

Trends and Policy Issues for the e-Learning Implementation in Libyan Universities

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Abstract—This paper provides an important snapshot of the current trends and policy issues for e-learning implementation in Libyan universities. The results of two Strength-Weakness-Opportunities-Threats (SWOT) models developed in 2009 and 2013 are compared and the evolution of e-learning implementation in Tripoli University is analysed. Several policy subjects and accessibility challenges related to the planning, development and implementation of e-learning strategies for undergraduate and postgraduate curricula are discussed. The paper also contains a set of suggestions to improve the learners' knowledge and understanding, recommendations for the institution regarding implementation of e-learning policies and governmental HE policies to evaluate, develop and approve e-learning business models or income revenue streams.

Index Terms—E-Learning implementation, e-learning strategy, Libyan universities, policy issues.

I. INTRODUCTION

The Libyan ICT infrastructure has been destroyed by the war in 2011, but many people (especially the youth) began to focus on social media and Internet tools to communicate with their relatives and the rest of the world. Following the armed conflict, Libya was forced to start from scratch in building up the country's infrastructure and services [1]. One of the difficulties is the reconstruction and the policy problems involved in redeveloping the education system because most of the educational institutions and universities in the affected areas have lost their infrastructure and resources. Implementing any type of process that involves change and alterations to how people work can present difficulties for an organisation. Estimates have shown that up to 70 percent of the cost of implementing a major organisational change has been linked to managing employee behavior during the transition [2]. The process of transforming an organisation's objectives into strategies that deliver lasting, sustainable change is, to a large extent, dependent on how institutions approach changing everyday processes. When there are major shifts in the processes faculty and staff are relied upon to do their jobs on a daily basis, and senior administration must fully endorse and engage in the planning, development, and launch of the initiative for it to be successful.

This paper presents the trends and policy issues of e-learning implementation in Libyan universities (LUs) through a modern model of SWOT analysis to reflect the

evolution of the current implementation strategies. It is obvious that some universities have managed to implement successfully e-learning systems despite the drawbacks faced due to economic, political and social difficulties existing in Libya. The model analyses the actual stage of e-learning implementation in several LUs to offer appropriate suggestions for improving and guiding the implementation team towards the correct performance of e-learning in Libyan HE institutions.

II. THE PROGRESSION OF E-LEARNING IMPLEMENTATION IN LIBYAN UNIVERSITIES FROM 2009 TO 2013.

SWOT is an acronym for Strengths, Weaknesses, Opportunities and Threats. The 'opportunity' and 'threat' should both focus on the possible future of an analysed situation. "The people who use SWOT might conclude that they have done an adequate job of planning and ignore sensible things such as defining the firm's objectives for alternate strategies" [3]. So it is important to consider various solutions after examining the results of SWOT analysis. The SWOT method can be used during the design, development and implementation stages of any project. It is also a convenient tool for the evaluation stage in order to have an initial idea of the future consequences.

Kenan [4] designed a questionnaire in 2009 (Quest.2009) to identify the challenges experienced by 63 teachers, students and technical staff when using technology in Tripoli University. A second questionnaire was designed in 2013 (Quest.2013) in order to check if the respondents confirmed the trends and the policy issues of using e-learning in LUs. A number of 28 teachers, 39 students and 10 technical staff completed this questionnaire. They could express their personal opinions about other challenges they were facing when using e-learning and ICT for the educational purposes. Here are the conclusions of the comparison between the answers to Quest.2009 and Quest.2013.

TABLE I: PERCEPTIONS OF RESPONDENTS OF COMPUTER USAGE IN 2009& 2013.

Computer usage	People Quest. 2009	% 2009	People Quest. 2013	% 2013
Every day	13	20.6%	62	80.5%
3-4 times every week	22	34.9%	11	14.3%
1-2 times every week	25	39.6%	4	5.2%
Rarely	3	4.7%	0	0%
Never	0	0%	0	0%
The total	63	100%	77	100%

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Strength Points

All respondents have been using the computers for various educational activities as shown in Table I.

Internet access has been active since 2000 in most LUs [5] and Table 1 shows there has been an increase in the interest in technology. This is because LUs are spending more of their budgets on providing their ICT.

A. Opportunity Points

The respondents chose the following benefits of using e-learning from a list of options provided in the questionnaire as shown in Table 2. Qu.2009 & Qu.2013 differed in that the question were changed to multi-options.

TABLE II: PERCEPTIONS OF RESPONDENTS ABOUT E-LEARNING BENEFITS IN 2009& 2013.

Benefits	People Quest. 2009	% 2009	People Quest. 2013	% 2013
Language skills acquired	37	58.7%	68	88.3%
IT skills acquired	10	15.9%	73	94.8%
Time management	7	11.1%	51	66.2%
Comfortable education	6	9.5%	36	46.7%
New method	3	4.8%	27	35.1%
The total	63	100%	Multi-option question	

Even though the method of question had changed, it was clear that there was acquisition of new languages and IT skills.

B. Weaknesses

The respondents chose the following barriers to e-learning implementation ahead of Libyan universities LU as shown in Table III.

TABLE III: PERCEPTIONS OF RESPONDENTS ABOUT THE BARRIERS OF E-LEARNING IMPLEMENTATION IN 2009& 2013

Barriers	People Quest. 2009	% 2009	People Quest. 2013	% 2013
Technological barriers	22	34.9%	25	32.5%
Mismanagement barriers	18	28.6%	31	40.4%
Cultural barriers	13	20.6%	12	15.5%
Others: such as cost, etc.	10	15.9%	9	11.6%
The total	63	100%	77	100%

The majority of respondents to Quest 2009 considered that technological barriers were important while 40.4 % of respondents to Quest 2013 chose barriers due to mismanagement.

Mismanagement and other reasons: the social impact after the war; lack of a general strategy of education linking the different stages of study, with a consequent difficulty in accepting E-learning [6]; lack of common regulations or standards for E-learning in a country which does not generally approve of such methodology; disapproval from the Ministry of Education for E-learning courses [7]; difficulty in securing accreditation collaboration; the management-corruption and lack of cross-institutional collaboration [8].

Technological barriers include: insufficient network and systems infrastructures; weaknesses of E-learning

development in HE institutions; difficulties in overcoming initial implementation problems; lack of experience in using technology; lack of provision of robust Internet access; lack of specific student services [9].

Cultural barriers consist of: unfamiliarity with the Internet and related technologies resulting in lack of appreciation and understanding of E-learning and its benefits; opposition to the adoption of the necessary educational changes (e.g. self-regulation, student centred) required for successful E-learning [10].

C. Threats

The answers given by the respondents show that the following categories display resistance to e-learning implementation in Libyan HE as shown in Table IV.

TABLE IV: PERCEPTIONS OF THE E-LEARNING RESISTORS IN 2009& 2013.

Resistance to e-learning	People Quest. 2009	% 2009	People Quest. 2013	% 2013
Academic staff (teachers)	18	28.6%	40	51.9%
Training staff	14	22.2%	59	76.6%
Government team	13	20.6%	22	28.5%
Leadership	10	15.9%	68	88.3%
Students and scholars	8	12.7%	21	27.2%
The total	63	100%	Multi-option question	

These results of Strength, Opportunity, Weakness and Threats reflect the SWOT analysis for the main aspects, which should be considered when developing more effective e-learning implementation strategies. It also presents the reflections of the students, lecturers, and technical staff on the trial implementation.

Also, Rhema and Miliszewska [10] undertook a SWOT study about the e-learning implementation at the Data Analysis Department and identified that technological and cultural barriers are hindering the e-learning implementation in the University of Gharian-Libya.

Artemi and Ajit [11] emphasised that many people perceive technological barriers as being essential in the e-learning implementation because people need access to modern technology in order to improve the quality of the teaching and learning processes. SWOT analysis is an essential step to analyse various factors before implementing an e-learning solution at any institution, because the success or failure of an e-learning initiative will be directly related to the policy issues that underpins it [12].

III. SWOT MODEL

The success or failure of an e-learning initiative is directly related to the quality of strategic thinking that underpins it and SWOT analysis should be performed before implementing an e-learning solution at any institution. It is thus important to have an e-learning strategy in place before beginning the implementation process.

This SWOT model is based on the personal experiences of the authors who have studied at Tripoli University and then became lecturers at the same university. It is also based on the study of the latest results related in 2009 to recent

SWOT analyses in 2013 of LUs performed by other authors such as Artemi and Ajit [11], Rhema and Miliszewska [10] (see Table V).

TABLE V: MODERN SWOT ANALYSIS OF E-LEARNING IMPLEMENTATION IN LIBYAN UNIVERSITIES

Strength points:	Weakness points
<ol style="list-style-type: none"> 1. The government policy system changed on October 2011 when it was officially declared the liberation of Libya. So the new government looks to support the LUs in a number of ways. 2. The proliferation of digital technology because the majority of people are using computers and social media channels to communicate with each other. 3. An annual increase the student numbers in the LUs. 4. The need to eliminate the administrative corruption aspects. 5. Implement modern and efficient management structures in the LUs. 6. Libya has a strategic geographical location in Africa. The people from Niger, Sudan, Mali and Chad could use the e-learning packages developed by the companies situated in Libya. Also people living at long distances from the main Libyan universities (such as Awbari, Ghat, Aljawf, Murzuq and Alkoofra) could complete their courses by distance learning. 	<ol style="list-style-type: none"> 1. Lack of training courses for the students, technical and academic staff. 2. Lack of technological support and periodic maintenance of computers. 3. Lack of online library catalogues in the LUs 3. Mismanagement and corruption. 4. Users' lack of awareness and fear of negative consequences of using technology in the education processes. 5. Post-war chaos that pervades all sectors of Libyan society and economy.
Opportunity points	Threat points
<ol style="list-style-type: none"> 1. Official recognition of education certificates holders of e-learning or distance education. 2. Create new business strategies to attract students from other African countries that still lack the basics of e-learning in their Higher Education Institutes. 3. Reduce the migration of skilled and intelligent people from Libya. 4. Create techno-education competitive environment with the neighbouring countries. 5. Development of new courses in foreign languages (English, French, etc.) in LUs. 6. Gradual change of culture including more acceptances to of e-learning systems. 7. Geographical position of Libya in Africa plays strategic role in the successful and the necessary need to implementation of e-learning system in LUs. 	<ol style="list-style-type: none"> 1. Numerous barriers related to e-learning systems implementation. 2. Preference of using only academic traditional methods in education. 3. Lack of support from the government. 4. Increased migration of skilled and intelligent people from Libya.

An e-learning initiative must be tied to the institution's core business to ensure that that the quality of the educational processes is enhanced [11]. The review recommends that the institutions should start working hard on minimising the weaknesses (such as poor English skills of students as well as instructors, lacking ICT infrastructure, lack of e-learning know-how, etc.). Also, the use of blended learning approach will enable the academics and students to have a smooth transition during the e-learning systems implementation [12].

SWOT analysis should help the decision-makers at departmental level to decide on opportunities with respect to e-learning implementation; also, to choose the appropriate policy issues for it: improvement of the learners' knowledge, learning outcomes, efficiency of the teaching and learning

processes and reduction of costs.

IV. POLICY ISSUES AND ACCESSIBILITY CHALLENGES

There are still many challenges to address on the successful policy and suitable strategy of e-learning implementation. These challenges are mainly pedagogical, technological, and attitudinal [13] as follows:

A. Lack of Training Courses and Languages Skills

Although most LUs provide each faculty member with a personal computer, a significant percentage of faculty members are still computer illiterate, and it is reasonable to suppose there will be resistance from those members towards any attempt to adopt an e-learning model in their discipline within the university. Also, some of faculty members have difficulty with the English language.

B. Lack of Interests by University Administrations Regarding the Possibilities of e-Learning Is also a Real Challenge

Staff teams in the Arabic universities fear that e-learning that would abruptly shift traditional education into a new pedagogical venture with which lecturers and policymakers are not sufficiently familiar.

C. Rigid Learner-Lecturer Relation

If Libya had been a strong power structure governing the relationship between a learner and a lecturer, any learner may feel subservient to the lecturer and this could prove a problem when the learner is asked to discuss his/her views freely with the lecturer.

D. Lack of Arabic Learning Tools and Applications for e-Learning Courses

This will be a serious challenge in implementing e-learning into LUs, where the Arabic language is the teaching language. But even for the science-based colleges where English is the official teaching language, the lack of Arabic learning applications might cause a problem for a large proportion of students.

E. Highest Load on the Academic Staff

The teaching load in Libyan universities is typically large, for example: the average number of teaching hours for academic staff is 24 hours per week, and Libyan universities have not yet established an academic research tradition [14]. Thus, even professors find it difficult to find the time for research activity and educational development. The Libyan business executive survey/global competitiveness report (LBES/GCR) ranks Libya 97th out of 111 countries in university/industry research collaboration [9]. Some academic staff does undertake extra activities such as writing and publishing, e.g. text books, to increase their income.

F. Lack of Official Recognition by the Qualifications of Online Studies

Teaching and learning are the cornerstones of any HEI. However, maintaining the quality of such processes is a continuous challenge. There is no official recognition in Libya for distance or online learning as a valid mode of education and most LUs have not appointed staff members

with formal qualifications in either distance learning or online learning [12].

Once the key players are committed to the implementation process, quality control and measurable outcomes must be considered as part of implementation [15]. So the SWOT analysis should look at the main policy issues, the strategy trends (such as the economic situation), social impacts and technological developments.

V. CONCLUSIONS AND SUGGESTIONS FOR THE IMPLEMENTATION OF E-LEARNING STRATEGY IN THE INSTITUTIONS IN LIBYA

Libyan universities could take many benefits from combining the active learning methods with suitable policy or accessibility into e-learning implementation [8]. Both active learning and e-learning encourage students to use numerous sources of knowledge, and persuade them to integrate and employ information efficiently.

Libya must match and compete with the standards of other countries' universities strategies. This goal is part of Libya's move towards a knowledge society for which ICT is considered a prerequisite to make decisions about technology issues before the implementation of practical e-learning systems aiming to reduce the investment of time, effort and money.

A. Suggestions to Improve the Learners' Knowledge and Understanding

LUs 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 check regularly that the course content has been updated. The lecturers should share with the learners their availability schedule to let them know when to expect a response from a lecturer. A backup plan should be put in place in cases where the lecturers will be out of reach or unavailable for a long period and staff members should be provided for support. It would be beneficial for the e-learning policies to have the course content available in Arabic and English languages. As the country has not yet reached a stage where most of the learning materials are home developed, it might be premature to suggest course content to be only in Arabic, as English is considered the medium of instruction.

B. Suggestions for the Universities in Implementation of Policies

The change policy system must be gives dedication and strong motivation to all the decision makers; and the employees should be encouraged to attend internal and external workshops so the software and hardware packages and the relevant ICT support can be updated continuously [12]. To be successful E-learning should have the affirmative support of senior management and a fixed budget that has been set aside to maintain and develop the facilities. Also, the course lecturers and developers should attend regular training courses related to the new hardware, software and learning management packages. The Libyan learners have different educational experiences based on the geographic location of their colleges and universities: the

learners from rich areas (such as Tripoli Town Centre) have access to the latest state-of-the-art technology [13]; learners from suburban areas have a lifestyle similar to more developed countries, and learners from areas such as Al-Koofra city have third world experiences and never saw or used a computer until they reach HE. Therefore, the mindsets and the attitudes towards learning of such diverse learners should be taken into consideration.

C. Suggestions for Governmental Policies in the LUs

The Libyan government should give more support to the LUs that have shown success in the implementation and management of e-learning so these institutions will feel encouraged sharing their success with other institutions. More coordination and resource sharing between different LUs could be of general benefit. Government departments of Higher Education Ministry have all responsibility to sponsor development of technologies in LUs that will produce a workforce that is competent in technologies.

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