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Developing a new framework for understanding success/failure factors of e-learning implementation in Libya: Case Study; Misurata University

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Abstract

Developing a new effective e-learning framework is significant because it is a widespread technique and it enriches the understanding of the challenges of integrating such techniques into education systems. This paper aims to develop a new technological pedagogical framework for understanding the success and failure factors of e-learning adoption, development, and implementation in the Libyan Higher Education System (LHES).This research followed a mixed-method approach (quantitative/qualitative methods) to collect data from instructors, learners, ICT experts, and officials at Misurata University (MU) in Libya as a case study. First, the current situation of LHES was investigated. Then the attitude of instructors and learners towards e-learning were considered. Finally, the barriers to e-learning adoption, development, and implementation were investigated. The Quantitative data were analyzed using the Statistical Package for the Social Sciences (SPSS), and thematic analysis was used to interpret qualitative data. Generally, the findings disclosed that the instructors and learners in MU had positive attitudes towards e-learning. Moreover, based on the results, the barriers to e-learning adoption in LHES were classified into five main categories: infrastructure and technological challenges, institutional and organizational challenges, pedagogical factors and curriculum development, social culture, and language challenges, environmental challenges respectively. Finally, the findings of this research contribute to current research on e-learning by providing the first technological pedagogical framework; which is designed to help the officials in LHES for effective implementation of e-learning.

Keywords: e-learning adoption, challenges, education system, Information Communication Technology (ICT), developing countries

INTRODUCTION

The widespread of harnessing ICT in education activities implies that conventional learning and teaching methods no longer fit with the global trend in the education system(Elkaseh et al., 2015). Therefore, both industrialized and developing countries started to re-examine the structure of their education systems and to invest in a new culture of teaching, embarking on national programs to introduce e-learning in education settings. However, despite this trend, LHES relies on old-style teaching experience face-to-face interaction in the classroom, i.e. there is not any technique can be used in teaching and learning experience(Othman et al., 2013; Ramadan et al., 2019a).Regarding the LHES context in utilizing e-learning, several scholars asserted that the implementation of e-learning is still in quite an early stage (Almansuri & Elmansuri, 2015; Elkaseh et al., 2015; Ghawail et al., 2019; Othman et al., 2013; Ramadan et al., 2019b).Recently, the Libyan Ministry of Higher Education and Scientific Research acknowledges the importance and potential of e-learning as a promising option to enhance education settings and improve its quality. For this reason, as well as because of the current international crises (COVID-19), policymakers spare no effort to adopt a

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clear strategy and policy to make e-learning technology a major factor in their education systems to enhance the learning process. However, to the best of the current researchers' knowledge, there is not enough research into the e-learning field and this area of research remains largely an unexplored field in Libya. Accordingly, the main objective of the present study to develop a new technological pedagogical framework to improve e-learning adoption and development in Libya. The contribution to the knowledge presented in this research study might show advances to the field of e-learning in Libya by developing a framework based on acquired knowledge, ideas, and opinions of all stakeholders (learners, instructors, officials, ICT experts) from different disciplines including science, engineering, arts, social and Islamic. Additionally, developing the framework was based on several studies pertinent to e-learning. First, the status quo of LHES was investigated. Then the attitude of instructors, learners towards e-learning were considered. Finally, the barriers to e-learning adoption, development, and implementation were investigated.

2. LITERATURE REVIEW

2.1. E-learning Application and Challenges in Developing Countries

Over the past decades, the trend of using e-learning has been widely increased in the educational field and has become an integral part of the successful learning and teaching process in many parts of the world (Ramadan et al., 2019b; Taurus et al., 2015). However, although the deployment of e-learning initiatives has increasingly grown and accepted in advanced societies, it remains at an early stage of development in most developing nations(Al-Azawei et al., 2016). Furthermore, the harness of e-learning still encounters many handicaps and challenges related to its investigation and application(Andersson & Grönlund, 2009). Regarding the Higher Education System (HES) context in developing countries, it encounters unique challenges compared to industrialized states(Bhuasiri et al., 2012; Kasse & Balunywa, 2013). In this sense, (Duan et al., 2010) also claim that educational experiences in developing societies are utterly unlike the industrialized world and are characterized by the inferior quality of education and also an ineffective harness of ICT applications in their educational institutions. Therefore, stakeholders are still not fully aware of the potential of e-learning as well as how the system works and what skills and tools are required. Furthermore, technological, pedagogical, contextual concepts are yet to be fully identified, understood and explored (Andersson & Grönlund, 2009; Duan et al., 2010). As a result, many developing countries are lagged behind in establishing a contemporary e-learning system(Al-Azawei et al., 2016). For that reason, Bhuasiri, 2012, reported that there is a need to understand the e-learning challenges deeply as well as understand the factors that drive e-learning development for success to take appropriate actions and steps to implement e-learning initiatives successfully(Bhuasiri et al., 2012).

Additionally, it is an important issue to comprehensively understanding the pedagogical, psychological, and cognitive boundaries to the successful harness of ICT in the educational process (Shahadat et al., 2012). In light of this, several studies endeavoured to identify challenges and handicaps that hinder *the* effective implementation of e-learning in developing countries. Concerning the Arab States context, (Abdelraheem, 2006) emphasized that poor ICT infrastructures, cultural restraints, administration attitude, policies of e-learning deployment, issues of copyright, individual traits of both learners and tutors, and the poor e-content represent crucial challenges for the Arab regions. Moreover, in keeping with the literature, a study conducted by (Elzoghbi & Khashkhush, 2013) explained that some of the obstacles that may impede HES in the developing world to embrace e-learning capabilities include: ICT infrastructure, management, training, as well as the absence of e-learning policies and strategies. In a similar vein and another research carried out by (Qureshi et al., 2012) also reported that most of HES in developing states suffer from the limited resources, the obsolete infrastructure of ICT ,and less technical expertise in the educational environment. Also, HES in developing regions which endeavored to adopt the e-learning system failed due to poor strategy and planning, resistance to change, the high delivery cost of the ICT, and poor delivery of instructional materials. Strong support can be found by (Tarus et al., 2015) who classified those factors as incompetent ICT and e-learning resources, financial subsidize, costly and low Internet bandwidth, absence of strategies and policies, poor technical abilities, instructor's commitment and awareness, lack of e-resources ,and tech-savvy who develops these resources as well as cost time to develop e-content materials. Furthermore, (Al-Azawei et al., 2016) also proclaim that the harness of technology in education encounters several challenges and categorized them into external or internal issues. Particularly, external challenges included (low Internet service, insufficient funds, poor training, absence of technical support, poor ICT infrastructure, vague strategy , and national policy, frequent electricity shortage), whereas the internal challenges incorporated in (ICTS and e-learning literacy, lack of awareness, interest and motivation).Indeed, there are numerous challenges to get over when adopting e-learning especially at the beginning stage in a rural environment as pointed out in a study conducted by (Idris & Osman, 2017) who asserted that developing nations must get over several obstacles in deploying e-learning successfully including lack of well-developed infrastructure , absence of training , deficiencies of technical skill , poor internet services, inadequate plans and polices , technical support and availability of hardware and software.

To summarize, the conclusion following the review of pertinent literature to challenges of e-learning implementation has revealed that the majority of e-learning initiatives implemented in developing states tend to fail, partially or totally due to similar barriers as the majority of instructional institutions suffer deficiencies in their infrastructure and resources. However, some obstacles are unique to a particular country i.e. the countries differ from each other in terms of socio-economic, cultural, technical, and contextual aspects(Tedre et al., 2009).In this token, (Kundi & Nawaz, 2010) stated that the country-specific differences including the pedagogical, technical and contextual issues for a particular country should be taken into account throughout combining ICT in teaching and learning practices.

2.2. E-Learning Application and its Challenges in LHES

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This part of the research investigates the HES in Libya. Particularly to gain some insights into the current practices and situation and also drawbacks faced in adopting e-learning in the teaching/learning process and the challenges for the future.

Although some instructional institutes, such as Tripoli University and Misurata university have the rudimentary ICT infrastructure and facilities (such as computers, Internet access, and a local area network in some of their faculties), they still utilize the conventional and traditional instructional style of education that focuses on face-to-face learning communication and learning activities that are accessible only in the classroom (Rhema & Miliszewska, 2010). However, some colleges have proposed an e-learning initiative as one of the multimedia means of instruction in offering instructional materials such as the School of engineering at Tripoli University. Nevertheless, it is not surprising that this initiative faced several challenges, mainly, resistance to change, which is generally observed among both academic staff and the Ministry of Education (Kenan & Pislaru, 2012).

In this sense, El Zoghbi,2010 stated that in the Libyan context, the awareness of instructional technology and fundamental computer skills are commonly low which leads to resistance in harassing ICT solution in teaching practicum(El Zoghbi, Kumar, 2010). The literature review of the existing publications has revealed that the embracing of e-learning in LHES is still in its infancy stage and also faces several challenges. Regarding the Libyan context, in their study (Rhema & Miliszewska, 2010) clarified the harness of e-learning in LHES is in its infancy stage, reported that this process encounters several obstacles that can be classified: culture and language, stakeholders' beliefs and attitudes, technological challenges, teaching materials development, and management funding. This was also supported by Kenan, 2012, who affirmed that the implementing of e-learning in LHES is in its early stages, and face many challenges that affect the adoption of e-learning which can be categorized: technological, mismanagement, cultural and other issues(Kenan & Pislaru, 2012). More recently, as stated by(Ghawail et al., 2019; Ramadan et al., 2019b). The implementation of e-learning and the use of ICT in LHES are still limited, ineffective and confront numerous impediments. As developing countries, Libya has struggled for many years to adopt modern ICT techniques in the learning environment. However, LHES still utilizes a face-to-face interaction system and campus-based learning activities, and also there is no evidence concerned with the use of e-learning(Ramadan et al., 2019b; Rhema & Miliszewska, 2010). This is unsurprising because Libya was faced with many challenges, including the 2006 embargo and the political conflict since 2011. Moreover, prior government trends and education policies have had serious repercussions for continuous development in ICT. For example, teaching and learning the English language was banned in Libya (Kenan & Pislaru, 2012). As a result, Libyan people have been prevented from keeping up with the latest developments in international ICT through this period. Clearly, the isolation period, upheaval, political and socio-economic system had a profoundly negative effect on the Libyan education sector, including higher education, as well as educational planning and ICT use in its educational systems.

In conclusion, despite the Libyan government has given more attention to developing the HES by giving top priority to ICT deployment, it could be claimed that the HES still struggles with many hindrances, and the Ministry of education has had challenges with delivering a satisfactory education system. In this sense, it is evident that many researchers reported that Libya fails to deliver a satisfactory education system due to the following challenges: The insufficiency of effective administration, absence of stakeholders' awareness towards e-learning, the absence of long-term staff training plans and, curricula development, limited cultural and linguistic background, poorly-developed ICT infrastructure, the dearth of local ICT-savvy instructors and the lack of resources that represent vital barriers that might be holding back adoption of e-learning technology in Libya.

3. METHODOLOGY

The main aim of this research is to develop a new effective framework to adopt e-learning in the HES in Libya. The development process of this framework started with reviewing the previous works in similar developing countries, and then instructors' attitudes towards e-learning was investigated in a qualitative study; which was conducted at Misurata University in Libya with 219 teachers sample size, the results of this study were published at The Journal of the AJBAS (Australian Journal of Basic and Applied Sciences) in a paper titled "Investigating Instructors' Attitudes towards the Adoption of E-Learning Technology in Libyan Higher Education Institutes: Case Study; Misurata University". The factors that might affect the learners' attitudes towards the adoption of e-learning were also investigated and published in the same journal (AJBAS) in a paper titled" An Analysis of Factors affecting Learners' attitudes towards the Integration of E-learning into the Higher Education System in Libya: Case Study; Misurata University", where 407 students across different colleges at Misurata University have participated. Moreover, another qualitative research study with a 626 sample size was conducted to investigate the current situation of the Libyan higher education system in terms of the barriers that might hinder the successful implementation of e-learning in Libyan. Finally, a qualitative research study with 8 officials and 7 ICT experts in Misurata University was conducted to support the quantitative results that were previously gathered. The mixed-method research approach that used in this research provided the researchers with clear insights to design a new framework; which could be adopted to avoid the barriers that might negatively affect the implementation of e-learning in the Libyan higher education system.

3.1 Statistical analysis

Quantitative data were analyzed using the Statistical Package for the Social Sciences (SPSS), and thematic analysis was used to interpret qualitative data. In order to investigate the research hypothesis, the responses of 219 instructors and 407 learners were collected using an online questionnaire, and then analyzed using the Statistical Package for Social sciences (SPSS). The responses

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of 7 ICT experts and 8 officials were collected using a face-to-face semi-structured interview and then analyzed using thematic analysis.

4. RESULT

This section presents the results obtained through quantitative and qualitative analysis, based on the questionnaires and interviews. It firstly presents the details about the learners' and instructors' attitudes towards e-learning. Secondly, it presents the results of investigating the current situation of LHES in terms of using ICT and its challenges based on the analysis of the answers (academic staff, learners). This part also presents the barriers to e-learning adoption and implementation based on the analysis of the answers provided by (ICT experts, officials) through qualitative analysis. The main analysis of quantitative data is done through the statistical technique using Statistical Package for Social sciences (SPSS), while the qualitative analysis technique applied in the research is thematic analysis.

4.1. Quantitative data: Analysis and results

The data were collected using an online questionnaire and then analyzed using (SPSS). To check the independence between the gender of (instructors/students) and the attitude towards e-learning Chi-square was applied. And then the Person correlation test was applied to check the association among the different variables such as age, computer use, teaching experience, English proficiency, and academic major.

4.1.1 The Analysis of Instructors' Attitudes towards E-learning

This section reports on the findings of the study concerning the perception of instructors in LHES and their attitudes towards implementing e-learning technology. The collected data were analyzed using Statistical Package for Social sciences (SPSS) to investigate the impact of demographic characteristics of instructors on their attitude towards e-learning. Overall, the findings revealed that the academic staff in MU had positive attitudes towards-learning, as they think the adoption of e-learning in MU will positively impact students' performance and engagement. The results also indicated that gender seems to play a vital role in the teacher's response towards e-learning, whereas there was a significant difference regarding the teacher's attitude towards e-learning based on gender. Particularly, it was found that the males were more likely to adopt e-learning in their teaching than their counterparties, i.e., females. Additionally, in regards to age, there was a significant difference between the participants' attitudes involved in the present study based on age. Indeed, it was revealed that the tutors with relatively older age are less confident with the harness of e-learning in their educational activities, and they also had negative attitudes toward e-learning. In terms of teaching experience, the results reported a statistically significant difference between educators' attitudes based on their educational experience. It disclosed that the tutors with relatively long years of experience are less familiar with e-learning practices. Data on experience with computer use revealed that there was a statistically significant difference in attitudes towards e-learning based on computer use experience. This result showed that tutors who had more experience in computer use had more positive attitudes towards e-learning than those with less experience in computer use. Finally, the study also examined the influence of the academic area of research participants, particularly about the adoption of e-learning in delivering lectures. In this respect, it was a statistically significant difference between tutors' science major and tutors' art majors. That is, tutors' science discipline had more favourable attitudes towards e-learning than those with art discipline.

In conclusion, the results of this study reveal that the tutors of Misurata University are in favour of adopting e-learning. It indicated that the majority of participants feel confident in the use of ICT facilities and enjoy the harness of e-learning in teaching, believe in the advantages of e-learning and are interested in developing e-learning courses in their teaching process. The findings also reaffirm the significance of considering tutors' demographic characteristics differences when harnessing e-learning in learning activities. As mentioned above, the results of this part of the research were published in The Journal of the AJBAS (Australian Journal of Basic and Applied Sciences) in a paper titled "Investigating Instructors' Attitude towards the Adoption of E-Learning Technology in Libyan Higher Education Institutes: Case Study; Misurata University".

4.12. The Analysis of Learners' Attitudes towards E-learning

The purpose of this section was to present the attitudes of learners in the LHES toward e-learning. Generally, the findings disclosed that the students in MU had positive attitudes towards e-learning where demographic profile played a statistically significant contribution to their attitudes. An interesting outcome is that the academic discipline appears to play a pivotal role for determining the level of perception as there was a significant difference regarding learner's attitude towards e-learning based on academic major. It was found that the science department was more likely to adopt e-learning in their teaching than their counterparties, i.e. art discipline. Another interesting finding is regarding English proficiency. The results showcased that there was a significant difference between learners' with an elementary level of language on one side and learners with an advanced level. This particular finding could provide new insights into the role of English level on attitudes toward e-learning, particularly in countries that the English language is the foreign language. Data on age further indicated that students' age remained insignificant. Results further indicated that learners' skills and experience with ICT might significantly impact on attitude towards online learning where it represented a noteworthy role in constructing positive attitudes towards e-learning. Finally, the influence of gender was also examined in this study. Results disclosed that there was no significant difference between the participants' attitudes involved in the present study.

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In conclusion, the result of this study reveals that students at MU are willing to adopt e-learning. The findings also reaffirm that the demographic characteristics of students have highly contributed towards the formation of the learners' perspectives in the educational setting, in particular, ICT skills and experience, academic department, and English proficiency. The results of this part of the research were published in The Journal of the AJBAS (Australian Journal of Basic and Applied Sciences) in a paper titled" An Analysis of Factors affecting Learners' attitudes towards the Integration of E-learning into the Higher Education System in Libya: Case Study; Misurata University".

4.1.3. Investigating the Status quo of HES

This section of the research addresses the status quo of the HES in Libya to gain more insight into the current practice and challenges faced in the teaching computing process. Particularly, it describes the current situation of HES from teachers and students' perspectives with regards to the ICT utilization to explore any obstacle that may exist. Then the nature of the barriers is determined through quantitative analysis, based on the questionnaires completed by academic staff and learners. The information that follows showcases the diverse views of participants (learners, instructors) concerning HES current practice and e-learning challenges in MU. Respondents acknowledged that the implementation of e-learning in the LHES is still in its early stages in MU and has several challenges. These include:

1. Insufficient physical resources (buildings, libraries, labs, etc).
2. Lack of provision of robust ICT infrastructure and Internet access.
   - Lack of affordable and reliable Internet connection.
   - Inconsistent electrical power supply.
3. Mismanagement and awareness.
   - Gaps in rules and regulations which promote technology-based learning.
   - Lack of financial and managerial support.
   - Lack of training courses including content development, technology and pedagogy.
   - Lack of technical support to promote the effective use of computing teaching.
   - Increased workload and poor pay.
   - Lack of motivation.
   - Lack of managerial support and commitment of top management.
   - Lack of planning and operational ICT policies.
4. Pedagogical and course development
   - The approach to learning sticks to courses offered by traditional teaching methods.
   - The approach currently followed is based on a teacher-centered approach.
   - The unsuitability of current curricula for the e-learning system.
5. Social cultural aspects
   - Lack of experience and limited awareness of technology-based learning.
   - English Language Proficiency.
   - Resistance to change.
6. Environmental challenges
   - Political crises and armed conflict.
   - Economic, political, and social conditions

4.2. Qualitative data: Analysis and results

A face-to-face semi-structured interview was carried out with 15 interviewees in various positions. Eight were officials and seven were ICT experts. Interviews took place in MU where participants were located. Analysis of ICT experts and officials responses concerned with challenges and constraints to the successful implementation of e-learning emerged seven main themes:

1. Inadequate technological infrastructure and resources

Analysis of responses revealed that the main problem for successful e-learning implementation is related to insufficient ICT infrastructure includes inconsistent electrical power supply and inadequate Internet connectivity as exemplified by all the ICT expert respondents. All the interviewees approved that inadequate ICT infrastructure is a major challenge preventing the implementation of e-learning.

2. Financial constraints

Respondents also consider financial support, in terms of purchasing and installing ICT related facilities, operating costs of internet services as well as poor pay structure for the teaching staff , all of which being a critical challenge hindering the implementation of e-learning.

3. Lack of managerial support and commitment of top management

Respondents declared that lack of adequate administrative support may also hinder e-learning adoption in HES.There are more efforts need to be exerted including support, training, and motivation for adopting technical innovation such as e-learning.

4. The time required for developing e-learning content and workload

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Respondents pointed out that increased workload leads to lack of time required to developing e-learning content, which in turn can be a hindrance to the implementation of e-learning.

5. Lack of technical skills in e-learning and e-content development

Data from interviews showed a further challenge related to a lack of necessary technical skills and limited awareness of technology-based learning by some academic staff especially among senior staff and art major as well as insufficient technical experts as hindering implementation of-learning.

6. Lack of planning and operational ICT policies

Along with those challenges was the absence of e-learning policies and planning where respondents believe that the absence of operational e-learning policies will hinder the successful implementation of e-learning.

7. Pedagogical and curriculum development

Along with the problems regarding technological inefficiencies, basic pedagogical and curriculum development are also found to have a huge impact on the implementation of learning.

4.3. Development of the L-MU framework

This section presents a new framework called the L-MU framework; which was developed based on the results of quantitative and qualitative results mentioned above. From the current researcher's point of view, this framework would provide the officials and instructors with clear insights into understanding the success/failure factors of the e-learning implementation in Libya.

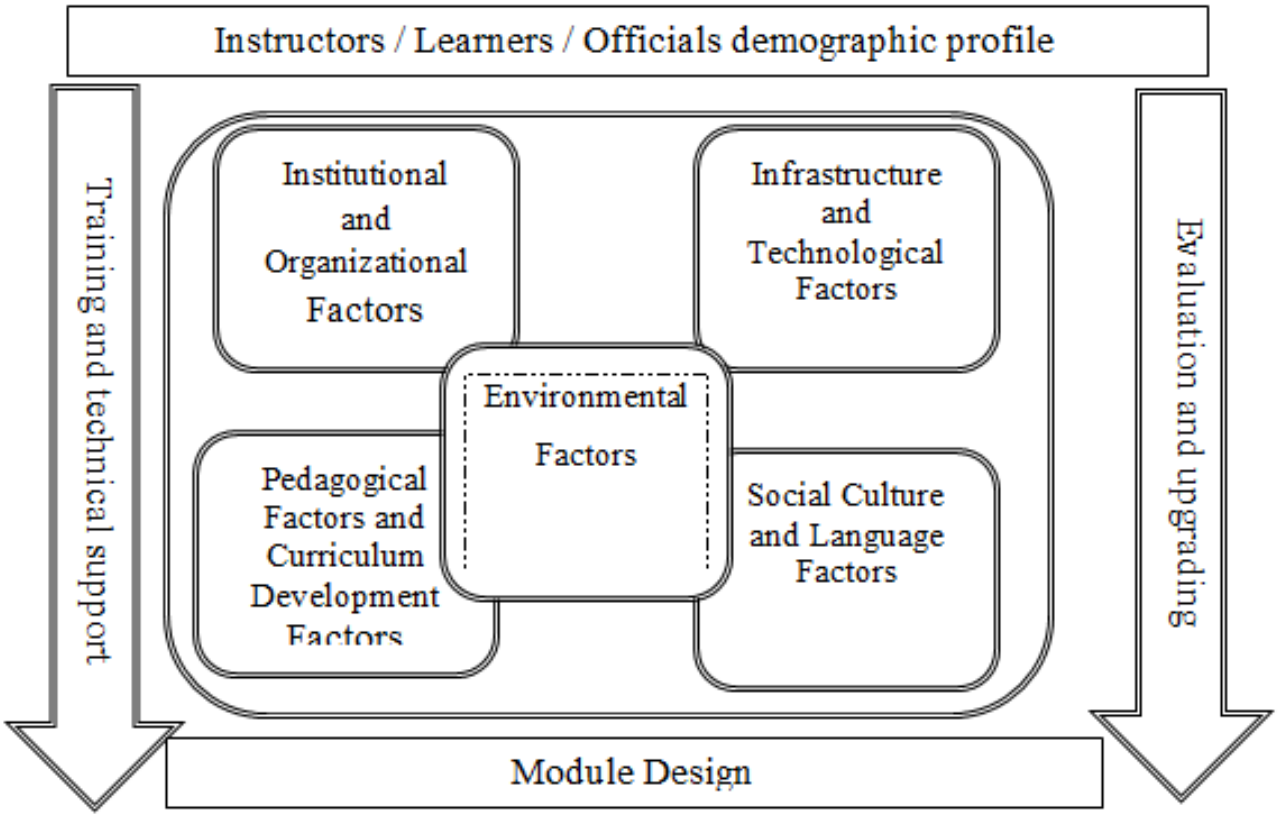

Figure 1: Development of the L-MU framework

5. DISCUSSION

Although e-learning is becoming more widely adopted and it has tremendous pros in the field of education, the failure rate when adopted is still relatively high due to the shortage of an e-learning framework development and adoption (Taha, 2014). On this basis, the present study was undertaken to develop a framework for understanding the success/failure factors of e-learning implementation in Libya. Generally, the findings of the present research study revealed that the LHES still struggles with many challenges in launching an effective teaching and learning environment. Therefore, this research intends to develop a framework that identifies and overcomes challenges that impact the implementation of e-learning in Libya. The following few subsections present the most important challenges that might negatively affect the implementation of e-learning in the LHES.

5.1. Technological Infrastructure and Resources

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Despite that learners and teachers at MU were interested in utilizing e-learning in their classrooms, the results revealed that MU faces challenges on the technological front because MU appears to lack the technological infrastructure and also the requirements are inadequate in most of their faculties. Further analysis revealed that problems with infrastructure are categorized in terms of inconsistent electrical power supply, inadequate Internet connectivity (bandwidth capacity), shortage of technical experts and insufficient computer laboratories and computers. These findings are consistent with those of similar work which revealed that ICT infrastructure like computers, networks, Internet connectivity, electrical power supply and computer labs are insufficient in most developing countries (Al-Azawei et al., 2016; Alkharang & Ghinea, 2013; Almansuri & Elmansuri, 2015; Ghawail et al., 2019; Idris & Osman, 2017; Khalil & Halis, 2017; Kisanga & Ireson, 2015; Tarus et al., 2015).

Generally, it could be observed that results obtained from the questionnaires are following the same trends those obtained in the interviews. This implies that ICT infrastructure challenges are most dominant within the MU context.

5.2. Institutional and Organizational Challenges

Literature is replete with studies which have affirmed that institutional and organizational challenges represent a significant challenge to successful adoption of e-learning system in developing states (Al-Azawei et al., 2016; Ghawail et al., 2019; Idris & Osman, 2017; Makhaya & Ogange, 2019; Mwakyusa & Mwalyagile, 2016; Qureshi et al., 2012; Shahadat et al., 2012; Tarus et al., 2015). It is not surprising that the findings of the current study support the preceding work and confirmed that the gap in ICT adoption was a result of insufficient institutional support in the Libyan context. Further analysis disclosed that problems with institutional and organizational challenges are categorized in terms of financial constraints, management awareness and managerial support, institutional policies and regulations, lack of strategy and planning, and deficiency of training and professional development context. Since overcoming e-learning challenges faced by institutions mainly depend on top management. Therefore, the onus rests with institutional leadership whose thrust should be focused on providing the funding and essential resources and ICT infrastructure with which to implement their respective institutional e-learning strategies.

5.3. Pedagogical Factors and Curriculum Development

Along with the problems regarding technological inefficiencies, several studies conducted by scholars demonstrated that adoption of e-learning was still at the primary stage in developing states due to many challenges related to pedagogical challenges and curriculum development(Andersson & Grönlund, 2009; Rhema & Miliszewska, 2010; Tarus et al., 2015). Regarding the Libyan context, the outcomes of this research study are consistent with others(Abod-her, 2013; Khalil & Halis, 2017; Rhema & Miliszewska, 2010; Tamtam et al., 2011) of which revealed that the e-curriculum in Libya is still in its formative years. Generally, it is obvious that and there are still pedagogical issues related to the academic content, teaching methodologies, and the use of technological programs that need to be addressed. The findings of this study uncovered that the existing curriculum has not been designed to be applied in an e-learning system environment, and also indicated that participants needed to be involved in professional training programs related to pedagogy and learning methodologies.

5.4. Social Culture and Language Challenges

Introducing recent innovation for a particular society represents a great challenge since individuals have diverse knowledge and viewpoints when adapted to new technology (Elbeltagi et al., 2005). Therefore, it could be of paramount importance to consider the social and cultural aspects of the stakeholders, which may affect their perception, especially in the ICT development context. Related work has affirmed that the social and cultural background of the stakeholders represents a significant role in the success of the adoption of e-learning(Alkharang & Ghinea, 2013; Almansuri & Elmansuri, 2015; Ghawail et al., 2019; Idris & Osman, 2017; Kisanga & Ireson, 2014). In line with those scholars, the findings of this study exhibited that socio-culture and language background differ from one stakeholder to another. Hence, it was found to be one of the most critical factors for the success of education through e-learning instruction. Social and cultural aspects including knowledge and skills, English language proficiency, and resistance to change came high in the list of barriers in MU where they were mentioned by most participants in both questionnaires and interviews.

5.5. Environmental Challenges

Challenges to achieving e-learning differ from one nation to another depending on various factors like economic, political, and social conditions (Khashkhush, 2011). In light of this, the status quo of the country, including the current social, economic, political, and armed conflict negatively affected the education system. All of the e-learning challenges in Libya and the deteriorating quality of higher education can be associated with the unstable political state of Libya.

6. CONCLUSION

This research study has been conducted to help LHES to establish a better-quality online learning environment by developing a new technologically pedagogical framework for understanding the success/failure factors of e-learning adoption. The results of this study revealed encouraging outcomes in terms of participants' perception and attitudes towards e-learning, where they showed a high level of interest in applying ICT and e-learning in their educational practices. It could also be concluded that the application of e-learning in Libya is still in its infancy similar to many developing countries. Furthermore, it faces several challenges to a successful implementation that can be classified into five main categories: technological infrastructure and resource challenges, institutional and organizational challenges, pedagogical and curriculum development challenges, social culture and language challenges and environmental challenges. It is recommended that substantial attention and a great effort from the top management

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by providing effective ICT infrastructure and proper training and supporting could supply stakeholders with effective accessibility to ICT facilities and further enhancing their skills, knowledge, and awareness of the benefits from e-learning technology.

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