



# University of HUDDERSFIELD

## University of Huddersfield Repository

Kenan, T., Pislaru, Crinela and Elzawi, A.

Analysing the effectiveness of e-learning based on national and international cultures and approaches to pedagogy

### Original Citation

Kenan, T., Pislaru, Crinela and Elzawi, A. (2012) *Analysing the effectiveness of e-learning based on national and international cultures and approaches to pedagogy*. In: 17th UKAIS Conference on Information Systems, 2012, 27 - 28 March 2012, New College, Oxford University. (Unpublished)

This version is available at <http://eprints.hud.ac.uk/id/eprint/13669/>

The University Repository is a digital collection of the research output of the University, available on Open Access. Copyright and Moral Rights for the items on this site are retained by the individual author and/or other copyright owners. Users may access full items free of charge; copies of full text items generally can be reproduced, displayed or performed and given to third parties in any format or medium for personal research or study, educational or not-for-profit purposes without prior permission or charge, provided:

- The authors, title and full bibliographic details is credited in any copy;
- A hyperlink and/or URL is included for the original metadata page; and
- The content is not changed in any way.

For more information, including our policy and submission procedure, please contact the Repository Team at: [E.mailbox@hud.ac.uk](mailto:E.mailbox@hud.ac.uk).

<http://eprints.hud.ac.uk/>

# Analysing the effectiveness of e-learning based on national and international cultures and approaches to pedagogy

T. Kenan, C. Pislaru, A. Elzawi

University of Huddersfield

School of Computing and Engineering, Queensgate, Huddersfield HD1 3DH, United Kingdom

Tel.: +44 1484 472934, email: ThurayaKenan@hud.ac.uk & kenancorner@yahoo.co.uk

## Abstract:

This paper presents the results of several studies looking at the influence of national and international cultures and approaches to pedagogy on the effectiveness of designing, implementing and using e-learning systems and technology in Higher Education institutions. The authors have developed a questionnaire, which was completed by mature Libyan students enrolled for PhD studies in UK who also are full-time lecturers at the Universities of Tripoli, Garyounis, Aljabal-Algharbi and El-zawia. The quantitative and qualitative analysis of the answers show several problems linked to the use of e-learning and ICT in Libyan universities.

The paper also contains the results of a study about using technology in teaching at the University of Huddersfield, UK. So a comparison is made between the perceptions of Libyan and English lecturers about teaching with technology in HE. It is obvious that the national and international cultures and approaches to pedagogy play an important role in using effectively e-learning systems and technology in Higher Education institutions. Several recommendations about implementing successfully e-learning and ICT in Libyan Universities are made by taking into account that institutional, pedagogical and technological contexts of product implementation have a similar influence as national and international cultures and approaches to pedagogy.

**Keywords:** *e-learning; ICT infrastructure; national and international cultures; pedagogy*

## Introduction:

Libya has a good rate in the literacy of the Arab world, and the United Nation's Human Development Index. Libya keeps at the top of all African countries not just in the geographic place but also in the strategic place. Libya has always been keen to ensure access to appropriate education for all members of the society, males and females. The government system plans to improve and develop ICT infrastructure in Libya and it seeks to develop and renovate the entire educational process, including the development of curricula and updating its scientific content; adopting ICT in education including higher education is an essential factor in its overall development plans.

Al-badree (2006) discussed about these pedagogical, technological, and attitudinal challenges. The introduction of E-learning programs in the educational system of a specific country must take into consideration the social and cultural aspects of that society. The social and cultural background of the educators and learners plays a significant role in determining the reasons for the success of E-learning education. This importance differs from one society to another according to the values of the society, and its customs and traditions.

E-learning requires more than just technology to be successful. There is the need for academic professionals well trained in ICT, capable of using E-learning systems and developing learning materials that address the needs of learners. Locally based technicians are also required to maintain equipment and E-learning systems and tools (Kenan et al., 2011)

### 1. E-learning in Libya (as focusing on the National culture)

Libya plays the leading role in the business and the education levels on the African continent by promoting and sponsoring major initiatives and projects, including those in the neighboring countries of Sudan, Chad, Niger, Mali and Niger. However, the challenges of poor and undeveloped infrastructure and a lack of skilled qualified teachers as well as the ICT provision and ICT for teachers present a great challenge to the current reform process. The first systematic study of implementation of E-learning systems in Libya was conducted by Al-badree in 2006, indicated that implementation of E-learning systems in Libya is still in its formative years. The stage of attempting to investigate the E-learning still as case studies because of the deployment of information and communications technologies is not widespread. The educators have been attending training course on E-learning implementation since 2002; then the E-learning was integrated into HE examination process in 2005.

The Libyan Department of Education has emphasized that ICT is creating new ways of learning & training and has the potential to enhance the management and improve the level of education in Libya. The global spread of ICT has enabled the people to use technology into all spheres of life, be it at work, at home, in

schools or in the field of entertainment. This has led to an increased number of learners and trainers in Libyan universities, institutes and colleges delivering distance-learning courses (Al-Teer, 2006).

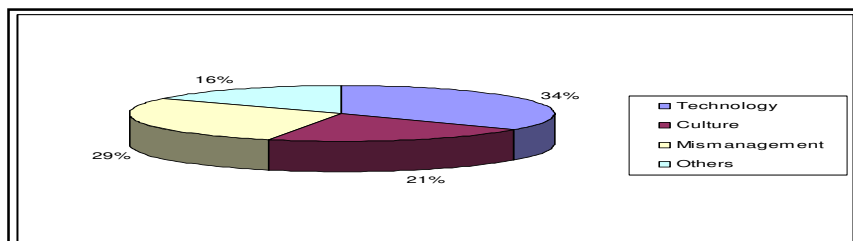
This paper will present the factors that students consider it as barriers to starting, continuing, and completing online learning courses by a quantitative analysis of the answers to a survey questionnaire designed and implemented by Kenan (2009). The survey was presented the opinions of 63 respondents' 12 (19.05%) women, 51 (80.95%) men. The questionnaire was identified the challenges experienced by teachers, students and technical staff in HE institutions in Libya. The questions have been formulated after a preliminary widespread study related to barriers of implementing and using E-learning and ICT in education has been performed. The aim of the questionnaire was to check if the respondents confirm the barriers of using e-learning and ICT in education. Also the respondents were asked to express their personal opinions about other challenges they are facing when dealing with e-learning and ICT.

Libyan universities can benefit from the notion of the active learning, and develop it as E-learning, where students are not only listeners in the class but interact with the teacher and discuss together the knowledge offered by the subject. Both active learning and E-learning encourage students to use various sources of the knowledge and persuade them to integrate and employ information efficiently, so that students are enabled to ask questions and discuss new ideas in teams where information is shared in order to achieving a common goal.

The teaching load in Libyan universities is typically large, the average of teaching hours for academic staff is 24 hours/week, and Libyan universities have not yet established a scientific research tradition (Al-teer, 2006; Kenan, 2009; Al-badree, 2006). Therefore, even Professors find it difficult to find the time for active the researches and educational development. The postgraduate programmes initiated in 1973 in some faculties in Libyan universities included education (Tripoli University) and literature (Garyounis university) (El-Hawat, 2004). The total number of postgraduate students who obtained a Master's degree from the Libyan universities in the different fields is about 3150, and only 40 students obtained a PhD degree from the three major universities (Tripoli, Garyounis and El-zawia Universities) (El-Hawat, 2004). However, 7 or 8 universities now have the resources and academic standing to award PhDs. Many students, especially in science, engineering, finance and management, find it necessary to travel abroad to undertake postgraduate, and there were some 3500 in the academic year 2004/2005 (Said, 2005).

### 1.1 The Challenges to E-learning in Libya:

Artemi (2009) classified the challenges linked to the implementation and use of e-learning and ICT in Libyan institutions to E-learning in Africa into three categories: lack of ICT infrastructure, lack of qualified personnel and resistance to change. Kenan (2009) performed further studies regarding these challenges. She grouped the barriers into four categories based on the conclusions from her study and personal experience as an academic (see Fig 1): Management barriers, Technological barriers, Cultural barriers and other barriers due to other factors such as cost.



**Fig 1: Barriers to E-learning in Libya (Kenan, 2009)**

**A. Technological:** As shown in the Fig (1): the highest percentage is the technology barriers are 34%, which influence in the educational processes concerning by the performance skills, the design skills, limitations linked to bandwidth and security requirements of IT systems. The majority of Libyan learners do not have access to a personal computer or the www. Libya is still way behind other countries in access to personal computers. In 2004 it was estimated that in Libya personal computer density is low, at 3.4 per 100 people, nationally 17% of Libya schools had a computer, but only 12% had one for teaching and learning (MBNQA, 2004). While in other countries, such as the United States and the United Kingdom, the percentage of computers available at secondary school is 73% and 78% respectively Consultation Unit, (2007). However, there are many less developed countries where computer literacy is very high. Also the ability to access the Internet and the number of Internet users differs widely from country to country (Zemsky and Massy, 2004).

**B. Mismanagement:** The percentage of the mismanagement is 29%; there are several reasons confront to implementation and use of E-learning and ICT of Libya such as increased workload for academic staff, development time, delivery time, lack of strategic planning and vision, lack of training in technological developments and lack of support for pedagogical aspects of the developments.

**C. Cultural:** the percentage was 21% from the responses; the cultural barriers exist where a certain culture or group is unable to accept or adopt a new methodology in an important area of their lives, such as religious beliefs or social customs or habits. This attitude has been reinforced by events because, with the arrival of new technologies, jobs that could previously be done with a minimum of education fast disappeared. A key

concept of E-learning is the flexibility of timing for students but certain religions impose a strict daily timetable, and it is also widely known that many universities have schedules are fixed and not at all flexible. May considering social factors or cultural challenges that could act as barriers to E-learning, one has to find the reasons why people or individuals might prefer not to learn in an electronic environment (Kenan, 2009). Some of the reasons such as the fearing of demonstrating a lack of skill or competence, fear of technology, fear of isolation from other students, lack of awareness of the need to develop or the opportunities available, blaming others for inadequate performance rather than taking responsibility for one's own actions, lack of personal confidence, and a general belief that people cannot change. So, fear poses a serious barrier to E-learning, because it is only through exposure and experience that one can master or be comfortable with E-learning (Twatti, 2006).

There is a culture still governing in most research offered by Libyan universities is generally in the form of a 'research exercise' such as dissertations introduced by students to obtain certificates, or by academic staff to complete the academic requirements for job promotion; so the goals of such research have not emerged from the real needs of society. The Libyan Business Executive Survey/Global Competitiveness Report (LBES/GCR) ranks Libya 97th out of 111 countries in university/industry research collaboration (Porter and Yergin, 2006). Despite, some academic staff conducts extra activities such as writing and publishing, for example the text books to increase their income (Elzawi, et al., 2012).

**D. Other issues:** A major barrier to introducing e-learning into Libyan HE institutions is the lack of resources. It is sometimes said that Libyan institutions are spending large amounts of money on e-learning, but these costs are not even part of the institutional IT budget, and that this huge expenditures on IT creates enormous problems for institutions; the expenditures exhausts the income, leaves no money for student bursaries and even demoralizes the staff (Kuhlen, 2006). Such a situation can become a nightmare for the staff and learners involved, and that is the last thing wanted by anybody interested in extending E-learning. With all the hype about E-learning in different organizations, how does one measure the results and the return on investment on E-learning deliveries? Checking the costs and the benefits of the e-learning and ICT systems can do that. On other hand, it is widely agreement among a number of Libyan educators including Twatti (2006), Alhawati, (2005), Al-badree (2006) and Kenan (2009) that students on postgraduate programmes in Libyan universities encountered the following difficulties:

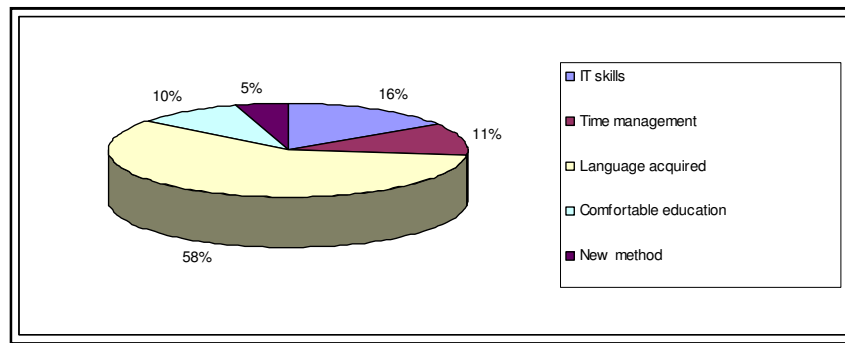
1. Lack of clear philosophy and objectives.
2. Absence of a plan for building the human cadre needed by society.
3. Absence of effective administration.
4. Lack of staff development Libyan HE. It is only recently that structured staff development has become available to academic staff.
5. Lack of a common policy (based on scientific and international criteria) regarding the acceptance of students onto a research degree.
6. Absence of any effective research contribution from academic staff members, due to their high teaching load.
7. Shortage of research activities in science and engineering in Libyan HEIs due the lack of necessary facilities.
8. Ineffectiveness of postgraduate programmes and inability to realise their goals and objectives.
9. Reliance on traditional teaching methods.
10. Reliance on traditional methods for assessing student performance, which do not consider the real readiness, capability and skills of the student.

Hence, responsible bodies in Libyan HEIs should work towards adopting an effective strategic plan that considers and efficiently tackles the issues listed above. Naturally, achieving such a plan will require Libyan HEIs to create a network to enhance the flow of information and provide mutual support and cooperation. E-learning has the potential to be a significant part of the solution for these issues.

### **1.2 The benefits of using e-learning and ICT in Libyan institutions:**

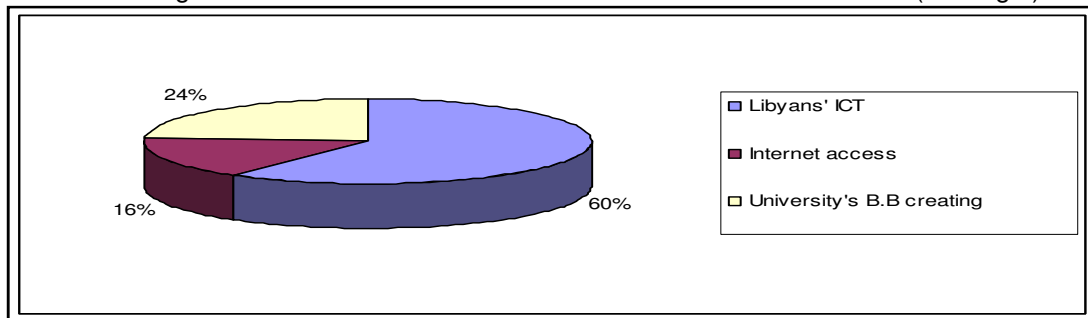
Libyan universities could benefit from the active learning notion, and develop it as E-learning, where students are not only listeners in the class but interact with the teacher and discuss together the knowledge offered by the subject. Both active learning and E-learning encourage students to use various sources of knowledge, and persuades them to integrate and employ information efficiently, so that students are enabled to create questions and discuss new ideas inside working teams where information is shared towards achieving a common goal (Porter and Yergin, 2006).

Kenan (2009) produced a diagram with the expected benefits of using e-learning and ICT in Libyan HEIs by the users (see Fig 2). The diagram was produced on the basis of statistical analysis of the answers to the survey questionnaire when the respondents were restricted to only one response, though there are likely to be many benefits from using E-learning.



**Fig 2: Respondents perceived benefits of using e-learning and ICT (Kenan, 2009)**

The questionnaire contained another question related to the most important factor, which should ensure a successful implementation of E-learning and ICT systems in Libyan HE institutions. The respondents emphasized that having a robust and effective ICT infrastructure is an essential factor (see Fig 3).

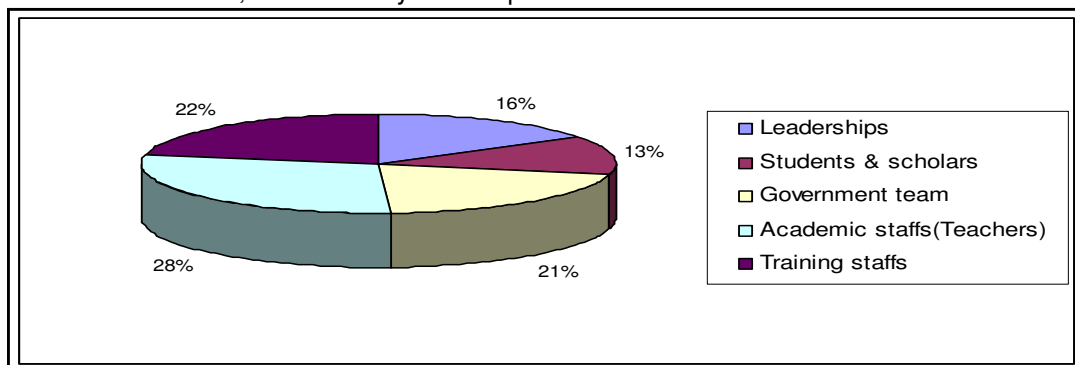


**Fig 3: Respondents' suggested requirements for successful E-learning implementation (Kenan, 2009).**

### 1.3 The resisting to changing and refusal the e-learning implementation:

The resistance to change is one of the important factors for implementation of E-learning (Said, 2005), Al-badree (2006). This resistance is often because of the high percentage of illiteracy in some countries (Twatti, 2006). Additionally, Artemi (2009) and Kenan et al. (2012) declared that resistance to change is one of the factors, which should be considered since implementing E-learning. It is related particularly to non-technical issues that include academic staff, administrators, and managers. It is divided into three main reasons: fear of ICT; lack of time to design, develop and maintain; support for online materials, and fear to expose the quality of work. Lecturers or instructors are one of the major factors contributing to the success of E-learning. For lecturers, implementation of E-learning programs represents a change in teaching style and materials. According to Kenan et al. (2012) the individual approach is a major factor affecting usage of IT. Understanding the user's attitudes in the direction of E-learning facilities is important for the creation of appropriate E-learning environments for teaching and learning.

The majority of the respondents have assessment of those persons resisting E-learning in Libya. Interestingly more respondents' perceived academic staff as the major barrier to E-learning than any other obstacle, (see Fig 4). It is widely believed the academic staffs contribute to e-learning resistance and maybe think the traditional method is the best, because they are still prefer the traditional methods.



**Fig 4: the Perceived opposition to E-learning by group**

These results tense the old culture is dominate; by consider the Academic staffs (28%), Training staffs (22%) and the Government team (21%) this is indicate to the culture that respect and revere all new methods also at same time, scare or fear from it and procedures of performance it. The proof for that is the percentage of the government team and the training staffs, which directed to uninterested to changing.

The respondents were students of postgraduate (25) and others (38) their works that relative by the education systems; these 25 Student-Respondents (about 40%) are asked about their degree and place of study; the level of the degree the 25 students were studying and their country of study are shown in (Fig 5). The total of the 25, eight were studying in Libya and these were enrolled on either a BSc or MSc degree. Of the 17 enrolled at UK universities, twelve were enrolled on PhD programmes.

May consider the percentage of 40% as both National and International; and According to the British Council (British Council Press Release, 2003) the UK signed a cultural agreement with Libya at the end of 2003 which is expected to result in an increase in the number of Libyan students studying in the UK. Officials from the British Council estimate that there were more than 3000 Libyan students enrolled at British institutions of higher and further education in 2004; of those, 90 percent are said to be on Libyan government scholarships. (Clark, 2004).

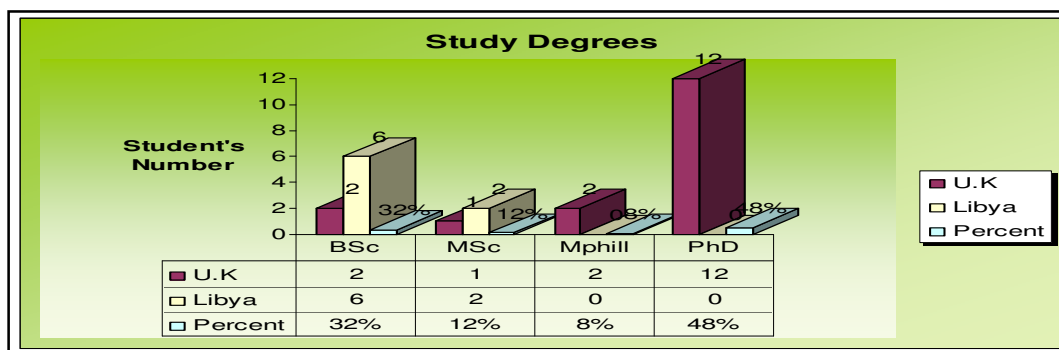


Fig 5: Level of degree and country of study of the students (Kenan, 2009)

#### 1.4 Advantages of using e-learning packages:

##### A. Online courses

E-learning allows students to reflect on the learning materials and permits them to work at their own pace, regardless of race, sex, disability or appearance. As a result, learners' perception can play a substantial role in improving the efficiency of E-learning systems.

This question is about the use of online courses either in their study or in their job. The responses are shown in (Tab 1 & Fig 6). 29 of the UK respondents answered yes and 8 answered sometimes. Of the Libyan respondents 12 answered yes, 5 answered no, and 9 answered sometimes.

Place's respondents	Yes	No	Sometimes
UK respondents	29	0	8
Libya respondents	12	5	9

Tab 1: Frequencies of use of online courses

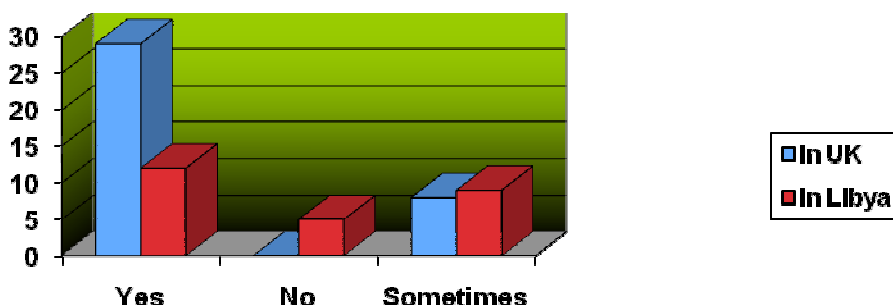


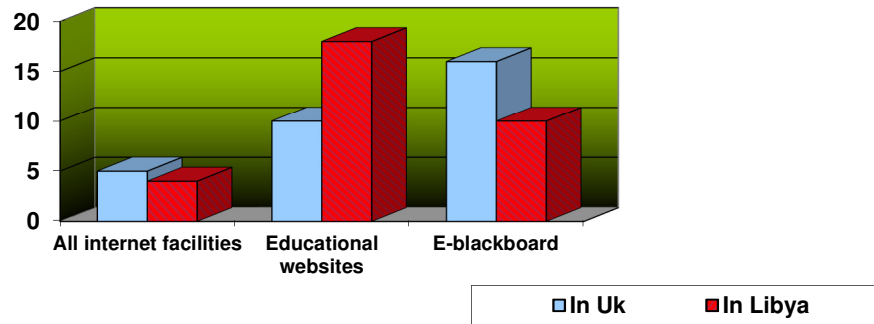
Fig 6: Frequencies of use of online courses

##### B. Use E-learning sites

The responses were asked about Internet sites that were preferred for E-learning as shown in (Tab 2 & Fig 7).

Respondents	Use of all internet facilities	Use of educational websites	Use of E-blackboard
UK respondents	5 (16.1%)	10 (32.3%)	16 (51.6%)
Libya respondents	4 (12.5%)	18 (56.3%)	10 (31.2%)

Tab 2: Respondents preferred site to support E-learning



**Fig 7: Respondents preferred site to support E-learning**

*C. Analysis of answers - implementation of E-learning in Libya's HE.*

Fig 8: contains a statistical analysis of the answers to questions such as:

Q1: I am satisfied by the present attempts to introduce E-learning in Libya.

Q2: I think the introduction of E-learning will ease the problems of the educational system and processes in Libya.

Q3: I prefer E-learning to traditional learning.

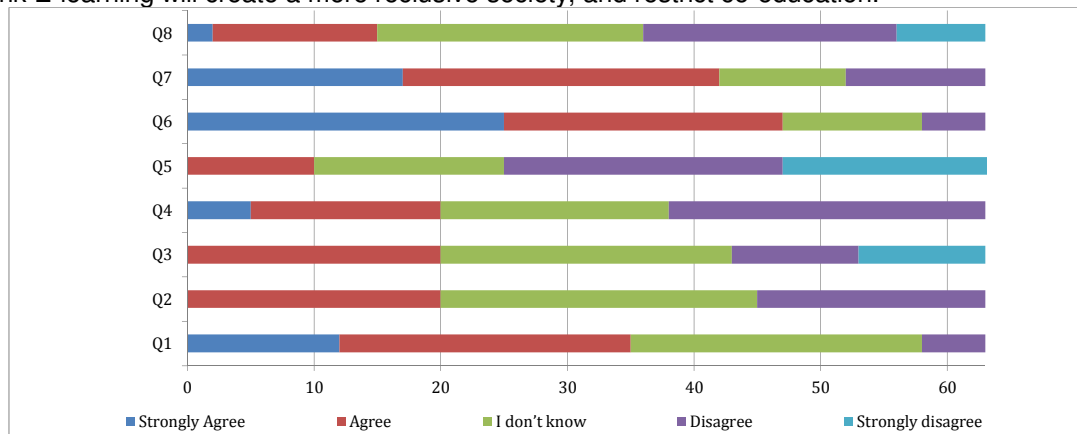
Q4: All the educational organizations in Libyan higher education need to implement E-learning.

Q5: E-learning is a necessary element in courses and research.

Q6: E-learning is an important part of the solution education problems in Libya, such as increases student numbers.

Q7: E-learning will encourage the disabled and women (mothers, housewife) to continue in their studies.

Q8: I think E-learning will create a more reclusive society, and restrict co-education.



**Fig 8: E-learning implementation in Libyan's HE (Kenan, 2009).**

- *In these questions concerned ideas regarding the implementation of E-learning. Whereas the answers as following:*

A1. Generally understanding and satisfaction with E-learning in Libyan HE Institutions, over half the respondents agreed or strongly agreed it was a pleasure to implement E-learning in Libya.

A2. The introduction/extension of E-learning will benefit the educational system in Libya; there was no strong overall opinion one way or the other on this question. However, it should be noted that the majority of those who agreed with the proposition were students and technical and training staff, while most of those who disagreed were academic staff.

- *The necessity of using an E-learning system (A3&A4&A5)*

A3. Use of e-learning rather than traditional learning, this question produced the largest number of responses, which were strongly opposed to the suggestion. One third of respondents disagreed or strongly disagreed with changing traditional learning or the traditional education.

A4. Most the educational organisations in Libyan HE need to implement e-learning; while there was no strong disagreement with this idea, about 70% of respondents had no opinion or disagreed. Possibly after some successes in implementing e-learning in some universities, opinions will change. However, there is a real need in some fields for science and engineering laboratories, which cannot be replaced by online learning.

A5. E-learning is necessary for academic courses and research. Nearly half the respondents are disagreed, particularly training and technical staff.

- *E-learning can be considered an important solution to educational problems (A6&A7&A8)*



A6. E-learning can increase student numbers, particularly in the rural areas. The students in the rural areas are those who face greatest difficulties in obtaining HE. So it is no surprise that about 40% of respondents were strongly in favor of the suggestion. Obviously, if HE is delivered to these students by E-learning that would help solve the problem of the yearly increase in the numbers of students.

A7. E-learning would encourage those with disabilities and women (mothers, housewife) to continue in their studies. Two thirds of the respondents agreed or strongly agreed with the proposal. No one strongly disagreed, but some 17% did disagree.

A8. E-learning will help create a more reclusive society and reduce the numbers of coeducational students; Opinion was more varied on this question than any other. However, on balance, nearly twice as many (43%) disagreed or strongly disagreed as agreed or strongly agreed (24%).

## **2. E-learning in UK (as focusing on the International culture)**

The UK has one of the best ICT infrastructures in the world. More than 48% of all households in the UK have a PC; more than 82 % of all British people have a cellular telephone, about 43% of all British adults use the internet, and the UK has the one of the largest number of bank clients using the internet for their normal banking services ([www.worldbank.org](http://www.worldbank.org)). The main reason for these achievements is the huge investment made by the government and IT companies into the UK infrastructure, which, in 2006, exceeded £170 million for the development of E-government alone ([www.worldbank.org](http://www.worldbank.org)).

A few years ago the UK government launched the own official website which aims to provide all governmental services online in the near future ([www.ukonline.gov.uk](http://www.ukonline.gov.uk)). This interaction between the government and its citizens increases as different government departments provide their own services online (e.g. registering for voting, buying a TV licence, applying for a passport, paying car tax, etc.). This encourages broad use of the Internet and as a result communication barriers between the government and the public are reduced.

UK government expenditure on education exceeds £45 billion a year. Education in the UK is considered as one of the most impotent factors for a successful economy. As a result, the government views E-learning as one of the most important issues in education and great attention is paid to it. Bennett, et al., (2008). In 2001 an eUniversity (UKeU) was established in the UK by the government to expand the availability of HE in the UK and abroad using online learning (E-learning). The government has funded the project. UKeU does not only offer higher degrees, it also provides commercial courses. The UK is witnessing a huge IT revolution in different fields of life especially in education, and has the declared aim of moving to into a knowledge based society with HE tasked to meet the requirements of such a society. It is noticeable that the government in the UK is keen on utilizing E-learning because it believes that E-learning can deliver the higher education and knowledge required.

The Open University is one of the largest universities in the UK, with more than 250,000 students following a huge number of courses. 200,000 of the students in the university are on distance learning courses, which utilised E-learning as the teaching methodology ([www.open.ac.uk](http://www.open.ac.uk)). The Open University strongly promotes and encourages E-learning, by offering its courses worldwide, and uses a number of learning technologies and media to add E-learning into its courses. Paul Clark, Open University's Pro-vice Chancellor says, "E-learning – properly integrated, delivered and managed – expands the Open University's ability to be open" (Clark, 2003). Obviously Clark strongly believes that effective use of E-learning will expand the ability of the university to deliver education more effectively and more widely.

Jensen and Folley (2011) published the results of a study about the teaching with technology in HE, which explores how lecturers use technology in teaching at the University of Huddersfield. May consider the results of this survey as a sample on E-learning in UK's HE. The survey asked about thoughts and opinions of 86 respondents (56% women, 44% men; 83% senior lecturers, 7% lecturers, 10 % part-time staff). Here are the main conclusions of this report.

### **2.1 The Challenges to E-learning in the UK**

The key barriers to E-learning in the UK are in cooperation on cultural and technical issues. From the cultural prospective it has been shown that many people in the UK think that E-learning does not provide the most appropriate courses for their needs. In the absence of the traditional physical communication between instructor and student, the interaction with teaching colleagues loses the benefits of body language. Users need to be convinced of E-learning as a useful teaching methodology to obtain greater user acceptance.

On the other hand, people's inability to use new tools because they need to gain more knowledge and make an effort means technical issues are a challenge. Some argue that lack of a fast Internet connection is the key barrier to E-learning, which can be categorised as one of the technological challenges to E-learning. Alexander (2006). Rosenberg strongly supported the view that technology itself is creating barriers to E-learning (Rosenberg, 2001).

**A. Technological:** the lack of provision of robust Internet access and difficulty of coping with the changes in the technology.

**B. Cultural:** the key barriers to E-learning in Libya include the role of government policy which does not promote E-learning, and even refuses recognition to qualifications obtained by E-learning. That culture has

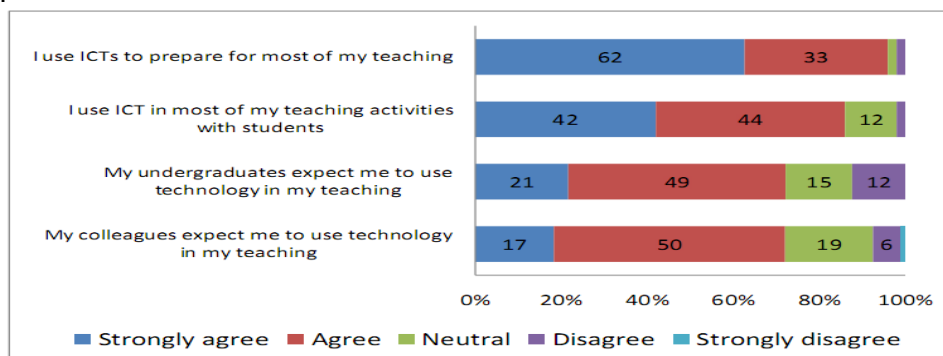


influenced students in Libya to stick to courses offered by traditional teaching methods. However, in the UK, the key barriers to nation-wide E-learning is the lack of provision of a nationwide high speed connection (broadband) which would allow E-learning to reach everyone in the country. In this sense, the UK government has failed in its role as provider of a strategy that links the different stages of education, when the existence of such a strategy would allow students to accept the changes that occur in HE when it comes to the use of E-learning. (Jacky, 2006).

**C. Other issues:** the pedagogy issue finding new techniques to deliver the content and missing link in the general strategy of education between different stages of study; therefore difficulty in accepting E-learning in the HEIs.

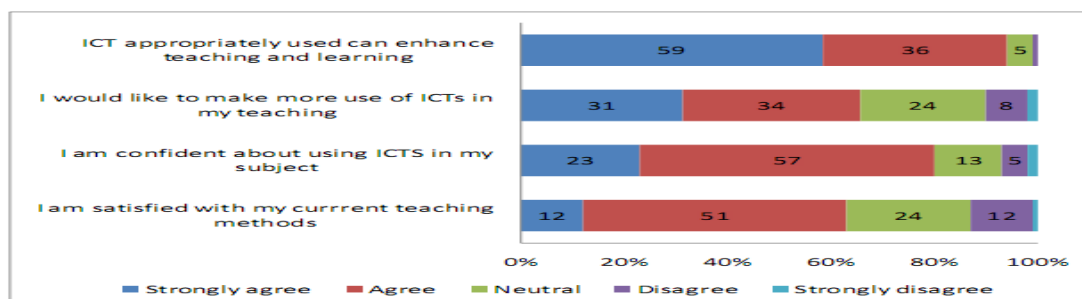
## 2.2 Usage of ICT and its impact on the expectations and practice

(Fig 9) shows the average of answers to specific questions. Around 95 % of respondents use ICTs to prepare their teaching materials because 70 % of instructors believe that the students expect them to use technology in their teaching activities. Also 67 % of staff considers that their colleagues expect them to use technology in their teaching.



**Fig 9: Use of ICT – expectations and practice (Jensen and Folley, 2011)**

The survey indicated that 65 % of staff would like to make more use of ICT in their teaching and 80% responded that they were confident about using ICTs in their subjects. There is also a high level of agreement (59%) that if ICT is appropriately used it can enhance teaching and learning as shown in (Fig 10).



**Fig 10: Teaching and the use of ICT (%)(Jensen and Folley, 2011)**

The answers to other questions included in the survey showed the need for technology usage to be governed by learning needs, the importance of feeling confident about using technology (for both staff and students) and also a concern that technology does not become a replacement for personal interaction.

## 2.3 Barriers to ICT use

According to this report; the barriers to ICT use as shown in (Tab 3 & Fig 11):

The barriers	The percentage from the total
1. Lack of time	81 %
2. Lack of training	59 %
3. Access to technical support	49 %
4. Availability of resources	78 %

**Tab 3: Barriers to ICT use (%)(Jensen and Folley, 2011)**

Interestingly, only 11% indicated that lack of resources was an issue (though this depends on how respondents define resources). Almost (55%) did not consider access to technical support an issue.

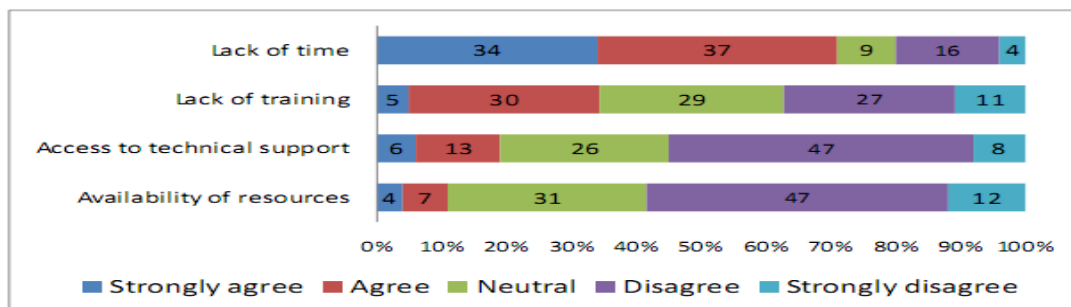


Fig 11: Barriers to ICT use (%)(Jensen and Folley, 2011)

### 2.4 Factors influencing the usage of ICT in teaching

The main barrier in using technology in teaching is the lack of teachers' time to develop online materials even though they have recognized that the students' learning will be enhanced. The teachers' level of confidence plays an important part in choosing the use of technology as well as students' expectations (see Fig 12).

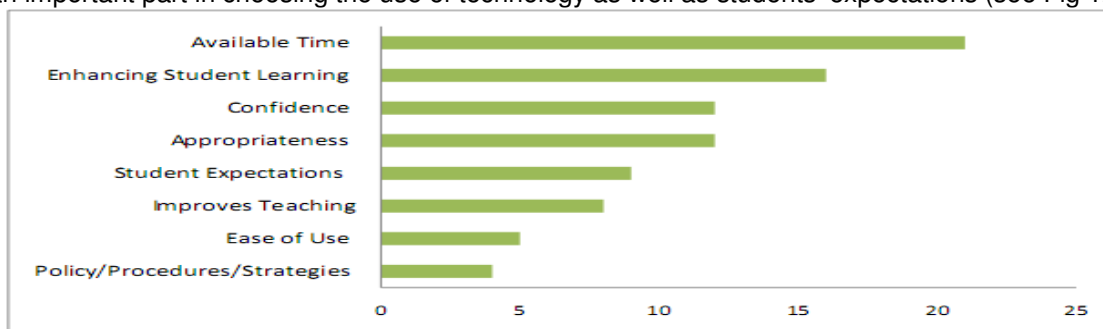


Fig 12: Factors usage technology in teaching (counts)(Jensen and Folley, 2011)

### 2.5 The impact of technologies on teaching:

The survey went on which of the modern technologies have the greatest impact on teaching. Around 85 % of respondents said that slideshow presentations (Power Point) followed by virtual learning environments (such as Blackboard) have a positive impact on their teaching (As shown in Fig 13). However, there are a rarely percentage between (13% - 23%) that do not agree that podcasts, e-portfolios, blogging, wikis and social bookmarking have a positive impact on their teaching.

The respondents who "strongly disagree" that PowerPoint, podcasts, e-assessment, blog, wiki and social bookmarking have a positive impact are respondents who indicate they have never used that technology. With the technologies e-portfolio and virtual learning environments this was also true with the exception of a couple of respondent who indicated they had used these technologies some of the time.

Pislaru (2010) emphasized that a compromise between the constraints on time and resources for modern education and the development and usage of effective e-learning systems should be reached. Continuing professional development (CPD) for undergraduates & post graduates needs to be done in an effective manner and the content of educational resources must be accessible, user friendly & relevant to the standards of professional bodies.

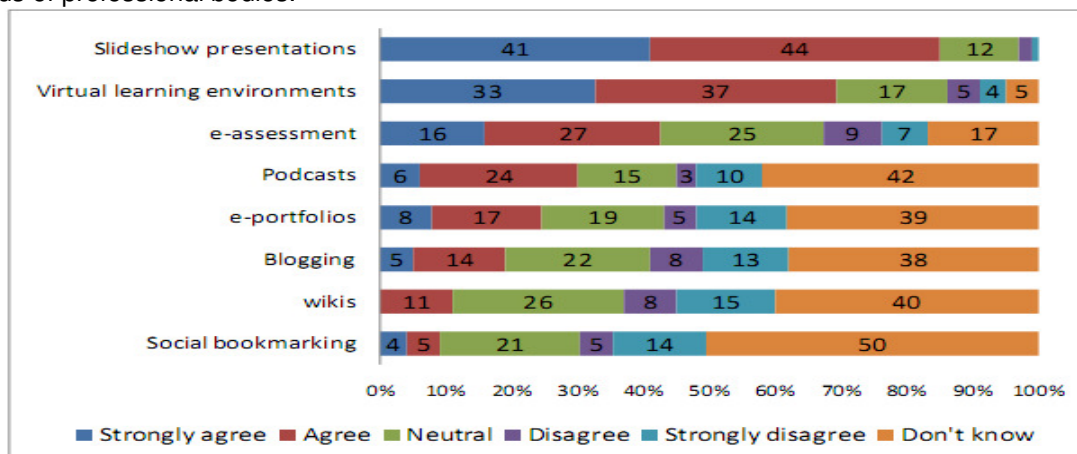


Fig 13: Do these technologies have impact on teaching? (Jensen and Folley, 2011)

## **Recommendations and future work for E-Learning in Higher Education:**

---

### *1. Recommendations for factors that affect learner (students' and instructors') proficiencies*

Course content should be continually revised and updated. HE Institutions should hire an adequate number of support staff to be responsible for administrative duties and take this heavy burden away from academic staff. Support staff may be utilised to regularly check that the course content has been updated. From the challenges identified in this research, there are some factors that still need to be addressed before E-learning can be used independently as a learning or teaching tool. Blended learning can be used as the transitory phase to E-learning in Libyan HE Institutions. Instructors should focus on the attitudes and mindsets of learners since these have an influence and impact on E-learning that can be derived from assessments done by learners.

### *2. Recommendations for institution in implementation of policies*

To be successful E-learning should have the declared support of senior management and a fixed budget that has been set aside to maintain and develop E-learning facilities. Those responsible for course development should be sent on high technology courses to be able to develop and maintain the programme to world standards in course development. There would also be good incentives and rewards to motivate teaching staff to invest their time in E-learning. Training should be offered to instructors and course developers so that they can be more familiar with learning management systems. They should be encouraged to attend internal and external workshops so that they can be updated on changes to software and hardware. Technological learning tools should be maintained and kept up to date at all times. Bandwidth and network systems should be improved and computer applications should be developed. With the support of senior management and a budget available for E-learning activities, licenses would be bought to get access to updated software and technologies.

### *3. Recommendations for governmental HE policies*

More coordination and resource sharing between different HEIs could be of general benefit. There are some HEIs that have shown success in the implementation and management of E-learning; those institutions should be encouraged to share their success with other institutions. Partnerships should be developed between government, HE and the private sector. Government departments and the private sector should be encouraged to sponsor development of technologies in HE that will produce a workforce that is competent in technologies.

## **Conclusions:**

There are balances between the two countries (Libya & UK) in analysis of the impact of E-learning and ICT in the HEIs, but there are clear different influences on both the UK and Libya about how interacts with the e-learning and ICT existing in the HEIs. It was found that the challenges or the barriers to E-learning in Libya could be classified into three different classes: technological barriers, cultural barriers and other barriers related to government attitudes.

E-learning in education HEIs of UK is experiencing exceptional usage and developmental. Despite challenges which faced by HEIs, e-learning has successfully managed to bring education to the entrance of all those who inquire about it. The need to create more encouraging environment for learners has proved to be a condition for the attainment of excellent results.

The instructors to be able to conducting by confidently; must receive continuously training of their pedagogical skills, accordingly to the dynamic nature of technology. The learners, being the essential position for HEIs, ought to have access to Internet and e-learning facilities if they are to prove themselves and achieve their goals. Institutional leaders should continuously adapt themselves to changing technological environments and inculcate a positive attitude to adoption and implementation of e-learning within their institutions. Attitudinal aspects have been cited as determining the success or failure of adopting e-learning in institutions.

Libya faced more barriers to the development and growth of E-learning than does the UK. On the other hand, both the UK and Libya face a common difficulty: they lack the provision of strong, lack of training and widely available Internet connection technologies. Libya demonstrated resistance to change and faces disadvantages of lack of experience of use of the net amongst many of its students. Therefore, the Libyan ICT must be consider the UK attempts with use the ICT in teaching and how impacts on the e learning in the education.

In case the E-learning established in Libya, most the problems will be solving as result from a shortage of traditional education institutions that enroll an increasing number of students who would to study at university, whilst providing them with a chance to learn and promote scientific cooperation and research to facilitate reach every learner. Also, E-learning could be providing education for those who missed such opportunities earlier, the house-waives and the disability people by give them the knowledge of technological developments

to continue in other areas of technical development. From known that the challenges encountered by Libyan HEIs that hinder the adoption of e- learning within institutions are common across the educational organisations, the responsibility rests with institutional leadership whose driving force should be focused on providing the necessary resources and the ICT with which to implement their individual institutional e-learning strategies. Governments ought to take it upon themselves to assign more support for HEIs to be able to accept training programmers' for academics and instructors acquire more computers and provide for better bandwidth for different HEIs. This must be buttressed by a reliable internet and network system that does not further provide additional challenges like loud or getting offline at a time when often the Libyan HEIs need it mainly.

## References:

- Al-badree, A. (2006). "Problems of Libyan higher education". In: Alaour, M., ed. Symposium of HE and Development in the Jamahiriya. Tripoli, Libya. December 31, 2007.
- Al-teer, M. (2006). "Higher education and development in Libya: a model of multi-twisted line". In: Alaour, M., ed. Symposium of HE and Development in the Jamahiriya Tripoli, Libya. December 31, 2007.
- Alexander, B. (2006). "A new wave of innovation for teaching and learning". *EDUCAUSE Review*, 41(2). Retrieved November 16, 2009 from: <http://www.educause.edu/EDUCAUSE+Review/EDUCAUSEReviewMagazineVolume41/Web20ANewWaveofInnovationforTe/158042>
- Alhawat, A. (2005). "Effectiveness of higher education infrastructures: Libyan model". In: Vocational, Cultural and Academic Bulletin (special issue on Libyan HE). General syndication of university staff members. Tripoli, Libya. 9 March 2005.
- Artemi, M., Ajit, K. (2009). "A SWOT Analysis of E-Learning Model for the Libyan Educational Institutions", The 3rd National Conference of Basic Science 25-27/4/2009 Aljabal-Algharbi University Gharian – Libya
- Bennett, S., Maton, K., Kervin, L. (2008). "The 'digital natives' debate: A critical review of the evidence" in *British Journal of Educational Technology* 39 (5): 775–786.
- British Council Press Release. 2003. *British Council Signs Major Agreement with Libya*. 18 Dec. 2003.
- Clark, N., 2004. *World Education News and Views*. [Online] Available at: <<http://www.wes.org/ewenr/PF/04Jul/PFP/ractical.htm> >
- Clark, R., and Mayer, R. (2003). "E-learning and the science of instruction: proven guidelines for consumers and designers of multimedia learning". John Wiley & Sons. San Francisco, ca., USA.
- Consultation Unit, (2007). "The future of education". Published on 9 August 2007 by authority of the House of Commons London: The Stationery Office Limited
- El-Hawat, A., 2004. *African Higher Education: An International Reference Handbook*. Indiana University Press, USA.
- Elzawi, A., Kenan, T., Wade, S., Pislaru, C. (2012). "Bridging The Digital Divide And Enhancing The Quality Of Engineering Research In Libyan Universities". 6th Conf. on Quality Conference in the Middle East. Hamdan Bin Mohammed University, Dubai, 30 Jan – 2 Feb 2012.
- Jacky, P. (2006). "ICT teaching experience sharing in higher education: an education development approach" *Informatics in Education - an international journal*, Vol. 5, No. 2, 265-284 (May 2006) institute of mathematics and informatics, Vilnius.
- Jensen, K. and Folley, S. (2011). "Teaching with Technology in Higher Education & Exploring how lecturers at the University of Huddersfield use technology in teaching". Paper No.1, University of Huddersfield, March 2011.
- Kenan, T. (2009) The Barriers of E-learning in higher education in Libya. MSc Thesis. In: UK, University of Salford, (March, 2009).
- Kenan, T., Pislaru, C., Elzawi, A. (2011) – "Comparing The Impact Of E-Learning And ICT In Higher Education Institutions In Libya And United Kingdom". *Int. Conf. on Education, Informatics and Cybernetics, (icEIC 2011), 29 Nov – 2 Dec 2011*, Orlando, Florida.
- Kenan, T., Pislaru, C., Elzawi, A. (2012) – "Analysis of information management and e-learning implementation in HE institutions in Libya". 5th Conf. on E-learning Excellence in the Middle East. Hamdan Bin Mohammed University, Dubai, 30 Jan – 2 Feb 2012.
- Kuhlen, R. (2006). "Collaborative e-learning- an opportunity to identify and to overcome gender barriers". UNESCO Chair in Communication. Department of Computer and Information Science - University of Konstanz, Germany (01/2006)
- MBNQA (Malcom Baldrige Nationality Quality Award). (2004). "Education criteria for performance excellence". [www.quality.nist.gov/pdf-files/2004-education](http://www.quality.nist.gov/pdf-files/2004-education).
- Pislaru, C (2010) 'Development of Lifelong Learning Skills by Embedding E-learning into the Curriculum'. In: HUDGETT conference, 11th May 2010, University of Huddersfield, UK.

Porter, M., and Yegin, D. (2006). "National economic strategy: an assessment of the competitiveness of the Libyan Arab Jamahiriya". The general planning council of Libya. Cera, UK.

Rosenberg, M.J. (2001). "Building successful online learning in your organization", McGraw Hill. USA.

Said, B. (2005). "The development of education in the great Jamahiriya: a national report presented to international conference on education; quality education for all young people: challenges, trends and priorities". Geneva. Sept. 2005.

Twatti, J.M., (2006) "The impact of organizational culture innovation on the adoption of IS/IT: the case of Libya". Journal of Enterprise Information Management. Vol. 19, No.2, PP. 175-191

[www.open.ac.uk](http://www.open.ac.uk)

[www.ukonline.gov.uk](http://www.ukonline.gov.uk)

[www.worldbank.org](http://www.worldbank.org)

Zamsky, R., and Massy, W. (2004). "Thwarted innovation: what happened to e-learning and why". The Learning Alliance at the University of Pennsylvania. Pa, USA.