E-learning Concepts, Definitions and the New Role of the Traditional Education Trilogy

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Abstract: *This research aims to clarify the basic concepts and benefits of e-learning, to identify a reference definition of e-learning, and vision about how to take advantage of information and communications technology developed in making the teaching and learning process electronic in addition to meet the challenges of atheist-first century, threats and the issues of the future in order to ensure continuity of survival. The paper also describes the new roles of various pillars of the educational process.*

Keywords: E-learning, education trilogy, learner role, teacher role, institute role

1. Introduction

The communications and information technologies and their systems revolution, caused a wide and very important changes in the world, the relative values of knowledge rises, so the importance of production traditional factors tumbled and raw materials, the knowledge became a key element in the production, there for the information became the most important factor, and it means that the knowledge capital has become more important and deeper impact of physical capital in the moving towards knowledge-based economy world, and the ability to ask questions has become outweigh the importance of being able to answer, which is the collection of knowledge and mastering it, also the safe live in the information erarequires the availability of superior ability, renewed awareness of the Arab teacher in dealing with information and its requirements which helps in the ability development of teachers to the optimum utilization of the information by searching for efficient ways to deal with it and make the most of them.

The technological progress has led to the emergence of methods and new ways of indirect teaching, based on the employment of such technological innovations to achieve the required education, including the use of computers and its innovations, satellite, satellite channels, and international information network "internet", for the purpose of access to education throughout the day and night for those who want, and in the place where It suits one, by a variety techniques and methods supported by technology of multimedia with its different components, to provide educational content through a combination of written and spoken language, and visible fixed, moving elements, and audio-visual diverse backgrounds, all these displayed for the learner through the computer, which makes it interesting and fun education, and achieved the highest learning efficiency, and with minimal effort in less time, thus achieving the quality of education.

There is also a set of requirements imposed on us by the current era, which make E-Learning - As one of thetechnological innovations- strategic option which is not irreplaceable, and these requirements are:
- The need for continuous education.
- The need to flex Education.
- The need to communication and openness up to others.
- The current trend to make education is not linked to the place and time.
- Lifelong learning, based on the current need education, self-education, effective education.

2. What's e-learning

E-learning is the kind of education that relies on the use of electronic media to contact and receive information and skills, the interaction between the student and the teacher, and in order to make it clear we can say thatit's the kind of learning with virtual means, de facto its results. This type of education is linked by electronic means, and mechanisms of modern communication and information networks, most notably the World Wide Web (Internet), which has become an active mediator for e-Learning, to deliver the information in the shortest time with less effort. Education is through contact and communication between the teacher and the learner and through the interaction between the learner and other electronic means like e-books, e-lectures…etc. [1]

Also it is known as "a way of teaching by using of modern communication mechanisms like computer networks, multimedia and Internet portals, to deliver information for learners as soon as possible, cheaper and more able to be managed, control the educational process, and measure, evaluate the performance of the learners [2].

E-learning also defined as education which relies on the use of computer-based multimedia technology,sothe learner will be able to access knowledge through electronic files (text, audio, video), which are known ase-course, and they are getting this educational files either a CDs issued by educational institutions or may be obtained via the Internet and through the downloaded from the site of the university in order to be interact and communicate with the scientific material and its content of the vocabulary later on [3].

E-learning also considered as a form of distance learning, which aims to expand the concept of teaching and learning to go beyond the traditional classroom and move to an interactive environment rich with applications that support the use of computer, multimedia and the Internet. The growth and development of distance education can distinguished through describing it as a transition from distance learning to e-learning and then to the Mobile

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Education where these stages of development affected with the industrial revolution of the eighteenth century to the nineteenth century after the electronics revolution in the 80th then revolution of wireless communications in recent years of the twentieth century. Thus, it can be said that e-learning is only a modern technology to apply distance education, which is linked with all types of education and has several forms and types. The mobile education is considered as the latest technology for applying e-learning [4].

So we can define e-learning as a kind of education creates new opportunities for lifelong learning at anytime and anywhere with the latest technological means.

Whatever the variations in the definition, and in spite of the controversy around it, but the most if not all definitions were indicate that a new approach to education provides greater opportunities for any number of people at any time and in any place to acquire information, knowledge and skills in various aspects of life, and then the e-learning including both teaching and learning processes by using modern means of information and communication technology, as well as the integration of those means in the traditional classroom as a catalyst, and e-learning uses to provide distance education programs, which allows the scientific material to the learner commensurate with his personal abilities and provide an opportunity for the learner to interact According to his/her potential with the teacher through the virtual classroom using video conferencing, or any other learning supporting facilities.

There are also some other concepts that are related to e-learning, whichis[5].
1) Educational Technology: Its Irregular curve for the design, implementation and evaluation of the educational process, depending on specific targets stemming from research in the field of education and human contact results using human and other resources in order to give education more effectiveness.
2) Distance learning: It is a relatively modern teaching method. And it supports the basic concept of the existence of the learner in a place different from the source, which may be a book, a teacher, or even a group of students. It is the transfer of an educational program of its position on the campus of an educational institution to geographically dispersed locations, and aims to attract students cannot continue in a traditional educational program under normal circumstances too.
3) Open Learning: It is very important to know that open education system is a form of distance learning which gives the quality of education it's particularly importance. Unlike education by correspondence, the proposed learning system is used by a limited (20-25%) direct education operations (face to face), which in turn aims to provide a favorable environment for active learning actor and direct interaction between students among them.
4) Blended Learning: It defines as one of education or learning formulas Where e-learning combined with traditional education a single framework, using e-learning tools, whether based on the computer or on the network in lessons, such as computer labs and smart classrooms, and the teacher meets the student face to face for the most part.

3. Types of e-learning [6]: -

A) Synchronous e-learning
A type of e-learning through it students can be linked with the teacher in a real learning environment, so that the student communicates with his/her teacher directly in spite of geographical distance and separation. In this type of education the teacher is the supervisor of the class with the possibility of direct conversation with students, in addition to the possibility of seeing the electronic blackboard by students inside the hall during explanation.

B) Asynchronous e-learning
Asynchronous education process is that the educational process between the teacher and the student are indirect and is controlled with a time limit, at different periods; for example self-education via the Internet or compact disks (CD-ROM), forums and e-mail.

Universities can be classified based on the applied e-learning to three main categories [7]:
a) Traditional universities: which are represented by the current situation for most of the universities in the Arab world, which depends on the actual attendance for students and a professor face to face in the actual halls and laboratories, and it do not allow absence.
b) Open Universities: the universities that offer its educational program through non-binding lectures, where each course professor regarded as a course supervisor and students can access and meet him. The first officially open University is the British Open University in 1969, in the Arab world Al-Quds Open University in Palestine in 1991 and the Open University of Sudan in 2003.
c) Virtual universities: This type of university does not have a real buildings, and all the educational services offered by the Internet, for example Canada Virtual university, AVU and the Arab world the Syrian Virtual University.

Some traditional universities have begun to integrate and use of open education program or virtual learning alongside traditional education program, this type of universities called "dual-class University".

E-learning objectives [8]:
The e-learning has many goals, including the following:
1) Changing the traditional concept of education to keep up with scientific development and cognitive revolution.
2) Increasing the effectiveness of both the teacher and the learner.
3) Overcoming the problem of big number of students in the classroom.
4) Compensate the lack of some qualified scientific personnel.
5) Expanding the scope of the educational process taking into account individual differences among learners.
6) Support the professional development for teachers and administrative leaders.
7) Take benefits from the knowledge available on the internet.
8) Use of e-mail services in the world.
9) Consolidation the skills of self-education and encourage continuing education.

The importance of e-learning [5]

1) Provide stress.
2) Saving Money.
3) The expansion of knowledge over a wider area.
4) Creates equality in education.
5) Applying modern educational theories.
6) Applying quality standards.
7) Applying e-government system.
8) Harness technology.
9) Introducing development and accompanying.

The advantages of e-learning [9]:
We find that the most important factors that contribute to the increased use of e-learning technology all over the world are:
1) The continuing needof education and training because of the development in the various fields of knowledge.
2) The Urgent need for education and training at the right time and the right place around the clock.
3) The Economic feasibility of the use of e-learning technology that contributes to the reduction of education and training costs for staff and students scattered around the world.

The pros of e-learning are shown in the following points [10]:
1) Save time for the learners, because they can choose the right time for them to learn without restrictions.
2) Providing the right place for the learner where he feels comfortable in it without the intervention.
3) Access to many important and influential factors such as [sound - text - Color - video - Line type - view and other] Therefore, the learner uses most of his senses in this educational process.
4) Do not care about the age of the learner,it fits for adult education, staff and children of those circumstances do not allow them to co-exist in educational institutions and universities in the specific times.
5) Many enthusiasts' education scientists for this kind of education believe that the material cost is much less than the cost of traditional one.
6) Allows the learner to get more information as long as he/she has Acceptance and readiness at variance to what is available in traditional education.

So it can extract some advantages of e-learning through various educational references, we find that it is characterized by the following recipes [1]:
1) Effectiveness: Remembering of information depends on the all sensory capabilities, while the response depends on the features of each person and his motivation to learn. Therefore the transfer method transmitters must provide possibility of repetition by different methods of sensuality to the learner, a possibility that is rarely offered by traditional educational methods; and the opportunity for learners to interact electronically with each other on the one hand and between them and the teacher on the other hand by means of e-mail, discussion boards and chat rooms ... etc.
2) less expensive: immediate e-learning service through online storage and compact discs, DVDs and other discomfort provides move to distant learning center cost to the learner, which means it will save the cost of travel and earn more time.

3) Ease of access to the curriculum: e-learning curriculum is available around the clock, allowing the learner follow-up online at any time he/she deems appropriate, and overcome the limitations of space and time in the educational process.
4) Strengthens Post: Theories of enhanced sharing learning emphasize that human interaction is a vital element in the learning process. It should be noted that synchronous e-learning provides such participation through virtual education classes, chat rooms, e-mails and meetings by video.
5) Integration: e-learning provides knowledge and educational resources to the learner in an integrated manner, through the assessment tools that allow analysis of the learner's knowledge and progress achieved.
6) Flexibility: The learner can work with a large group of teachers online around the world, at any time in line with its agenda. And thus he can learn at home, workplace or anywhere allows him the use of the Internet and that at any time. Also teachers can use a variety of different methods more accurate and fair in evaluating the performance of the learners.
7) considerate the learner situation: e-learning Provides to the learner to choose the speed of their choice in learning, which means that he can speed up the learning process or slow them down as needed. It also allows him to choose content and tools that fit the interests, needs and the level of skills, especially as it involves a number of varied methods to transfer knowledge to different learners based teaching methods, which makes it more effective for some of them, and thus works to enable the student to receive a scientific article style commensurate with his abilities through visual, audio or read … etc. Taking into account individual differences among learners and enable them to complete the learning processes in suitable environments for them, to progress according to their own abilities.

E-learning Barriers [11]

E-learning, like other ways of Education has Barriers and impeding obstacles, these obstacles are:

1. Develop of the criteria: -
E-Learning is facing difficulties may quenched it luster and impede its quickly spread and the most important of these obstacles the issue of standards, what are the criteria and what makes it necessary? If we look at some of the educational curricula and courses in universities or educational institutions, we find that they need to make adjustments and updates as a result of many different developments each year, but each month sometimes. If the university has invested in the purchase of educational materials in the form of books or compact discs (CD), you'll find they are unable to modify anything in what these books and disks were not rewritable which is complicated even if it is possible.

2. Systems and compensatory incentives:
It's one of the requirements that motivate and encourage students to e-learning, where e-learning is still suffering from a lack of clarity of the regulations and the ways and methods that e-learning is clearly, and that no decision be taken on the

issue of incentives for education environment is one of the obstacles that hinder the effectiveness of e-learning.

3. Secured and effective delivery for educational environment:
- The lack of support and provided cooperation to the nature of effective teaching.
- The lack of standards for the development and operation of an effective and independent program.
- The lack of incentives for the development of content.

4. Methodology: -
Technical decisions are often taken by technicians relying on their use and their personal experiences, and often not taken into account the interests of the user. When it comes to education, then we must develop a plan.

5. Privacy and confidentiality: -
The attacks occurred on the main sites in the Internet affected the teachers and educators, and put in their minds many questions about the impact on e-learning in the future, so the hacking of content and examination is one of the most important obstacles to e-learning.

6. Obstacles facing e-learning in terms of learners:
- The difficulty of the transition from a traditional method of learning to modern one.
- Difficulty to applying it in some of the articles.

7. Obstacles facing e-learning in terms of teachers:
- The difficulty of dealing with learners which are not used or trained in self-education.
- Difficulty of making sure that the student is enabling to use of computer skill.
- The complexity of some courses.
- The initial financial cost.

8. Constraints faced by breeders in e-learning:

A) Physical obstacles
Despite the prevalence of computers, and Internet coverage, speed and low price.

B) Human obstacles
There is a scarcity of teachers who are fluent in "The Art of e-learning" and that it is wrong to think that all teachers in educational institutions that can contribute to this type of education.

9. There are also some obstacles that can be identified in the following points:
- The extent of the students in response to the new style and their interaction with it.
- Integration with classroom teaching methods immediate control, and make sure that the curriculum is going according to the plan set for it.
- An increased focus on the teacher and notified his personality and its importance for the educational institution, and make sure there is no sense of insignificance and he/she has become something heritage and traditionally.

- Need of continuing to train and support teachers and administrators in all levels, as this type of education needs to be continuous training according to the technical renewal.
- The need to train the learners on how to educate using the Internet.
- The need to disseminate the contents of a high level of quality and because global competition.
- Edit all the old rules that hamper innovation and the development of new ways to promote innovation in every time and place to provide education and to demonstrate efficiency and innocence.

4. E-learning components [5]

The traditional education trilogy "learning components teacher, student, and environment" has a new role in e-learning. Studies and research, which focused on the activation of e-learning mechanisms indicates that there is a set of tools for the implementation of the e-learning system successfully, starting from the adoption of the idea stage through implementation and development right up to the evaluation, re-development and improvement, each of these components has a number of the ramifications, and these components are:

1) Management Component: it includes a number of pillars, including the Department of Finance, the Admission and Registration Department, alumni affairs department, the Department of Student Services, Personnel Department, the Department of e-learning, and recognition of the quality Department.
2) Information and Communication Technologies Component: includes a number of pillars: infrastructure, hardware, networking and communications, software (content design, web design, etc.), set standards, technical support.
3) Education Component: includes a number of foundations, including the different cultures, different time, people with special needs, the digital gap (who owns and who does not), network etiquette, cases of fraud and hacking of content and exams, intellectual property rights.
4) Evaluation Component: includes a number of foundations including the content and design Evaluation, e-learning environment Evaluation, learners Evaluation.

The impact of e-learning on the educational process[1]:
The use of the Internet as one of the most important means of e-learning would put both students and teachers in front ofan importantand unusual fact, that the Internet will provide them with the necessary information of all kinds through the click of a button saving them trouble keeping course material by heart and why they should do that at a time when information became available at any time? Areboth students and teachers can focus on logical thinking and analysis, rather than to rely on the preservation and collection of information? Based on these data the main changes in the field of education can be summarized as follows:

1) All educational institutions will become closely linked and equipped with necessary technologies to the extent that they can keep pace with modern techniques.
2) Teachers can develop educational skills to keep pace with skills related to the use of modern computer technology

and to the extent that they can continue to career advancement in the field of education.

3) Techniques are available to students and computers for basic educational studies at an early stage of their lives[9].

4) Focusingwill turn in the classroom to the analysis and logical thinking and the development of knowledge rather than incurring hardship conservation.

5) Teachers will be better able to help their students to absorb incurable concepts and Achievement and to meet the necessary needs of students. considering that e-learning works to enhance the learning process and improve the achievement levels for all students.

6) There will be no need to choose a textbook with a wide variety of books available through direct and indirect contact, where the Internet offers a wealth of information, which limits the ability of teachers to determine certain "textbook".

7) Changing most of the printed books to e-books saved in the electronic devices connected to the Internet so that e-books easily updated and revised, while printed papers and printed resources wearing out over time to become at some point of time useless because it contain old information.

8) Reduce educational expenses significantly in terms of volume and quality of educational resources, for not having the requirements of such large buildings for libraries and to avoid massive losses resulting from printed materials damaged and scientific journals and many other services that there will be no need for them except the cost of the related technologies.

9) Release Education of time and space constraints and dependence on lectures and conservation,the restrictions that limited the education between the walls of the classroom for a long time, but now with the possibility of the establishment of electronic conferences and provide a lot of other advanced communication means, beside the embodiment of the logical thinking concept   and analysis, rather than conservation has shifted Education to a benefit or service supposed to be available to everyone at any time.

5. E-learning Environment [6]

In fact, the e-learning depends on the use of electronic media to contact, receive information, acquisition of skills and the interaction between the student and the teacher like what in e-courses, e-library, e-book…etc. educational environment for e-learning consists of the following:

1. Teacher: This requires the availability of the following characteristics: -
- The ability to use modern teaching and learning techniques.
- Find out the use of computers, including the Internet and e-mail.

2. Learner: This requires the availability of the following characteristics: -
- Self-learning skills.
- Find out the use of computers, including the Internet and e-mail.

3. The relationship between the teacher and the learner electronically: -
The relationship between the teacher and the learner in a traditional classroom Characterized as face to face, where the teachers identifies the objectives and content of the lesson, using the appropriate method of teaching with students and discuss with them, he choose and design teaching aids, mange the classroom and identifies the rules. In fact, the teacher has a key role in the management of the learning process and student support.

Given that the student will not change its kind when we change the technology or the tool which he used to educate, but that is changing is how he educated, for this the most appropriate was not to change the learner, a student or electronic companion here is indicative and intelligent educational program, real student interacts with it, instead of choosing real student he can choose the virtual student, shared with him in reaching solutions to problems, and to exchange roles with him.As there is e- student, also there is also e-leader.

E-Teacher who interacts with the learner electronically, and assume the burden of educational supervision and the proper functioning of education, this teacher will be within the institution or in his/her home, and often this teacher is not linked specifically to work in advance, but be dealing with the educational institution by the number of courses Supervised by him/her, and the number of students it has.

In fact, we find e-learning helps the learner in the followings:
- The possibility of learning at any time, any place for universities and colleges that offer this type of education.
- Help in solving the problem of overcrowded lecture halls.
- Expand the opportunities associated with the acceptance of the limited school places.

Roles change in the new era of knowledge [5].

The information and communications technology revolution in the world, requires us to act quickly and effectively, to catch up with this revolution, for this we must change the education goal from education for all to quality education and excellence for all. And add the following new targets:
- The use of ICT in educational institutions and homes for all learners and teachers.
- The use of ICT by all teachers effectively to help their learners to achieve high academic levels.
- The acquisition of information technology and communications skills for all learners.
- Scientific research and evaluation undertake duty to improve the next generation of skills in teaching and learning applications.

To achieve these objectives it requires a change in the Triple traditional education (the teacher, the student, the educational institution) and turn it into a more modern and contemporary educational process.

Firstly: The teacher
expansion of thought and skills of the teacher, and therefore the explanation methods by providing him with training programs in technology, education and modern methods of explanation, which supports the spread of information

technology and using it properly in the development of education system as a whole.

Characteristics and specifications of the teacher:

- Unique and atypical teacher.
- Considered the disagreeing with others rich source of information.
- Facilitator and facilitators.
- Practitioner of critical thinking to learn.
- Able to comprehensive and lasting self-learning.

New roles for the teacher:

- Supportive and critic friend.
- The peerless leader.
- Creative and innovative.
- Interlocutor and discussant.
- Model and adviser.
- The observer and the rudder.

Secondly: The learner

The traditional role of learner changed from the recipient and participant limited participation it boils down to his role in memorizing of information received in the curricula and textbooks approved and stored in memory, and summoned at the exam time, to the positive role of learner

- An active and creatively participant.
- Discuss and interviews.
- Boldly presents his ideas and freedom.
- Criticize present ideas and presents alternative ideas.
- Able to interact with modern technology.
- Able to use a computer with great skill.
- Can take a self-decision.
- Acquire thinking and creativity skills and employed.
- Contribute to the knowledge production and develop it.

Thirdly: The educational institution

We need a new educational institution linked to people's lives and organically connected to the community, "school without walls, as they say," contribute to:

- Lay the base for continuous development of the curriculum.
- Educational programs designed in the form of an electronic laser discs or Internet sites.
- Create the necessary networks to link between the school and the teachers, parents, students and community.

6. Conclusion

We conclude from this paper that e-learning is one of the most effective means, especially after we realized that learning is no longer is a stage in human life, it became a continuous and sustained process, and is essential to the individual himself and for the nation's most comprehensive since the individual has become of us need more to learn and works then returns to the learning and works, and so on, a computer provides the possibility of continuous learning as well as the many features and characteristics that make the computer an essential element of the learning elements, and we find through mutual interaction property the Computer achieves individual attention to students, which means

achieving a cornerstone of the educational process, also the modern theories in education and philosophy supported the direction of learning through exploration, and the computer provides the possibility of exploration and by the desire or curiosity, and that help to increase academic achievement among students and increase the effectiveness of teaching and learning. a lot of studies have shown that the computer is the power of a huge spur.also many studies found the overall results to the experimental groups studied using computer has outperformed the control groups that did not use Computer learning,also an Arab studies found the same results.

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