which came in line with the government initiatives and the educational strategic vision 2020 of the UAE. The

adoption of E-learning and later smart education began to take its way in the educational system in the UAE.

The e-learning market is expanding. In the United Arab Emirates, E-learning has invaded the education market due to the large deployment of information technology in schools. Moreover, since the last 10 years, UAE educational institutions employ this new way of learning. E-learning takes off and shakes pedagogical practices of teachers who become "knowledge integrators" available to all via networks and must manage new virtual communities of knowledge (Gilbert & Jones M2001). E-learning has found its place in the field of public education paralleled with traditional courses, but it is still in the infantry stage in the private education, that is due to the high concern given by the UAE government to quality education. The fear of costly change is behind the slow adoption of private education to E-learning. Also, the fear of change is due to the e-learning ignorance and a lack of IT tools.

The Ministry of Education and Youth adopted a project to develop curricula for the teaching of computer material in the secondary stage (TCF, 2017). It was initially included in the first and second secondary grades. The project started with the preparation of a first grade secondary curriculum and was tested by selecting two schools in each educational area, one for boys and the other for girls,all high schools in the country. This experience has been accepted by students and parents. In addition to the goals set by the ministry, the experiment has yielded many positive results (TCF, 2017).

The UAE Ministry of Education has encouraged e-learning at all educational levels in order to create a technological environment for education through several methods (TCF, 2017). The first is to prepare pre-programmed educational programs for the curriculum and to prepare e-classes

equipped with the best technological means, the project was first implemented on a pilot basis at the beginning of the second semester of the academic year 2003/2004 on 24 schools with 12 middle schools (6 boys and 6 girls) and 12 secondary schools, with 4 schools from each Educational region, and a plan was developed with a training program in cooperation with private sector institutions includes the following sectors: managers of educational departments, school principals, supervisors, teachers of English, mathematics and science, as well as comprehensive awareness programs for parents and staff in the field of education (TCF, 2017). Through various means of communication, visual, reading and audio, in order to make everyone aware of the experience before applying it(TCF, 2017).

According to Olivier, B., & Liber, O. (2001), the American Open University, Nova Southeastern University and the University of Phoenix are recognized as leaders in providing distance education. Similarly, the British Open University, Fern Universität of Germany and the University of Twente in The Netherlands are recognized as leaders in Europe.

Today, there are many universities around the world, including Hamdan Bin Mohammad Smart University offering fully remote courses and academic programs. Moreover, distance universities have carried a significant role in driving distance education. New educational demands put pressureto expand academic offerings for adults to study with interest and with particular needs (Kalz, Koper & Hornung-Prahauser, 2009). This prompted and enhanced the offerings of universities and created or modified their services to meet students with new profile, prompting the emergence of virtual universities (Olivier, & Liber, 2001).

2.5-Challenges of e-learning

E-Learning has disadvantages for students and teachers in the context of classroom and remote learning. Some of these difficulties are difficult to evaluate while some are easy to evaluate in terms of quality and profitability. Examples of these disadvantages of E-Learning are the difficulties in the investments in E-learning technology and personnel and the initial costs of learning initiatives(Olivier, & Liber, 2001). These costs include development costs to design and construct the actual price as well as the cost of hardware and software to enable users to access training (Welsh et al., 2003). These costs also include the design of e-learning costs, the prices and training (Kalz, Koper & Hornung-Prahauser, 2009).

Therefore, e-learning has faced many criticisms and challenges to their growth. When a phenomenon so widespread influence is examined, it is essential to know who is who substances are involved either technology or service content.)(Davis, 2006). Therefore, in the following section, the challenges of this technology will be examined in greater depth. This research will also investigate all possible factors that could be an obstacle to the growth of e-learning in the world.

E-learning is a new subject in the world and does not exist in many countries. The reason is that e-learning is a teaching method that requires both the student and the institution to have some ICT skills (Mason and Rennie, 2006).

The United Arab Emirates is one among the first countries to have internetconnectionacross the Middle East. The Internet World indicates thatinternet uses in the UAE have rapidly grown from735, 000 in 200 to 8,515,420 in 2016. This number accounts for about 91,9% of the population, which means that 91,9% of the nation is connected online.

YEAR	Users	Population	% Pop.	Usage Source
2000	735,000	3,750,054	19.6 %	ITU
2003	1,110,200	3,750,054	29.6 %	ITU
2005	1,300,000	3,750,054	34.7 %	EIM
2009	3,558,000	4,798,491	74.1 %	TRA
2010	3,777,900	4,975,593	75.9 %	ITU
2012	5,859,118	8,264,070	70.9 %	IWS
2016	8,515,420	9,266,971	91.9 %	IWS

http://www.internetworldstats.com/me/ae.htm

Three challenges have been identified as challenges for e-learning in the Arab world: lack of ICT infrastructure, lack of qualified personnel and resistance to change. In fact, the challenges of e-learning can be used in this case study because of its great importance that this categorization is for the challenges faced by generals (Abouchedid et al., 2004).

2.6-Technological and cultural challenges

The new roles of teachers and students have changed within the deployment of E-learning. It is shifted from paper works to the use of new technologies which students and teachers find it quite difficult to learn that quickly. Teachers, who face new challenging problems in e-learning classes yet, have no capabilities to solve these problems (Singh, 2008). This is, thus, a matter of adapting the new technology by both teachers and student. Students will be also faced by new challenges when they use technology tools which they have newly experienced. Both students will lose control on these technology devices if they are not appropriately experienced and well trained.

Importantly, there is an aspect of great significance which is pertinent students' and teachers' basic computer skills (Davis, 2006). Teachers who lack basic computer education will fail to communicate with students in a proper way and students who lack basic computer skills will face challenges in major IT applications.

The study of Galusha (1997) at the University of Southern Mississippi in the United States of America was conducted to identify the obstacles to distance learning; and found that there are three major constraints that must be taken into account for the success of distance learning are: The shortage of experience and training. Teachers face obstacles such as: lack of training of teachers on how to develop curricula, employ ICTs, lack of support in general, and poor selection process Such as: infrastructure and technology, institutional problems, budget and financial support. The most important recommendations of the study are: the importance of communication with students, the importance of selecting teachers with experience and knowledge of distance learning methods, and the importance of developing and improving the structure.

Colleen Longstreet and Michelle Winkley, (2011)E-learning has encountered a number of barriers in its implementation due to the following aspects:

- There are many educational institutions that have not included e-learning due to the high cost; another aspect that stands in the way of its complete implementation is the apparent complexity the implementation of e-learning program.
- The lack of trust in the pedagogical value of e-learning, because it is not something tangible- is another barrier to the implementation of e-learning programs
- On the other hand, the computer difficulties, since this continues to be a taboo subject for many people, in short, the lack of support and experiences.
- The lack of knowledge of e-learning since some students and teachers are not updated with the latest development in e-learning applications.
- The amount of time needed to organize and prepare the material needed for its implementation is also a great barrier.

The challenge faced by any consultant or new leader, when he or she wants to make improvements in an organization, is to change a culture that is ingrained in the new commercial

or technological circumstances (Birch, & Miller, 2000). Too deep-rooted organizational cultures are burdensome for the company that seeks to adapt to changing market conditions and environments. Deeply rooted organizational cultures give people within them great security. In the face of any change that is proposed, however minimal, that modifies the established culture, confronts immediate rejections, even for the benefit of all. Most believe that it is possible to change the culture of an organization, but it is a slow process that can last for many years; Even if the change is produced they recognize that it will only be partial(Birch, & Miller, 2000).

The new forms of communication that are constituted by telematic mediation are posing a great challenge in the moment of conceptualizing what has traditionally been understood by communication for educational purposes. In the recent literature on communication in the educational context, one of the topics that are contributing a greater number of researches is associated with the didactic use of new technologies. It is therefore not surprising that, in a review of the specialized literature, we find abundant references to the concept of computer-mediated communication

This new concept of mediated communication is finding in several authors its field of definition. The CMC has been defined by Mason (2003) as the set of possibilities that take place when computers and telecommunications networks are used as tools in the communication processes to compose, store, transmit and process communication.

Drayton, B.; Falk, J. (2003) restrict the term CMC to the direct use of computers in the communication process, defining it as the "process of sending messages - not limited to textual messages - through direct use of the computer and the Communication in networks ". Under this conception, Drayton, and Falk considers that for communication to be mediated by the computer,

the user must be aware of their interaction with technology in the process of creating and sending the message

Synchronous and asynchronous terms appear again and again in the context of distance learning and CMC. For Ryan, Scott, Freeman and Patel (2000) CMC is a mediator of communication that facilitates synchronous and asynchronous communication. Davis, B.; Brewer, J. (2005)defined synchronous communication as real-time communicative activity as well as face-to-face communication (Branon, Essex, 2001), and interaction participants must be present, though not necessarily in the same physical location. On the other hand, asynchronous communication (Branon, Essex, 2001) is technologically mediated and does not depend on students and teachers being present at the same time to direct teaching-learning activities.

This new option of education via Web reaches its maximum, if the technology is developed to the point where it can integrate the three teaching methods: asynchronous, synchronous and self-training.

2.7-Asynchronous Teaching

It is the most flexible teaching method because it does not impose schedules as events occur at different times. Asynchronous instruction with instructor is much more effective than self-taught initiatives, as it encourages communication between students at all times by:

- The holding of debates.
- The assignment of group tasks.
- personalized contact withinstructors.

This occurs in an environment that does not impose schedules or spaces, it only needs that at some point, and both students and instructors are connected to the communications network. In this way it pushes the students to take the reins of their education and be more applied(Birch, & Miller, 2000). The asynchronous collaborative workshop brings together the students and the instructor on the computer screen, but it is not necessary for all of them to be online at the same time. The asynchronous workshop provides a convenient forum for groups of students living in regions with different time zones around the world, because it allows them to learn in their own schedules(Birch, & Miller, 2000). Network-based asynchronous training combines technologies such as e-mail, e-mail discussion groups, Web pages and self-taught programs for students and instructors to communicate with each other. This type of training is adequate to sustain discussions, make presentations and conduct research, assessments and team projects based on the Network(Birch, & Miller, 2000).

2.8-Synchronous Teaching

It is the most similar to traditional teaching because it collaborates and generates contact between students and teachers, but differs from it in that teaching activities occur without students attending the same site(Moore & Benbasat 2001). The instructor and the students interact with each other at the same time in a synchronous workshop. This type of "real-time" workshop generally requires specialized equipment such as microphones, video cameras, and special computer programs. The "live" interaction between participants in a virtual workshop simulates personal interaction ("face-to-face") among students in a conventional classroom. Students should be prepared to interact in a timely manner with their classmates, so special equipment and bandwidth is vital to maintain the agility of this interaction(Moore & Benbasat 2001).

Connecting with each other through their computers, students engage in activities such as problem solving, brainstorming, debates, demonstrations, presentations and role plays.

Thanks to the new technological advances, the possibility of learning in a virtual classroom becomes more feasible. The tools that are most used for this type of teaching are:

- Audio and video conferencing.
- Whiteboards.
- Application compartment.
- Web-based multimedia content.
- Private conversations and other functions of this type.
- Chat rooms.
- Instructors monitor presentations, ask questions to students, guide and direct communication during class

With these collaborative technologies, students can express their points of view and share information or applications through them(Moore & Benbasat 2001). A whiteboard is the electronic equivalent of a blackboard in a traditional classroom. The whiteboard is the screen on which participants and the instructor can turn to write their messages and present information regarding the topic they are dealing with. Students may also use a whiteboard for group activities(Moore & Benbasat 2001). For example, a group of students and their instructor can enter data in a spreadsheet from different places around the world. By working online at the same time, people can fill cells, correct formulas, or modify column headings, while each member of the group can see exactly what others are doing(Davis 2006).

The chat room offers structured aids for students to engage in a dialogue by writing their comments during a continuous discussion online via email(Moore & Benbasat 2001). This type

of web-based training allows groups to discuss, reflect and solve problems together through real-time learning (Moore & Benbasat 2001).

2.9-Self-management& Self instruction and their importance in online learning

Self-management of learning involves four distinct phases: planning, monitoring, control and evaluation, in which the individual must identify his own learning needs, establish his own learning objectives, search for resources (including instructors, peers and materials), choose and implement his own strategies and his own learning methods, and carry out Evaluation of results (Zimmerman, 2008). It should be noted that self-management of learning can involve peers and educators (Zimmerman, 2008), and in the case of formal education, it helps that responsibility for learning is transferred from the teacher to the student (Kalz et al. 2009).

There is a relatively new concept that gives the subject a leading role in the management of his or her own learning: the "Personal Learning Environment" or simply PLE (Personal Learning Environment) (Kalz et al. 2009). Because of its PLE, the person has a collection of tools, selected by himself, according to his interests, expectations and needs, to plan, organize, control and evaluate his own learning, regardless of geographical location, stage of life, The situation or the context in which it is found (Kalz et al. 2009). In fact, it could be said that the PLE is the environment constituted by the physical and virtual tools that the person uses to manage their own learning. For this reason, a viable way of studying self-management of learning is by investigating the PLE that the subject uses to carry it out (Kalz et al. 2009).

The UNESCO (2011) has established the necessary competencies so that teachers can effectively teach with ICTs (Kalz et al. 2009). These competences cover six aspects of teacher work and six

successive stages of development. In this context, self-management of learning appears on the one hand in the aspect called "Pedagogy" and, on the other hand, in the Creation of knowledge stage. Teachers should be able to act as student monitors by ensuring that students have the skills and knowledge they need, informing them of the methods they could use to self-manage their learning, guiding students to focus on their tasks in learning communities, and comply with the deadlines that have been agreed upon (Kalz et al. 2009).

In general, the PLE theory states that teachers should assume a role of active partners in student learning (Kalz et al. 2009). Empirical research has been consistent with this idea and has shown interest in the skills and abilities they have (Kalz et al. 2009) or should have (Shaikh & Khoja, 2011) teachers for PLE education. However, some evidences show a teacher with little influence on the PLE of their students outside the classroom, in addition to an underutilization of institutional platforms (Kalz et al. 2009).

Self-management of learning is the action of systematically activating and maintaining metacognitive, motivational, affective, and behavioral processes in order to achieve learning objectives in a particular context (Zimmerman, 2008); it is a pedagogical concept that is related and even equated with other concepts such as self-directed, self-developed, self-organized, self-regulated learning, mainly in Anglo-Saxon literature (Kalz et al. 2009).

As counterpoint, there is research on PLE that shows efforts to change this tendency of teachers. For example, the work of Gil (2012) presents the implementation of a proposal in which the teacher is involved in the improvement of the PLE of the students while promoting the development of linguistic skills.

Other researchers also present research where the teacher supports the development of the PLE of their students. On the one hand, the teacher is an explicit model of learning, which means that, in addition to posing learning situations, he himself must be able to self-manage his professional development. On the other hand, this idea is exemplified in the research of Ivanova, M. & Chatti, M.A. (2011) which seeks the assessment of a 2.0 telematic training environment to become a PLE for its users.

It is the type of training that self-instructors choose using all sorts of media such as books, Videos, Cassettes and Computer hardware. Currently one of the sites that meet all these media in one is the World Wide Web, being another possibility the use of Intranets(Davis 2006).

Products and Services of E-learning is becoming a very useful tool because it presents training products:

- **Interactive**: Where the user can take an active role in relation to the pace and level of work.
- **Multimedia**: Because it incorporates texts, still images, animations, videos, sounds.
- **Open**: because it allows an update of the contents and activities on a permanent basis, which contrasts with the static nature of the printed material.
- **Synchronous and Asynchronous**: Because it allows students to participate in tasks or activities at the same time regardless of where they are (synchronous), or the performance of individual work and study in each student's particular time (asynchronous).
- **Accessible**: This means that there are no geographical limitations, because it uses all the potential of the Internet, so that the markets for training are open.

- **With online resources**: That the students can resume their learning in their own personal computers.
- **Distributed**: So resources for training need not focus on a single space or institution. The potential of the network allows students to use resources and didactic materials scattered throughout the world on different Internet servers. It also allows you to use trainers who do not necessarily have to be in the same geographic space where the course is given.
- **With a high following:** Of the work of the students, since the trainers organize the training based on tasks that the students must realize and to send in time and established form.
- **Horizontal communication**: Among the students, because the collaboration is part of the training techniques

2.10-E-learning as the solution to the training and communication challenges

E-learning is one of the most important methods of modern education. It helps in solving the problem of knowledge explosion, increasing demand for education, expanding the chances of admission to education, training and educating workers without leaving their jobs, and the elimination of literacy(Davis, 2006). E-learning holds the broad reach of both sources and individuals (Davis, 2006). Today, it encompasses a large group of solutions that can be used throughout an organization, from corporate communications and marketing to technical documentation, customer support, quality control, manufacturing, engineering, public relations and analytical sharing relationships Information, experience and ideas. E-learning can provide employees with the ability to transform changes into benefits by leveraging existing knowledge resources and preparing them in an employee-centered, more personalized and accessible format. The old learning models do not adjust to meet the new challenges of global learning. E-learning

systems can improve (rather than replace) traditional teaching methods and materials. E-learning systems can include elements such as:

According to Davis F.D., (2006)the material can be developed in a modular format, divided into "objects" that are extracted from a database, are used for learning and the results are evaluated in an interactive test. The result is a personalized learning path: Students only get what they need and study at their own pace.

2.11-E-Learning and the role of technology

Computers represented an important stage in the development of distant education. In this direction, Olivier, B., &Liber, O. (2001)emphasized that this medium has allowed connection to Internet through networks of people throughout the world. Since the eighties, they offered courses without credits. The use of this medium has proved convenience to distribute course materials to students around the world which are currently still used.

The emergence of information technology is one of the factsconsidered in the development of E-Learning. These have led to a new revolution in the conception of educational model for higher education and have determined also newrules for the supply and demand of university disciplines. This trendis validated by the ministries of education around the world(Johnson&Liber, 2008).Olivier, B., &Liber, O. (2001)noted that during 2015, approximately 10.2 million students took at least one course online, reflecting an increase over the previous year, in which 12.3 million students were enrolled in online courses.

Necessarily, technological development is irreversible forcing stages of learningintelligent systems- based technologies which support mobile-cellular telephony integrated with Internet (Shaikh & Khoja, 2011). It could be argued that the distance education has been and will be subject to continuous development of technological means

Zimmerman, B. J. (2008) highlightedthe current importance of distance education to set up a new form of distribution of education. This, inaugurating a series of necessary transformationsin the field of educational and technological resources associated with the development processof educational activity.

Informal learning is generally understood to mean learning acquired outside formal or educational institutions. Such a definition calls for an explanation of the typology that distinguishes the three concepts that became popular in the 1970s after the publications of Philip Coombs and his colleagues (Koper, 2005).

Formal education refers to the scale constituted by the different levels of institutional organization from kindergarten to university. In most of the world, formal education is heavily regulated by states and contains a basic compulsory part (basic education) covering the first years of schooling. Formal education often implements specific programs with explicit objectives and evaluation systems, using textbooks that have been approved by government bodies and employing qualified teachers(Koper, 2005). It is also a hierarchical system in which the Ministry of Education is at the head and pupils at the grassroots level. One of the characteristics that most distinguishes these official systems is their propaedeutic nature in the sense that the main task to each level is to prepare the pupils to the next level since, in order to be accepted at a given level, one must have followed in a complete and satisfactory manner. Hence, at the end of each class or level, successful students receive a ballot, diploma or certificate enabling them to enroll in the upper class or enter the official labor market(Koper, 2005).

Informal learning is conceptualized as any learning acquired outside of formal and non-formal education programs. It is pertinent to note that the definition does not say "outside formal and non-formal education" but "outside formal and non-formal education programs". It should be

recognized that most informal learning takes place outside the premises of educational establishments. However, informal learning can also take place on the premises of educational establishments(Koper, 2005). This happens with a large number of different interactions, individual or group, that are not part of the activities planned by the programs and course preparations or that can occur at recreation. This also happens in a large number of extra-curricular activities such as sports, arts, festivals and meetings, lunch time, and even in the classroom.

An e-learning platform, a web-based educational platform or Virtual Environment of Teaching and Learning is a web application that integrates a set of tools for teaching-learning online, allowing for non-classroom teaching (e-learning) and / or mixed teaching (B-learning), where Internet-based teaching is combined with face-to-face classroom experiences (Koper, 2005). The primary objective of an e-learning platform is to allow the creation and management of teaching and learning spaces on the Internet, where teachers and students can interact during their training process(Koper, 2005). A teaching and learning space is the place where the set of teaching and learning processes aimed at the acquisition of one or more competences is carried out. The learning spaces can be the classrooms of an educational center, in the classroom teaching, sites on the Internet, in non-face-to-face, virtual or e-learning, or the combination of both, in mixed or b-learning (Koper, 2005).

The aim of e-learning is to support the educational process with interactive technology in the best ways that helps in facing many of the challenges faced by the traditional system, such as overcrowded classrooms, lack of facilities and places, inability to provide an atmosphere conducive to creativity and inability to take into account individual differences between learners(Koper, 2005). It is possible to compare the learning space with a theater (building or

place for leisure) in which plays is represented, which are the learning processes, with a script that is the learning design.

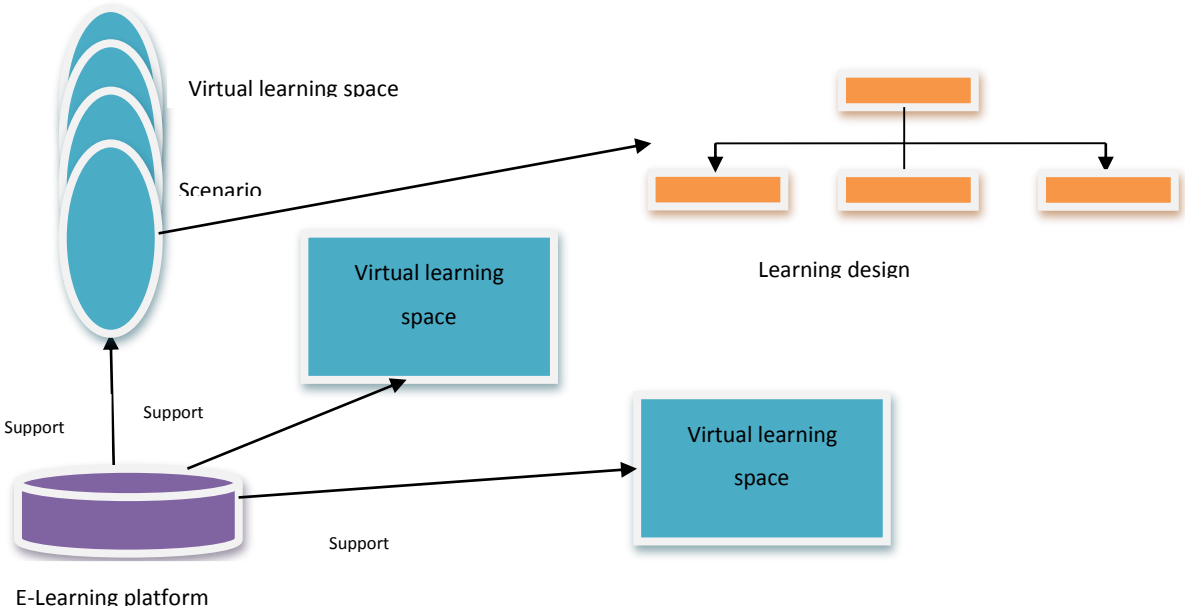


Figure 2

Conceptual model of virtual learning space

Finally, the stage is the theater area where a play is played. Figure 2 shows graphically the relationship between virtual learning environments, virtual learning spaces, scenarios and learning designs

In the non-academic field, administrations, companies, companies and other organizations use e-learning platforms for the training, training or continuous improvement of their employees, with an instructional approach. The aim is to offer its staff a permanently accessible and inexpensive professional development tool.

Although this has been the original approach of the platforms, in the academic field and specifically in the high school and university context, the goal of use changes towards the search and application of more effective models and educational methods for teachers and students.

Currently, the use of platforms in technical schools in the UAE is very widespread and their exploitation is carried out from multiple pedagogical approaches, especially in those centers with a teacher-centered application model and even in ways not provided for in the original conception of these platforms (Koper, 2005). This exploitation is producing an advance not only in the platforms themselves, which are demanding more functions, more flexibility and greater robustness, but also in the university teaching itself, which is undergoes a technological and methodological process of innovation.

CHAPTER THREE

Research Design and Methodology

3.1-Research Type

This research is an exploratory study. It aims to explore the major challenges that face E-learning in the context of the UAE educational institution, thus, it will explore the opinions and attitudes of the participants towards the challenges facing e-learning in the UAE schools. Teachers and students in the Secondary Technical School (STS) in the city of Al-Ain will be investigated in this research.

3.2-Research Method

Once the research problem, questions, objectives and hypotheses have been elaborated, the design is drawn up and the sample to be used in the study chosen according to the chosen approach, the next step is to collect relevant data on the variables, events, Communities or objects involved in the research (Keller, & Warrack, 2000). In this context, Keller, G and Warrack, (2000) in their work Research Methodology, argue that all research work is based on two main approaches: the quantitative approach and the qualitative approach, which together form a Third approach: The mixed approach.

One of the most important and decisive steps of the research is the choice of the method or path that will lead to obtain from the research valid results that respond to the objectives initially proposed. This decision will depend on the form of work, the acquisition of the information, the analyses that are practiced and therefore the type of results that are obtained; the selection of the research process guides the entire investigative process and based on it the objective of all research is achieved(Keller, & Warrack, 2000).

Keller, G & Warrack, (2000) point out that from a quantitative perspective data collection is equivalent to measuring. According to the classical definition of the term "measuring" means assigning numbers to objects and events according to certain rules. Often the concept becomes observable through empirical referents associated with it.

Quantitative studies seek the explanation of a social reality seen from an external and objective perspective. Its intention is to seek the accuracy of measurements or social indicators in order to generalize their results to large populations or situations. They work mainly with the number, the quantifiable data (Keller & Warrack, 2000).

For its part Keller, G & Warrack, (2000) postulate that an adequate measurement instrument is one that records observable data that truly represent the concepts or variables that the researcher has in mind; In quantitative terms, the reality that is captured is truly captured, although there is no perfect measurement, the result is as close as possible to the representation of the concept that the researcher has in mind.

The authors Edwards, R. & Holland, J.(2013) point out that a qualitative research studies reality in its natural context and how it happens, drawing and interpreting phenomena according to the people involved. It uses a variety of instruments to collect information such as interviews, images, observations, life histories, describing routines and problematic situations, as well as meanings in participants' lives. On the other hand, Baker, S. E. & Edwards, R. (2012), referred to qualitative methodology as a way of approaching the empirical world, point out that in its broadest sense is the research that produces Descriptive data: the words of people, spoken or written and observable behaviour.

Our research will adopt the mix research methodology, as quantitative survey and an interview will be used. It is also based on the case study method which explores the challenges facing E-learning in the context of a UAE/Al-Ain secondary Technical school (STS)

When choosing a case study method or investigation, we try to make valid inferences from the detailed study of events that are not developed in a laboratory, but in the context of social and institutional life. The case study is a qualitative and empirical research method oriented to an in-depth understanding of an object, fact, process or event in its natural context. It is used both in research of the interpretative paradigm and of the sociocritical paradigm (Edwards & Holland, 2013).

One of the areas of interest to investigate the processes and results of e-learning has to do with the analysis of the opportunities for synchronous and asynchronous communication. Our Research Group is concerned with researching the discourse generated in communication situations through chats and discussion forums in e-learning. These tools provide us with a privileged space for evaluating the actions of e-learning, since they give us access to know how interactions are produced, what are the functions of the tutors in the learning process, how communication flows, etc. Discourse analysis has been an area of knowledge that is bringing together researchers from many different fields. In Van Dijk's excellent collection (2000, p.23) we are faced with the idea that discourse is used by people to communicate ideas or beliefs, and they do so as more complex social events. The analysis of the discourse necessarily incorporates a study of the language used, of the beliefs that are communicated and of the interaction in situations of a social nature.

In Van Dijk's excellent collection (2000, p.23) we are faced with the idea that discourse is used by people to communicate ideas or beliefs, and they do so as more complex social events. The discourse analysis necessarily includes a study of the language used, the beliefs that communicate and the interaction in situations of a social nature. Blanton, Moorman and Try (1998) made a proposal to organize the forms of communication in virtual environments, differentiating between convergent and divergent situations, depending on the interpretations of the users. From this work, Shotsberger (2001) applied different categories to The analysis of synchronous dialogs through chats. These were: affirmation, beliefs, concerns, practice, desire, intention, question and outcome.

Recent attempts have been made to go beyond the mere description of messages in asynchronous communication forums, to understand them as an opportunity to promote knowledge and learning. In this sense, the work ofHenry (1992), who proposed that asynchronous communication could be analyzed through five dimensions: participatory, social, interactive, cognitive and metacognitive. More ahead we will concretize its contribution

3.3-The Research Populations

This research will comprise quantitative and qualitative research methods. The quantitative research method is a survey of which concern the cultural readiness& technical readiness of the STS in implementing their E- Learning program. The survey was distributed among 75 teachers working in the STS where only 50 of them have completed the questionnaire. The interview questions form was distributed on 5 administrative principals only. The staff of the STS comprises 75 teachers and 10 administrative. The questionnaire and the interview forms were distributed in the academic year 2016 – 2017 in the school building on 20/1/2017.

3.4-The Instruments

The research instruments deployed by the research are interview and questionnaire. The researcher uses SPSS to finalize the results.

CHAPTER FOUR

Data Analysis

1-Cultural readiness

1- The STS is committed to continue e-learning

commitment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	8	16.0	16.0	16.0
	agree	19	38.0	38.0	54.0
	sometimes	15	30.0	30.0	84.0
	disagree	7	14.0	14.0	98.0
	strongly disagree	1	2.0	2.0	100.0
	Total	50	100.0	100.0	

38% of the participants agree that STS is committed to continue e-learning, 30% of the participants sometimes agree that STS is committed to continue e-learning and 16% of the participants strongly agree that STS is committed to continue e-learning while 14% disagree and 2% strongly disagree.

2- E-learning philosophy encourages students to pull information to themselves

philosophy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	7	14.0	14.0	14.0
	agree	17	34.0	34.0	48.0
	sometimes	18	36.0	36.0	84.0
	disagree	8	16.0	16.0	100.0
	Total	50	100.0	100.0	

36% of the participants say that E-learning philosophy encourages students to pull information to themselves and 34% of the participants agree that E-learning philosophy encourages students to pull information to themselves and 16%of the participants disagree that E-learning philosophy encourages students to pull information to themselves while 14% of the participants strongly agree that E-learning philosophy encourages students to pull information to themselves

3- STS School leadership value and support E-learning as a means for students' learning acquisition

leadership

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	12	24.0	24.0	24.0
	agree	17	34.0	34.0	58.0
	sometimes	15	30.0	30.0	88.0
	disagree	6	12.0	12.0	100.0
	Total	50	100.0	100.0	

34% of the participants agree that STS School leadership value and support E-learning as a means for students' learning acquisition and 30% of the participants sometimes agree that STS School leadership value and support E-learning as a means for students' learning acquisition and 24% of the participants strongly agree that STS School leadership value and support E-learning as a means for students' learning acquisition while 12%of the participants disagree that STS School leadership value and support E-learning as a means for students' learning acquisition.

4- The team of teachers and administrative drive the e-Learning initiative

team

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	6	12.0	12.0	12.0
	agree	20	40.0	40.0	52.0
	sometimes	15	30.0	30.0	82.0
	disagree	9	18.0	18.0	100.0
	Total	50	100.0	100.0	

40% of the participants agree that the team of teachers and administrative drive the e-Learning initiative and 30% of 34% of the participants sometimes agree that the team of teachers and administrative drive the e-Learning initiative and 18% of the participants disagree that the team of teachers and administrative drive the e-Learning initiative and only 12% of the participants strongly agree that the team of teachers and administrative drive the e-Learning initiative

5- The students in the school are open to e-Learning as a tool that supports stand-up classes

students

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	15	30.0	30.0	30.0
	agree	15	30.0	30.0	60.0
	sometimes	12	24.0	24.0	84.0
	disagree	8	16.0	16.0	100.0
	Total	50	100.0	100.0	

30% of the participants strongly agree that the students in the school are open to e-Learning as a tool that supports stand-up classes and another 30% of the participants strongly agree that the students in the school are open to e-Learning as a tool that supports stand-up classes while 24%

30% of the participants sometimes agree that the students in the school are open to e-Learning as a tool that supports stand-up classes and only 16% disagree.

6- The students are trained and coached in how to learn

training

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	8	16.0	16.0	16.0
	agree	19	38.0	38.0	54.0
	sometimes	14	28.0	28.0	82.0
	disagree	8	16.0	16.0	98.0
	strongly disagree	1	2.0	2.0	100.0
	Total	50	100.0	100.0	

38% of the participants agree that the students are trained and coached in how to learn and 28% of the participants sometimes agree that the students are trained and coached in how to learn while 16% of the participants strongly agree that the students are trained and coached in how to learn and another 16% of the participants disagree that the students are trained and coached in how to learn while only 2% of the participants strongly disagree that the students are trained and coached in how to learn.

2-Technical readiness

1- The technical tools needed to support e-Learning are installed properly in place

tools

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	12	24.0	24.0	24.0
	agree	22	44.0	44.0	68.0
	sometimes	14	28.0	28.0	96.0
	disagree	2	4.0	4.0	100.0
	Total	50	100.0	100.0	

44% of the participants agree that the technical tools needed to support e-Learning are installed properly in place and 28% of the participants sometimes agree that the technical tools needed to support e-Learning are installed properly in place and 24% of the participants strongly agree that the technical tools needed to support e-Learning are installed properly in place while only 4% disagree.

2- There is a technical team who helps drive the initiative and oversee its implementation and administration

technical team

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	17	34.0	34.0	34.0
	agree	19	38.0	38.0	72.0
	sometimes	7	14.0	14.0	86.0
	disagree	7	14.0	14.0	100.0
	Total	50	100.0	100.0	

38% of the participants agree that there is a technical team who helps drive the initiative and oversee its implementation and administration and 34% of the participants strongly agree that there is a technical team who helps drive the initiative and oversee its implementation and administration and 14% of the participants sometimes agree that there is a technical team who helps drive the initiative and oversee its implementation and administration and another 14% of the participants disagree that there is a technical team who helps drive the initiative and oversee its implementation and administration

3- **The directors and students are comfortably incorporating technology-based tools in their daily life**

Technology- based

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	8	16.0	16.0	16.0
	agree	19	38.0	38.0	54.0
	sometimes	16	32.0	32.0	86.0
	disagree	6	12.0	12.0	98.0
	strongly disagree	1	2.0	2.0	100.0
	Total	50	100.0	100.0	

38% of the participants agree that the directors and students are comfortably incorporating technology-based tools in their daily life and 32% of the participants sometimes agree that the directors and students are comfortably incorporating technology-based tools in their daily life and 16% of the participants strongly agree that the directors and students are comfortably incorporating technology-based tools in their daily life while 12% of the participants disagree that the directors and students are comfortably incorporating technology-based tools in their daily life and only 2% of the participants disagree.

Summary of the results

	S.Agree	Agree	sometimes	disagree	S.disagree
1-Cultural readiness					
1- The STS is committed to continue e-learning	16%	38%	30%	14%	2%
2- E-learning philosophy encourages students to pull information to themselves	14%	34%	36%	16%	-
3- STS School leadership value and support E-learning as a means for students' learning acquisition	24%	34%	30%	12%	-
4- The team of teachers and administrative drive the e-Learning initiative	12%	40%	30%	18%	-

5- The students in the school are open to e-Learning as a tool that supports stand-up classes	30%	30%	24%	16%	-
6- The students are trained and coached in how to learn	16%	38%	28%	16%	2%
2-Technical readiness					
7- The technical tools needed to support e-Learning are installed properly in place	24%	44%	28%	4%	-
8- There is a technical team who helps drive the initiative and oversee its implementation and administration	34%	38%	14%	14%	-
9- The directors and students are comfortably incorporating technology-based tools in their daily life	16%	38%	32%	12%	2%

Summary of the interview questions

1. **What is the E-learning philosophy of the Secondary technical School?**

The philosophy of E-learning in the STS is to extend E-Learning to the whole institution: With e-learning technologies, management and administrative staff at all levels can be reached with the same content of training and educational support. For example, by decentralizing e-learning services, the school will develop staff capacity at the district and local levels. With the appropriate physical infrastructure, supervisors at high levels can receive the necessary training and management tools

2. **To what extent is E-learning being used in the Secondary technical School?**

By using an e-learning strategy wecan organize and allow students moving at their own pace, focusing on topics that fit their individual needs. E-learning reached a large number of students in the STS. E-learning technologies will provide the means to:

- Support teaching and information for systems operations.
- Continuously support (eg management tools provided through the Internet) in order to achieve curriculumperfectness.
- Improve the quality of teaching programs, using standardized, field-tested tools, rather than relying on ad hoc local interventions.

3. What are the barriers/challenges facing you while implementing E-learning program in the Secondary technical School?

In this new and changing global economy, all education institutions want to ensure competitiveness in the market. Therefore, they need to invest in updating, training and continuous improvement of managers and teachers. Although we encounter cultural and technical challenges represented by failure of systems and lack of skills but we invest in training both students and teachers to new technology and we adapt this technology to fit to our students' needs.

4. What changes does E-learning make in the Secondary technical School?

E-learning and electronic communications provide a greater possibility for long-term relationships between students and their educators. This relationship is strengthened by e-learning especially when students' needs are fulfilled. E-learning is facilitating institutional and professional links. Professional exchange and the sharing of experiences are crucial elements for the betterment of students. E-learning provides an opportunity to break insulation locally, regionally, or across the country, and to provide and receive information regarding successful improvement initiatives

5. Where does the Secondary technical School want to be in this field in the future?

Educators today are debating the true efficacy of computer-based e-learning technologies. From the existing evidence it is suggested that e-learning methods are as effective for teaching or even more than traditional classrooms. Beyond this, it is clear that e-learning technologies can provide learning opportunities for people who otherwise would not have access to new knowledge. E-learning methods can be more effective than others for teaching

some types of content. Combinations of classroom learning and e-learning could be the best educational strategy. E-learning is the business of the future. This does not mean the death of face-to-face education, this with e-leaning, will always coexists, but in different proportions. However, there is a strong bet on the advantages of e-learning, being the following:

- Make better use of available time.
- Optimize learning processes.
- Maximize results by properly using technological resources.
- Break the geographical barriers

CHAPTER FIVE

Findings and Discussion

Research findings

This research attempts to investigate the challenge facing E-Leaning in the context of UAE educational institutions. It aims to highlight the challenges facing e-learning in terms of e-learning practices and policies in the context ofthe UAE secondary stage, the (Secondary Technical School (STS)is involved in this study. The research tries to illustrate the barriers and challenges that face e-learning in the country and tries to impose some solutions and suggestions in order to develop e-learning incentives and technology infrastructure.

E-learning is the education in which Internet technologies are used for communication and information, including online education, web education, computer education, and Internet education, which is used to acquire technological means and is provided by the teacher directly and immediately through local networks or the Internet. E-learning that allows us to use the Internet and its various applications, computer networks and other electronic technologies for use in the management and measurement of education

E-learning aims to achieve many goals at the level of the individual and society including:

- Improve the level of effectiveness of teachers and increase their experience in the preparation of educational materials through the dissemination of technology culture, which helps in creating an electronic community able to keep up with the latest developments.

- Access to sources of information and access to images and video papers and search through the Internet and use them to explain and clarify the educational process.
- Provide educational material in its electronic form for the student and teacher.
- The possibility of providing classes for distinguished professors, as the shortage of educational staff makes them exclusive to exclusive schools and benefits a limited part of the students. The shortage of academic and training personnel in some educational sectors can also be compensated by virtual classes.
- Help the student to understand and deepen the lesson more where he can return to study at any time, and help him to do his homework by reference to the various sources of information on the Internet or electronic material provided by the professor to students supported by multiple examples. The student keeps the information for longer because it is supported by audio, video and comprehension.
- The introduction of the Internet as an essential part of the educational process is of great benefit in raising the scientific level of the students' scientific knowledge and increasing the awareness of the exploitation of time by developing the ability to innovate rather than wasting it on sites that only lead to degeneration of the moral and cultural level.

In the UAE, for more than ten years, education has developed in an increasingly distributed environment, with strong technological components and within multinational platforms, where virtual education is an obligatory component. In the same vein, Colleen Longstreet and Michelle Winkley, (2011)point out that educational institution should not be left out of social and technological changes, but, on the contrary, should bring the student as close as possible to this reality. In the UAE, we have begun to manage programs or projects of virtual education based on new technologies in various universities and technological institutes. E-learning is one of the

forms that have been adopted by UAE educational institutions where the STS is one of them, to update personnel, as a complement to face-to-face learning. They offer digital magazines, virtual courses of various subjects, among others.

When the first e-learning systems were launched in the UAE, the biggest challenge was resistance to change(TCF, 2017). Educational institutions have overcome these challenges by the smart adaptation of information technology and communication technology to serve the goals of local educational institutions. More importantly, the commitment to the UAE educational strategy 2020, educational institutions have succeeded to minimize these challenges and have achieved remarkable success. There is no doubt that, the minimization of these challenges have been attained by a rational philosophy adopted by the Ministry of Education and the Ministry of Higher Education which entails that E-learning success should be based on equipping schools with efficient IT and communication technologies train students, teachers and administrative to implement and apply these technologies effectively in class.

The data analysis chapter has finalized the evidences on the challenges facing the STS is implementing E-Learning programs. Accordingly, based on the data analysis chapter we found that the STS is committed to continue e-learning. Within the scope of E-Leaning, the new roles of teachers and students have changed within the deployment of E-learning. It is shifted from paper works to the use of new technologies which students and teachers find it quite difficult to learn that quickly. The UAE Ministry of Education has encouraged e-learning at all educational levels in order to create a technological environment for education through several methods (TCF, 2017)

Also, E-learning philosophy encourages students to pull information to themselves to a high degree. The participants emphasized the role of this philosophy to enhance the quality of teaching and learning. The Ministry of Education and Youth adopted a project to develop curricula for the teaching of computer material in the secondary stage (TCF, 2017). It was initially included in the first and second secondary grades. The project started with the preparation of a first grade secondary curriculum and was tested by selecting two schools in each educational area, one for boys and the other for girls,all high schools in the country. This experience has been accepted by students and parents. In addition to the goals set by the ministry, the experiment has yielded many positive results (TCF, 2017).

It is also found that STS School leadership value and support E-learning as a means for students' learning acquisition. E-learning is the learning acquired with information through the use of some Technology, whether by network (Internet, intranet or extranet) or CD-ROMs. The information is based on the delivery of contents, through a structured scheme, practical exercises, cases study, evaluations, consultancies and simulations. E-learning directs all resources to generate learning. These resources are: the instructor, the library, classes, organizations and others(Davis, 2006)

The research emphasized that the team of teachers and administrative drive the e-Learning initiative. E-learning takes off and shakes pedagogical practices of teachers who become "knowledge integrators" available to all via networks and must manage new virtual communities of knowledge (Gilbert & Jones M2001). Moreover, the students in the school were viewed more open to e-Learning which becomes a tool that supports stand-up classes. In the context of education, this means that it is not enough to import technology; rather, it is necessary to ensure

that the level of education and skills of academics and students is adequate to exploit the full productive potential(Moore & Benbasat 2001)

The research results emphasized the need for training and improvement for both the teachers and students. In this new and changing global economy, all education institutions want to ensure competitiveness in the market. Therefore, they need to invest in updating, training and continuous improvement of students and teachers and condition them for the best development, avoiding staff turnover and retaining talent. Educational institutions, in this way use the Internet for staff training(Smith, Reggie & Diamond, 2000). Internet-based forum research literature, as we have seen above, identifies student-student interaction as an essential form of interaction in the classroom. The opportunity for interaction with other students, both in structured and informal contexts, is one of the main advantages of using asynchronous text-based communication. As Bonk and King put it, the technological tools for learning are becoming increasingly interactive, distributed and collaborative (1998)

With regards to technical challenges facing the implementation of E-learning in the STS the research found that the technical tools needed to support e-Learning are installed properly in place. The participants gave great value to the installation of e-learning equipments in place. This result matches with the answer of question (1) from the interview which demonstrates that the philosophy of E-learning in the STS is to extend E-Learning to the whole institution: With e-learning technologies, management and administrative staff at all levels can be reached with the same content of training and educational support. For example, by decentralizing e-learning services, the school will develop staff capacity at the district and local levels. With the appropriate

physical infrastructure, supervisors at high levels can receive the necessary training and management tools.

The research also found that there is a technical team who helps drive the initiative and oversees its implementation and administration. Respondents' answers gave high value for the availability of technical teams in the STS and their role in facilitating the learnability and teachability processes. This finding also matches with the question pertinent to the extent to which e-learning is being used in the STS. The interviewees confirm that the technical teams

- Support teaching and information for systems operations.
- Continuously support (eg management tools provided through the Internet) in order to achieve curriculumperfectness.
- Improve the quality of teaching programs, using standardized, field-tested tools, rather than relying on ad hoc local interventions.

In this new and changing global economy, all education institutions want to ensure competitiveness in the market. Therefore, they need to invest in updating, technical equipment for the improvement the learning process. Although they encounter technical challenges represented by failure of systems and lack of skills but they invest in training both students and teachers to new technology and we adapt this technology to fit to our students' needs. There is a growing line of research that seeks to analyze how the technologies of asynchronous communication can support the development of high-order cognitive functions: articulation, reflection, negotiation (Anderson,T. et al. 2001). It is argued that asynchronous communication has the potential to transform education by creating more student-centered environments in which students can interact with their peers. Anderson,T. et al. (2001)suggests that the web is more than a space to access and place information. It is a place to communicate interactively and

to build knowledge. Asynchronous communication can promote reflection and the development of ideas. In addition, Anderson,T. et al. (2001) suggest that asynchronous communication supports the principles of constructivist learning because it allows students to easily articulate, read and reflect on concepts. They affirm that the asynchronous or deferred capacity of communication tools, for Example, allows students to have some control as "waiting time" increases and gives opportunity for reflective learning

Also, the research found that the directors and students are comfortably incorporating technology-based tools in their daily life. E-learning directs all resources to generate learning. These resources are: the instructor, the library, classes, organizations and others. With the use of the technology various formats for the delivery of the material of learning can be applied. The most widely used format is multimedia, including images, video, sound, Text, etc. The technological means used for the delivery of information are: Web, online databases, conferences with satellites, electronic whiteboards, messaging (E-mail, chat, etc.)(Davis, 2006).However, the use of knowledge objects leaves several benefits. The first benefit is that it reduces costs and efforts because objects can be shared again and again, even for different purposes. Second, it allows the customization of the learning, since the configuration of objects can be adjusted according to the needs of the user. Third, it makes it possible for solutions based on e-learning to be reconfigured according to the changes of users and the institution.

The research shares the idea that the traditional teacher-centered model, in which knowledge is transmitted from the teacher to the pupils, is rapidly being changed by alternative models of teaching (pupil-centered, constructivist and based on sociocultural ideas) in which the emphasis is placed on the orientation and support of students as they learn to build their knowledge and

understanding of the culture and community to which they belong. Thus, a vision Sociocultural approach to collaborative learning is supported by the use of collaborative tools that act as mediators of socio-cultural learning processes.

Electronic discourse is complex and multi-faceted. The term electronic discourse focuses on the way people use language to exchange ideas and not so much on the medium they use for it. The analysis that is done is not the analysis of speech because the discourse analysis is asynchronous, it has a type of feedback and answers that sometimes, as we have pointed out previously, can be a limitation (Drayton and Falk, 2003). The interaction is delayed in time since someone sends a text until it is answered. In addition, electronic speech also differs from face-to-face communication in word-taking shifts, since here, interruption and overlap do not They're possible. In the electronic discourse, interactivity develops from two perspectives: that of the one who sends the message and the one who responds

Research limitations

The limitations of the research are represented by the small number of participants in both the questionnaire and the interview. The STS has 75 teachers and administrators, yet, the sample of the study is small. I have distributed the questionnaire on 75 teachers but 25 of them were incomplete, thus, I excluded them. Also, one of the limitations is that some of the colleagues found the research questions so hard; therefore, I instructed them about and translated some questions to them.

Conclusion and recommendations

Electronic discourse is one of the forms of interactive electronic communication. The term refers to those bi-directional texts by which a person, using a keyboard, writes something which appears on the screen of another subject, who responds through the keyboard as well. The person who receives a message may be an individual or a group, large or small, of receivers.

At the moment, traditional education does not add new educational content to generations because, it alone can not keep pace with contemporary thought. The research questioned the challenges E-learning in STS. The challenges detected in the research are pertinent to cultural and technical challenges. The research deployed secondary and primary research method to finalize the results

As we have seen, preparing students to develop will allow new technologies to become an extension of their intellectual capacity and allow them to evolve, adapting to changes and new developments. The research explored the challenges facing E-Learning in the STS. The research results emphasized the need for training and improvement for both the teachers and students. Also, E-learning philosophy encourages students to pull information to themselves to a high degree. The participants emphasized the role of this philosophy to enhance the quality of teaching and learning. The research also found that the directors and students are comfortably incorporating technology-based tools in their daily life. E-learning directs all resources to generate learning

The implementation of E-Learning is the best solution to address the imbalance that limits the development of the Arab countries and keep them on the sidelines under the name of the developing countries. Technology requires specific theoretical formulations that allow it to

synthetically adapt scientific knowledge to the conditions identified as relevant to their joint application to other non-scientific practices, which may have a functional impact on the solution of a specific problem.

Finally, the research recommends the following:

- Implementing e-learning in an environment that is in harmony with the traditional so as not to dispense with the traditional, but complement each other, especially children at an early age so as not to affect other aspects such as the decline in the level of handwriting.
- Adopting a unified Arab project to provide textbooks with electronic copies, including training programs from theoretical questions, pictures, videos and slides
- Encouraging school work on e-learning by focusing on their projects.
- Building a digital system that is specialized in e-learning as a first stage in the application. The idea is to provide an electronic learning system that is equivalent to the material given in the elementary stages and is supported by examples and more explanation and realistic simulation based on full documentation (video, flash, audio files and examples) For the lessons given in schools to be a permanent reference to the child and parents.
- It is not irrational to think about a free e-Learning course and self-learning. However, it is essential to provide a set of factors in order to minimize student dropout, such as early, complete and detailed information on the methodology and characteristics of the course, and promote student autonomy by generating communities of practice.

- The generation of communities of students who assist in the tutoring of e-Learning courses is a very efficient strategy of building collective knowledge, which is not tacit, but requires a gradual and progressive work.
- The strategy of working around challenges poses students with an extra motivation to work. However, special care must be taken to provide all the learning materials and advice necessary to achieve them.

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Appendices

Questionnaire

Dear friends

Thank you for giving me the opportunity to interview you and for taking time out of your busy schedule to participate in this study. This survey is part of a Master Degree Dissertation being conducted on" The challenges facing E-Learning in educational institutions: Case study of the Secondary Technical School (STS). Your valued participation and responses are significant in obtaining a full understanding of the issue. Information collected in this study will remain confidential and will be used only for the purpose of this study. The subsequent outcomes of this study will be structured in a way that respondents will not be identified.

Part One: Individual Demographic and Work Information

Please answer all questions:

1. **Gender**
   - Male
   - Female

2. **Nationality or Ethnic background**
   - Emirati
   - Arab none Emirati
   - Asian
   - Western

3. **Role (Administrative / Technical)**
   - Director
   - Manager
   - Supervisor
   - Administrator
   - Teacher

4. **What is the highest level of education you have completed?**
    - Diploma
    - Higher Diploma
    - Bachelor's degree
    - Master's degree
    - Doctoral degree

5. **Years of Experience**
    - 0-5 years
    - 6-10 years
    - 11-15 years
    - 16 and above

Part Two: Culture readiness

S\N	Cultural Readiness	Strongly Agree	Agree	Sometimes	Disagree	Strongly Disagree
1	The STS is committed to continue e-learning					
2	E-learning philosophy encourages students to pull information to themselves					
3	STS School leadership value and support E-learning as a means for students' learning acquisition					
4	The team of teachers and administratives drive the e-Learning initiative					
5	The students in the school are open to e-Learning as a tool that supports stand-up classes					
6	The students are trained and coached in how to learn					

Part Three: Technical readiness

S\N	Technical Readiness	Strongly Agree	Agree	Sometimes	Disagree	Strongly Disagree
1	The technical tools needed to support e-Learning are installed properly in place					
2	There isa technical team who helps drive the initiative and oversee its implementation and administration					
3	Thedirectors and studentsare comfortably incorporating technology-based tools in their daily life.					

Part Four: Interview

Interview questions

Kindly, answer the following questions:

1- What is the philosophy of the Secondary technical School of E-learning?

.....
.....

2- To what extent is E-learning being used in the Secondary technical School?

.....
.....

3- What are the barriers/challenges facing you while implementing E-learning program in the Secondary technical School?

.....
.....

4- What changes does E-learning make in the Secondary technical School?

.....
.....

5- Where does the Secondary technical School want to be in this field in the future?

.....
.....