

The Reality of E- Learning at the Mutah University from the Viewpoint of Students

Dr. Adil Akram Salloum
College of Business Management, Muta'h University

Emad Ali kasasbeh
School of Business Innovation and Technopreneurship, University Malaysia Perlis

Ahmad Saleh Al-Sukkar
College of Business- Department of Management Information Systems, Amman Arab University

Abstract

This study aimed to identify the reality of e-learning at Mutah University from the perspective of students. The researchers adopted descriptive and analytical method to highlight the concepts related to the subject of study. Moreover, analysis and extrapolation of the results have resorted researchers to choose a simple random sample which are in total (335) from the number of students of science and humanity college in the fourth year. To achieve the objectives ,the study designed a questionnaire included (22) paragraphs to gather preliminary information from the study sample in order to collect and analyze data and test hypotheses. However, the study found that the arithmetic mean of the estimates of the study sample (students) on the axes of the questionnaire (use; positives, negatives; obstacles) was as high as the study showed in the presence of statistically significant differences between the mean scores of students around the axis of Use and the positives and negatives depending on the variable specialization as results of the study showed a lack of statistically significant differences between the mean scores of students around the axis of obstacles.

Introduction

In the light of technical progress with communications revolution and development of information systems, the administrative activities are took gradually transformed from ordinary activities to electronic activities, in order to benefit from the advantages of these new activities in the provision of administrative services, where it became the most important attributes of contemporary organizations that their activities are based on informatics of knowledge, in addition to, these digital or electronic organizations offer their services without relying on paper activities, this transformation is one of the aspects that imposed by the technical globalization and its challenges. Moreover, this led from one way or another to change the structure of processes, transactions, procedures, skills, contexts of decision-making, and performance standards and forms, in addition , the extension of service sometimes outside the official times.

One of these activities is introducing the modern means of teaching and learning where the most important of mean is e-learning, as the computers technology plays a major role in the reform of the educational process, also the development of educational software using computer considered as important essentially in the development strategy of the educational process to reach the maximum possible limits of efficiency, effectiveness and flexibility in order to support individual and self-learning student, thus allowing him/her to progress in the learning process by its speed and its own needs, where this technology added a new dimension to mechanism computers, and gave its roles and activities that were not presented before.

The e-learning is considered as a positive way to help the learner to make an interaction through what is included in the software that contains tools required from the learner to do a variety of activities and tasks such as, answering specific questions, and to express an opinion in some case, or to see the new in content lesson and other interactive tasks and activities that are excessive and varied.

Learning Management Systems (LMS) and Learning Content Management System (LCMS) use e-learning field in educational institutions .However, training learners in educational institution using e-learning is considered as catalyst element for both the teacher and the learner to use the internet in the educational process, these systems have been designed to help teachers use the internet in teaching and communicating with learners in easy way without the need for a deep knowledge of programming techniques, it also provided for the learner various and multi scientific materials that can be obtained from a single location, also, these systems provide a self-learning environment that enables the learner to interact positively with the scientific material.

The enormous development in the means of e-learning, created many education systems; smart (ITSs) which is one of the educational systems that managed by computerized and it is based on artificial intelligence, moreover, it uses Symbolic Logic and Rules in teaching and learning for students to simulate significantly a human teacher.

These systems do not rely only on teaching facts and procedural knowledge, but in addition to this ,

they teach students the thinking skills and problem solving in order to make them highly suitable for the purposes of different education.

The e-Learning activity is considered as one of the manifestations of the application and hiring tools and principles of artificial intelligence technology in the educational process, and works to activate the role of computers in teaching and learning process, to make it dynamically active for a teacher rather than being just a pot encompassing information, in addition to its ability to provide flexible, higher efficiency and wider application areas for educational programs that keep pace with the individual needs of learners.

As well as it is able to simulate a human teacher significantly in his/her behavior and style of education and teaching with student, and modeling his/her learning knowledge and his/her way of thinking in solving and addressing the issues and problems associated with the academic field of specialization, and supplying student in teaching way that individual and high-efficiency based on individual education style one – on – one, through the analysis of procedures performed by the student in order to follow-up his/her scientific progress, correct his/her educational pathways and behavior, and increase the interactive capabilities between the student and the interactive tutorial, through dialogue for the student natural language to respond to his questions and inquiries in various educational content, and generate explanations and clarifications necessary to explain the solutions and products that have been reached.

The theoretical framework for the study

Witnessing the current era in the first decade of the third millennium after of birth tremendous and fast developments in all fields, scientific and technological progress became the ruler and the predominant element .Moreover , the era in which we live now is a new era - the civilization of information era, or the of development of informatics knowledge era as it is called, fired by composition of variables, transformations, developments and the challenges that continue to affect the repercussions in both positive and negative on the contemporary world, in rapidly style, which paved the way for the emergence of a new global society called the Knowledge Society,

These changes and transformations represented the challenge to contemporary education systems in various international communities, and gave them the responsibility of the self -development speed especially after the emergence of many of the innovations and educational concepts that caused a major change in the role of educational institutions, especially after the widespread use of the Internet in teaching and learning in developed countries and the emergence of what is known as "learning environments based on the Internet, (Banan, 1998) so it was logical that education systems respond to technological innovations make radical changes so that they can achieve their goals of a knowledge society, the education has invested those technological innovations developed in parallel fashion in it is means, the benefit from these technologies appeared in educational institutions and in the classroom, however, the establishment of an integrated learning is supported on these techniques, a so-called e-learning, and established integrated learning supported on these techniques, a so-called e-learning.

The current term of E-learning and philosophy does not appear suddenly but appeared and evolved through three generations started since the beginning of the eighties until they reached the current format (Salah al-Din, 2006):

- **The first generation** began in the early eighties: where the E-content Exists on the CDs and the interaction through these CDs is individually between the learner and the teacher with a focus on the role of the learner.
- **The second generation** began with the beginning of the use of the internet where the content deliver ways has evolved to the networked way, and the evolution of them containing a certain limit and has evolved process of interaction and communication from being individual to being a collective, shared by a number of learners with a specific teacher.
- **The third generation** began with the emergence of the concept of e-commerce and e-security in the late nineties of the last century, this synchronization with the rapid development of multimedia technologies, the virtual reality technology and satellite communications, this allowing for the development of the third generation of e-learning, until it reaches to the current concept, which depends on the use of electronic media to deliver and receive information, also gain the skills and the interaction between the learner and the teacher and between the learner and the school and between the school and the teacher.

Furthermore, (Uzunboyly, 2006) sees that the use of modern multimedia technologies with the internet to enhance the quality of learning by facilitating the deal with the sources of knowledge and network services and support cooperation and exchange of information and remote participation.

While (Stahl and Suthers, 2006) found that science is concerned with studying how to enable learners to learn together with the help of computers, or with the help of technology to ensure the improvement of the

learning process and employ collective action so that learners discuss their ideas and put forward their views, allowing the exchange of ideas and information cross-fertilization, and the attention given to the multiple perspectives and different on the subject of learning.

Moreover, (Grove, 2003) pointed out that it is a general term that refers to all forms of electronically supported learning, which includes a range of teaching and learning tools that use of electronic media such as phone, video conferencing, broadcasting via satellite. So that this term was limited to the courses offered by the web line or direct mail, use e-mail and video conferencing, discussion groups and chat rooms and electronic whiteboards on the internet.

It is a way to teach using the communication mechanisms of modern computers, networks, and it is multimedia from voice and image, graphics, search mechanisms, electronic libraries and the internet, whether it was after or in a classroom with a view to using the technology of all kinds in the delivery of information to the learner in the shortest time with less effort, and the largest possible benefit (Marc, 2006).

The importance of e-learning

The e-learning has the ability to meet the needs of the educated individual so that learning individuals according to their self-speed, and the provision of training costs (accommodation, travel, books) and improves the retention of information and access to information in a timely manner and the speed of updating the information in the network and standardize the content and information for all users and to improve cooperation and interactive among students, and reduces the feeling embarrassed in front of his fellow students at the foul (Codone, 2001).

It also increases the effectiveness of learning to a large degree, reduces the time needed for training, reduces the cost of training and provides an interactive learning environment and allows the learner to study at the time and place of he or she prefers (Guckel, K. & Zimmer, 2002).

In addition, it allows work interviews and discussions to live on the network, and provides updated information and is consistent with the needs of learners, and provides simulation programs and motion pictures, events and interactive exercises and practical applications (Al-Karam & Al-Ail, 2001).

Moreover, E-education considered the reduced costs of the most advantages provided by the task, according to one study that refer to reduce costs by 50-70% when it was changed to traditional classroom teaching methods used Hall-mail (Urduan & Wagger, 2000).

It also lies its importance as seeking to change the traditional concept of education to keep pace with scientific development and knowledge revolution and worked to increase the effectiveness of both the teacher and the learner and to overcome the problems of numbers many in the classroom and make up the shortfall in some scientific personnel qualified in addition to strengthening the strengthening of self-learning skills and encourage lifelong learning.

Requirements of E-learning systems application

The term of e-learning appeared because the need for social interaction of learners. Where (Downes, 2005) explained that the characteristic social and participatory is characteristic of e-learning software as it is used by different or variant learners working in the same subject of learning through computers branching from a main office or through different networks.

Also, (Strijbos and Martens, 2004,) argued that the nature of e-learning allows learners from around the world to participate with each other through social interaction associated with this type of learning, this requires from teachers to raise the motivation of learners and good planning of the curriculum and teaching methods, where the participation should be online and directly interactive that helps learners to build new knowledge and gives the opportunity to inquire their questions and learn from each other by providing what the learners have learned.

In the opinion of (Karim and Hashim, 2004:52) even the educational institutions have been able to use the principles, fundamentals and e-learning tools in classrooms must pass in three entrances:

- The use of technology as part of a supplementary or assistant in a traditional classroom that based on direct education (face to face).
- Integration activities on the internet and that using on-line (On line) in providing traditional classroom in order to enhance the educational process.
- Providing semesters or classroom totally based on information technology and the Internet on-line (On line).

Problem of the study

Higher education is facing many challenges as a result of social, economic, scientific and technological shifts and changes that have taken place at the international level and the Arab world in general and on the national level. Moreover, it is necessary to keep pace with these changes and the changes that have taken place on the

contemporary societies in order to respond to them preparedness and response by thinking methods and modern patterns to help universities which follow the traditional system to solve some of their problems as the input of e-learning style to the educational system, which is considered one of the most areas experiencing rapid growth as a result of scientific and technical developments. However, the increasing demand for the integration of technology in education in order to build a generation capable of dealing with the vocabulary of the new era to counter the recent developments has led to an increase in the burden on educational institutions, and giving rise to the need to use information and communication technology in the educational process. To do so, it is necessary to study the actual reality of these institutions to propose the best ways to develop e-learning and this new approach faces many challenges and obstacles, and there are two sides for these challenges: the technological readiness side which is associated with the information and communications, and the executive readiness side which is associated with user that requires the readiness of universities and educational organizations, teachers, students and instructors to use e-learning. Proceeding from the leading position of the e-learning researchers to recognize the reality of e-learning at the University of Mutah from the perspective of students, an emphasis on the role of technology should be taken in order to employ it in the educational process, which encourages the researchers to take into consideration the lack of studies on this subject in Jordan.

Thus can be identified a problem in the study, the main question as follows: *What is the reality of e-learning at the University of Mutah from the viewpoint of the students?* Stems from this question the following sub-questions:

1. What is the extent of the use of e-learning at the University of Mutah from the viewpoint of the students?
2. What are the advantages of e-learning at the University of Mutah from the viewpoint of the students?
3. What are the disadvantages of e-learning at the University of Mutah from the viewpoint of the students?
4. What are the obstacles to e-learning at the University of Mutah from the viewpoint of the students?

Objectives of the study

1. Identify the extent of the use of students at the University of Mutah e-learning.
2. Identify the advantages of e-learning at the University of Mutah from the perspective of students.
3. Recognize the disadvantages of e-learning at the University of Mutah from the perspective of students.
4. Identify the obstacles to e-learning at the University of Mutah from the perspective of students.
5. Making recommendations to the decision-makers at the University of Mutah based on the results of the study may help in the development of e-learning.

The importance of research

This research is trying to recognize the reality of e-learning at the University of Mutah from the perspective of students. However, it provides feedback to the decision-makers at the University of Mutah being sought for the detection of obstacles and disadvantages which limit the use of this system by standing on the strengths and promotion and diagnose weaknesses and work on getting rid of them to raise the required level of the educational process. Also, this research represents a starting point for other studies in the same field as an addition to the limited studies on the subject of e-learning.

Hypotheses of the study

1. No statistically significant differences in the significance level (0.05) between the average scores of students around the axis to use variable depending on the specialty variables.
2. No statistically significant differences in the significance level (0.05) between the average scores of students around the axis of the advantages variable depending on the specialty variables.
3. No statistically significant differences in the significance level (0.05) between the average scores of students around the axis of the disadvantages variable depending on the specialty variables.
4. No statistically significant differences in the significance level (0.05) between the average scores of students around the axis of the obstacles to the variable depending on specialty variables.

Research methodology

This study adopted a descriptive study and field analytical as a research. At the level of descriptive research According to purpose of this study, where data were collected from two sources. Primary data were collected by using a questionnaire, while secondary data were obtained from previous researches and literature. The questionnaires were distributed directly to the participants selected as a study sample. The distribution and collection process took about 5 - week's period. The questionnaire was prepared in English, and then translated into Arabic language; it is composed of 22 items measuring the independent variables and dependent variable of the study. The respondents indicated the frequency of encountering the situation described by each item using a five-point likert scale which ranges from strongly disagree (1) to strongly agree (5). (335) total of questionnaire were distributed, but (290) were returned, with a response rate up to 85%.

Population and sample

The study population consisted of all students in the fourth year, totaling (2512) spread over 12 faculties. The researchers choose the fourth year student because the students this year have been known to e-learning skills of students more than in previous years as well as the answers to students in the fourth year will be more accurate and objective note that the validity of the study results are highly dependent on the accuracy of the answers. The sample of the study researchers resorted to the selection of a sample; using simple random sample which are in total (335), (Sekaran & Bougie, 2009) the number of students in the fourth year of each college science colleges and humanity as shown in the following table:

Table (1) shows The names of community colleges study

| Number | The names of the colleges | Number of student |
|--------|---------------------------------|-------------------|
| 1 | Faculty of Arts | 123 |
| 2 | Faculty of Science | 216 |
| 3 | Faculty of Engineering | 618 |
| 4 | Faculty of law | 127 |
| 5 | Faculty Rights | 89 |
| 6 | Faculty of Educational Sciences | 141 |
| 7 | College of Agriculture | 115 |
| 8 | College Sports | 106 |
| 9 | College of Nursing | 31 |
| 10 | School of Medicine | 264 |
| 11 | Faculty of Social Sciences | 192 |
| 12 | Faculty of Management | 490 |
| Total | | 2512 |

Cranach's alpha test was used to calculate reliability coefficients. Cranach's alpha measures the average of measurable items and their correlations, and if the result is generally above 0.60, it is considered to be reliable. Cranach's alpha values varied (0.74, Use) and (0.88, the pros) and (0.71, the negatives) and (0.73, obstacles) for total values (0.76), which means that the reliability results of the current study are acceptable.

Data Analysis Technique

The researchers used SPSS software to test the study's hypotheses by using different statistical techniques, these techniques are:

1. Cranach's alpha: used to test the reliability of the scale.
2. Means and standard deviations for the independent variables, to explore the existence and importance of every variable according to the sample of the study.
3. Use test (t-test).

The answer to the first question: To what extent the use of e learning at the University of Mutah from the viewpoint of the students?

Table (2) averages and percentages, estimates of the study sample (students) on the axis that Use

| The phrase | Mean | Standard deviation | Rank |
|---|------|--------------------|------|
| Is available at the college a sufficient number of laboratories and computers | 3.86 | 0.81 | 2 |
| I have the ability to deal with basic computer programs such as (word, Excel, Power point and ACCESS easily | 3.83 | 1.18 | 3 |
| I have the ability to use the Internet and e-mail | 3.82 | 1.20 | 4 |
| I can search in electronic libraries in topics related to the study | 3.90 | 1.23 | 1 |
| Use e-mail to communicate with teachers and students | 3.79 | 1.21 | 6 |
| I can build Favorites on Web sites in an orderly manner | 3.70 | .061 | 7 |
| I have the ability to manage electronic files (receive, open, delete, save). | 3.81 | .051 | 5 |
| The arithmetic mean and the standard deviation of the year | 3.82 | 1.11 | 2 |

Evident from the results listed in Table (2) that all the paragraphs related to the use axis was high, with an mean of the year (3.82), the standard deviation was 1.11, This result reflects the high level of use of e-learning at the University of Mutah from the perspective of students. Ranged among the responses of sample study between the center (3.90) up to a maximum on the paragraph that states "I can search in electronic libraries in topics related to the study," and the center (3.70) minimum on the paragraph, which states "I can build

Favorites on Web sites in an orderly manner".

Table (3) averages and percentages, estimates of the study sample (students) on the axis of the pros

| The phrase | Mean | Standard deviation | Rank |
|--|-------------|--------------------|----------|
| Contributes to the activation of active learning and develop IT skills | 3.84 | 1.13 | 1 |
| Helps to increase students' motivation to study that raising the level of achievement among students | 3.79 | 1.06 | 2 |
| E-learning contributes to the development of critical and creative thinking. | 3.76 | 1.08 | 4 |
| the e-learning take into account the individual differences among students | 3.69 | .970 | 5 |
| E-learning works to create an truth environment to learn | 3.77 | .071 | 3 |
| The arithmetic mean and the standard deviation of the year | 3.77 | 1.06 | 3 |

Evident from the results listed in Table (3) that all the paragraphs relating to the use axis was high, with an arithmetic mean of the year (3.77), and the standard deviation 1.06, and this result reflect the high level of the positives of e-learning at the University of Mutah from the perspective of students. The means ranged among the responses of sample study between the center (3.84) up to a maximum on the paragraph, which states that "contributes to the activation of active learning and develop IT skills", and the center (3.69) minimum on the paragraph, which states, "take into account the e-learning individual differences among students."

Table (4) means and percentages that estimates of the study sample(students) on the axis of the negatives

| The phrase | Mean | Standard deviation | Rank |
|--|-------------|--------------------|----------|
| The difficulty of applying the methods and tools appropriate calendar | 3.91 | 1.11 | 1 |
| Impedes the crashes of the educational process devices | 3.89 | 1.09 | 2 |
| The e-learning increases the burden of students | 3.87 | 1.03 | 4 |
| The e-learning lack to human relationships between teacher and student | 3.82 | 1.01 | 5 |
| E-learning focuses on the hearing and sight senses | 3.87 | .021 | 4 |
| The arithmetic mean and the standard deviation of the year | 3.88 | 1.05 | 3 |

Evident from the results listed in Table (4) that all the paragraphs relating to use the axis negatives, was high, with an arithmetic mean of the year (3.88), and the standard deviation was 1.05, this result reflect the high level of the negatives of e-learning at the University of Mutah from the perspective of students. The means ranged among the responses of sample study between the center (3.91) up to a maximum on the paragraph that states that, "the difficulty of applying the methods and tools appropriate calendar," and the center (3.82) minimum on the paragraph which states "the e-learning lack to human relationships between teacher and student."

Table (5) averages and percentages, estimates of the study sample (students)on the axis of obstacles

| The phrase | Mean | Standard deviation | Rank |
|---|-------------|--------------------|----------|
| the teachers have inexperience of e-learning techniques | 3.86 | 0.85 | 3 |
| E-learning takes a lot of time and effort | 3.83 | 1.23 | 4 |
| Neglect of computers maintenance continuously in college | 3.89 | 1.30 | 1 |
| The weakness of students' skills in Internet and Computer | 3.81 | 1.23 | 5 |
| Classrooms are not equipped for the application of e-learning | 3.79 | 1.12 | 6 |
| The arithmetic mean and the standard deviation of the year | 3.88 | 1.15 | 2 |

Evident from the results listed in Table (5) that all the paragraphs relating to the axis of obstacles, was high, with an arithmetic mean of the year (3.88), and the standard deviation was 1.15, This result reflects the high level of the negatives of e-learning at the University of Mutah from the perspective of students. The means ranged among the responses of the study sample between the center (3.91) up to a maximum on the paragraph, which states that "the difficulty of applying the methods and tools appropriate calendar," and the center (3.82) minimum on the paragraph which states "lack of e-learning to human relationships between teacher and student".

Test hypotheses

Test hypotheses of the study: to achieve the objectives of the study and to answer the questions, in this section the researchers have tested the hypotheses of the study focused on the task of test the acceptance or rejection of hypotheses using the t test Steodan according to the order of the hypotheses is as shown in the following table:

Table (6) test results for T. Steodan significance of differences between the mean scores of students on the main variable resolution by Specialization

| Axis | Specialization | Mean | Standard error | T Value | The significance level | Decision |
|----------------------|----------------|---------------|----------------|--------------|------------------------|-------------------------------|
| Axis of Use | scientific | 85.665 | 6.430 | 3.860 | 0.01 | Statistically significant |
| | Literary | 76.621 | 5.981 | | | |
| Positives | Scientific | 89.598 | 7.552 | 2.899 | 0.02 | Statistically significant |
| | Literary | 65.634 | 5.787 | | | |
| Negatives | Scientific | 62.660 | 8.400 | 2.628 | 0.000 | Statistically significant |
| | Literary | 62.656 | 7.138 | | | |
| The obstacles | Scientific | 71.613 | 26.204 | 0.107 | 0.914 | Not statistically significant |
| | Literary | 59.413 | 22.658 | | | |

Table (6) shows that the value of T has reached on the axis of use of E learning by students, depending on the specialization variable (3.860) at the level of significance (0.01), which is statistically significant at the level of significance (0.05), which indicates the presence of statistically significant differences between the average scores on the axis of a group to use for the benefit of specialization with an average top as we see for the benefit of scientific specialization.

According to the value of T has reached on the positives axis of E-learning by students, depending on the variable specialization (2.899) at the level of significance (0.02) which is statistically significant at the level of significance (0.05), which indicates the presence of statistically significant differences between the average scores on the positives axis in favor of a group of specialization Top of the medium which, as we see in favor of specialization Scientific.

In addition, the value of T has reached the negative axis of E-learning by students, depending on the specialization variable (2.628) at the level of significance (0.02) which is statistically significant at the level of significance (0.05), which indicates the presence of statistically significant differences between the average scores on the negative axis in favor of a group of specialization with upper middle They also see the benefit of scientific specialization.

Moreover, the value of T has reached the obstacles axis of E-learning by students, depending on the specialization variable (0.107) at the level of significance (0.02) which is not statistically significant at the level of significance (0.05), not indicates the presence of statistically significant differences between the average scores on the obstacles axis variable depending on the specialty.

Results of the study

First results concerning the calculation averages and percentages, estimates of the study sample (students) on the axes of the questionnaire:

- Results of the study showed that all the paragraphs relating to the axis of use, was high, with an arithmetic average of the year (3.82), and this result reflects the high level of use of e-learning at the Mutah University from the perspective of students.
- And that all the paragraphs relating to the axis of the positive, was high, with an arithmetic average of the year (3.77), and this result reflects the high level of the positives of e-learning at the Mutah University from the perspective of students.
- And that all the paragraphs relating to the axis of the negatives, was high, with an arithmetic average of the year (3.88), and this result reflects the high level of the negatives of e-learning at the Mutah University from the perspective of students.
- And that all the paragraphs relating to the axis of obstacles, was high, with an arithmetic average of the year (3.88), and this result reflects the high level of the negatives of e-learning at the University of Mutah from the perspective of students.

Secondly, the study results related assumptions:

- The presence of statistically significant differences between the average scores on the axis to use for the benefit of a group of upper middle specialization was in favor of scientific specialization.
- The presence of statistically significant differences between the average scores on the axis of the pros in favor of a group of upper middle specialization was in favor of scientific specialization.

- The presence of statistically significant differences between the average scores on the axis cons in favor of a group of upper middle specialization was in favor of scientific specialization.
- The lack of statistically significant differences between the average scores on the axis of the impediments to the variable depending on specialty.

Recommendations

- the university administration should be adopt the idea of e-learning at the university does not consider it a minor thing.
- Give training courses in e-learning for each of the lecturers and students.
- The application of e-learning at the university in phases so that gradually shift from traditional learning to e-learning.
- Activation material and moral incentives to encourage the professor to use e-learning.
- Created the center of your e-learning at the university.

References

- Tawfik, S (2006).Philosophy of e-learning: intellectual vision proposed for educational excellence, in the Khalil Mustafa Abul-Enein: Origins philosophical thinking and modern scientific breeding, Engineering Publishing, Cairo, 2006, pp. 274.
- Marc, J. Rosenberg, (2001). *E-Learning, strategies for Delivering Knowledge in the Digital Age*. New York: McGraw Hill, pp. 28-29.
- Uzunboylu, Huseyin (2006). A review of two mainline E-learning projects in the European Union. *ETR & D Educational Technology Research and Development*, Vol. 54, No.2, pp. 201-209.
- Monk, David (2005). Using data mining for E-learning decision making. *Electronic Journal of E-learning*, Vol. 3, Issue 1, pp. 1-3. Available Online at: www.ejel.org/volume-3/v3-i1/v3-i1-art5-monk.pdf.
- Bannan-Ritland, Brenda; Harvey, Douglas M. and Milheim, William D. (1998): A general Framework for the Development of web-based Instruction. *Educational Media International*, Vol. 35, No. 2, pp.77-81.
- Undan,T.,& Waggen,C. ,(2000). "*Corporate E-learning: Exploring a New Frontier*", W. R. Hambrecht & Co.. digitalpipe.com/pdf/dp/white_papers/e_learning/corporate_elearning_H_q.pdf
- Guckel , K. & Ziemer, Z. (2002),“E- learning Seminar: The Training of Cross –Cultural Competence and Skills”, Univeratiy Hlidesheim
- Al- Karam, A. M. & Al- Ali, N. M.(2001). E- learning: the new breed of education in Billeh, V. & Ezzat, A.. (Eds.), *Education development through utilization of technology*: UNESCO Regional Office for Education in the Arab States(pp. 49-63).
- An E-Learning Primer . (n.d.). http://faculty.mercer.edu/codone_s/. Retrieved June 10, 2014, from http://faculty.mercer.edu/codone_s/elearningprimer.PDF
- Grove, Andy (2003), “E-Learning”, Retrieved, March 22, 2004, Internet Recourse (website) :<http://www.Cognitivedesignsolutions.com/ELearning/E-Learning>.
- Stephen Downes. (n.d.). E-Learning 2.0 ~ Stephen's Web. Retrieved July 14, 2014, from <http://www.downes.ca/post/31741>
- Stahl, G., Koschmann, T., & Suthers, D. (2006). Computer-supported collaborative learning: An historical perspective. In R. K. Sawyer (Ed.), *Cambridge handbook of the learning sciences* , 409-426. Cambridge, UK: Cambridge University Press.