The North African Journal of Scientific Publishing (NAJSP)
مجلة شمال إفريقيا للنشر العلمي (NAJSP)
E-ISSN: 2959-4820
Volume 2, Issue 3, July – September 2024, Page No: 42-48
Website: https://najsp.com/index.php/home/index
SJIFactor 2023: 3.733 معامل التأثير العربي (AIF) 2023: 0.63 ISI 2023: 0.383

Barriers to E-Learning Adoption among Higher Education Students In Libya

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معوقات تبني التعلم الإلكتروني لدى طلاب التعليم العالي في ليبيا

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Received: May 20, 2024	Accepted: July 17, 2024	Published: August 02, 2024

Abstract:
The integration of E-learning into educational systems has become crucial, particularly in developing countries like Libya. This study investigates the social and academic organizational factors that influence the adoption and effectiveness of E-learning in Libyan universities. Employing a mixed-methods approach, the research examines student attitudes, community acceptance, and E-learning adoption relationships.
Quantitative data were collected from 100 students and 30 Educators at the University of Tripoli recognized for its early adoption of E-learning. The study tested two hypotheses: H1, which posits a significant relationship between student attitude and E-learning adoption, and H2, which suggests a positive relationship between community acceptance and E-learning adoption. The findings confirmed both hypotheses, with strong positive correlations for student attitude (r = 0.62) and community acceptance (r = 0.57), both significantly predicting E-learning adoption.
Qualitative data were obtained through structured interviews with educators. Thematic analysis revealed that students expressed positive attitudes towards the flexibility and accessibility of E-learning. Moreover, community acceptance varied, with some resistance due to cultural preferences for traditional education.
These findings emphasize the need for supportive policies, investment in technological infrastructure, continuous training, and community engagement to enhance the effectiveness and sustainability of E-learning in Libya. Addressing these factors can significantly improve educational outcomes and resilience in the face of ongoing challenges, positioning E-learning as a viable alternative to traditional education.

Keywords: E-Learning, Student Attitudes, Community Acceptance, Educational Technology.

الملخص
أصبح دمج التعلم الإلكتروني في الأنظمة التعليمية أمرًا بالغ الأهمية، خاصة في البلدان النامية مثل ليبيا، حيث تبحث هذه الدراسة في العوامل التنظيمية الاجتماعية والأكاديمية التي تؤثر على اعتماد وفعالية التعلم الإلكتروني في الجامعات الليبية. وباستخدام منهج متعدد الأساليب، يدرس البحث العلاقات بين مواقف الطلاب وقبول المجتمع واعتماد التعلم الإلكتروني.
تم جمع البيانات الكمية من 100 طالب و30 مدرسًا في جامعة طرابلس لاعتمادهم المبكر للتعليم الإلكتروني. اختبرت الدراسة فرضيتين*H1*: ، التي تفترض وجود علاقة ذات دلالة إحصائية بين اتجاه الطالب واعتماد التعلم الإلكتروني، و*H2*، التي تشير إلى وجود علاقة إيجابية بين قبول المجتمع واعتماد التعلم الإلكتروني. وأكدت النتائج كلا الفرضيتين، مع وجود ارتباطات إيجابية قوية لاتجاه الطالب *(r = 0.62)* وقبول المجتمع *(r = 0.57)*، وكلاهما يتنبأ بشكل كبير بتبني التعلم الإلكتروني.

تم الحصول على البيانات النوعية من خلال مقابلات منظمة مع المعلمين. وكشف التحليل المواضيعي أن الطلاب عبروا عن مواقف إيجابية تجاه مرونة التعلم الإلكتروني وإمكانية الوصول إليه. علاوة على ذلك، تباين قبول المجتمع، مع بعض المقاومة بسبب التفضيلات الثقافية للتعليم التقليدي.
تؤكد هذه النتائج على الحاجة إلى سياسات داعمة، والاستثمار في البنية التحتية التكنولوجية، والتدريب المستمر، والمشاركة المجتمعية لتعزيز فعالية واستدامة التعلم الإلكتروني في ليبيا. يمكن أن تؤدي معالجة هذه العوامل إلى تحسين النتائج التعليمية والمرونة بشكل كبير في مواجهة التحديات المستمرة، مما يجعل التعلم الإلكتروني بديلاً قابلاً للتطبيق للتعليم التقليدي.

الكلمات المفتاحية: التعلم الإلكتروني، اتجاهات الطلاب، القبول المجتمعي، تكنولوجيا التعليم.

Introduction

E-learning, defined as the use of electronic technologies to access educational curricula outside of a traditional classroom, has become increasingly significant in global education systems. The rapid advancement of information and communication technologies (ICT) has transformed educational practices, making learning more accessible and flexible [1]. It contributes to innovation and development in the performance of these institutions and to get rid of the traditional model of education and access to knowledge in more innovative ways on the basis of collaborative learning. Adoption of E-learning as a tool to support the educational system is linked to conducting a radical reform movement and trying to provide a favourable educational environment. The new patterns posed by E-learning technology characterized by rapid development and have therefore become an urgent need.

Social factors such as cultural attitudes towards technology, economic conditions, digital literacy, family support, social infrastructure, and community engagement play a significant role in shaping the E-learning environment. Understanding these factors is essential to addressing the barriers and leveraging the opportunities for E-learning in Libya [2]. However, traditional academic institutions as well as newly established online or hybrid educational organizations in Libya are still in the early phases of trying to get students and their parents to accept and adapt to the concept of e-learning.

Additionally, academic organizational factors, including institutional policies, technological infrastructure, training and support, curriculum integration, administrative backing, and quality assurance, are critical determinants of the effectiveness and sustainability of E-learning initiatives [3].

This paper aims to explore the intricate relationships between these social and academic organizational factors and their influence on E-learning in Libya. By gaining insights into these dynamics, the study seeks to contribute to the development of strategies and policies that enhance the implementation and impact of E-learning in Libyan educational institutions.

Problem statement

In Middle East countries, the e-learning began to takes place gradually at major universities, especially in Jordan, Libya, Turkey and the Gulf states. Where these countries have developed programs designed to broaden the base of participants of e-learning. If we look at Libya will find it has been applied e-learning system partially in major educational institutions such as the University of Tripoli and the Libyan Academy for Graduate Studies. Organizers have discovered many positives in e-learning program are that may be motivated them to broaden the base of e-learning in other regions and universities within Libya. According to [4] have found that, Libyan higher education institutions still encounter several troubles in terms of the using of e-learning in teaching and learning. These kinds of troubles are generally from the cultural as well as linguistic background of students and instructors, also their awareness of and attitudes towards e-learning, the underdeveloped technological infrastructure and the often-prohibitive cost of educational technologies. The lack of local expertise in curriculum development for e-learning, in addition to the lack of educational management mechanisms to support e-learning endeavours .On the other hand, people's perceptions of ICT and to e-learning are almost different, that because, they depend on their own backgrounds. Accordingly, the design of an e-learning system should consider cultural differences and sensitivities associated with its users. For instance consideration for the different dimensions of the actual e-learning environment [5]. For example, with designing interfaces to have an e-learning system about learners worldwide, cultural communication as well as ethical issues must be taken into consideration; "Cultural factors are increasingly cited as significant influences on IT adoption" [6].

Besides the positives there are obstacles may cause the failure of the adoption of e-learning if they did not study it and take decisions. The influential social barriers are accepting society for graduates of this kind of programs, and the other barrier is the students' attitude towards e-learning and the use

of technology and also the organizational barrier, quality and technology. This study will focus on social barriers and organizational barriers, which plays a very important role in the field of education in Libya.

Research questions

1. What are the social factors that influence the E-learning in Libya?
2. What are the academic organizational level factors that influence E-learning in Libya?

Research objectives

1. To understand the relation between the social factor and the E-learning.
2. To understand the relation between the academic organizational level factor and the E-learning.

Significant of research

The significance of this research lies in its potential to provide a comprehensive understanding of the factors influencing the adoption and effectiveness of E-learning in Libya. This understanding is critical for several reasons:

- This study will contribute to the literature on the problems of the social factor, and organizational factor, playing a very significant role in E-learning in Libya.
- It will give an update on the condition of the students are finding themselves unaccepted in comparison with the students from traditional education especially in Libya.
- This work will expand the body of knowledge on the E-learning literature. By providing empirical evidence and theoretical insights, the study can serve as a reference for future research and contribute to the global discourse on E-learning [7].
- This study will help managers, government, academicians, practitioners and researchers with an in-depth material on the E-learning issue in universities.

Due to the limited research conducted in Libya, this study will provide universities in Libya both private and public universities with an update and help them in monitoring and planning their work. By enhancing the effectiveness of E-learning, this research can contribute to the broader goals of improving literacy rates, fostering human capital development, and promoting socio-economic progress in Libya [8].

Literature review

Many studies conducted to measure the factors that influence the adoption on E-learning. The culture has a significant rule in terms of online collaborative learning, also the academic organizational level such as the quality of the programs offered, and technical, educational and pedagogical level of the instructor.

1- Social barriers

- **Student attitude and intention**

The important factor that influence the adoption on E-learning is the attitude of the student towards the e-learning and the extent of acceptance of the programs of study offered, in addition is the acceptance or interaction with the technology used in those programs.[9] Has conducted an empirical research to study the barriers to e-learning for students who are studying in higher education in the United Arab Emirates using a questionnaire online, where he analyzed the relationship between e-learning and age, sex of the student, ease of use, and satisfaction. The data collection was carried out in phases throughout 2007 and 2008. The sample size was 455 students. The preliminary findings of our study indicate the need for further research and investigation into how e-learning barriers are perceived by students in the UAE. While the gender of the students was associated with a lack of interest for e-learning.

[10], Started research to understand the international students' experiences with, and perspectives on, the online learning environment. The participants in were 12 graduate students enrolled in a graduate Educational Technology program offered fully online at a large western Canadian university. Four of the participants lived outside of Canada: two in Japan, one in China, and one in the United States. While this study was conducted in Canada and no one in the sample was from the Middle East, but the Middle east students will face the same situation that the foreign students in the study faced if they wanted to enroll in foreign universities that offer e-learning. Results indicate that the level of previous education and language proficiency particularly strongly affected the level of educational attainment for these students in the e-learning environment. English speakers of non-native need a lot of time to deal with the readings and written responses and observations themselves. They also do

not have to know the details of North American culture and slang made it difficult to follow a lot of discussions

Another study carried out by [11] to explore the admission of students to incorporate emerging communications technologies in education at the University of Kuwait Showed that there are differences in the admission of students to the use of technology. The study showed that 69.5% prefer to use social media, while 41.2% prefer to use virtual education systems of the study sample which reached 270 respondents

- **Community Acceptance**

[12] explored an open E-learning program offered by the Information Technology and Computing (ITC) department at AOUJ, a major university in Jordan. The researchers used a qualitative approach, which included five lengthy semi-structured interviews with the director of the program, two instructors and three students. Through the personal interview conducted, four important issues. The first issue is the unwillingness of low educated people to online learning. The Director of the program, for example, pointed out that there is a lack of confidence the public has about the scores on the Internet and the belief that job opportunities will be low after that. Also, there is the fear of competition from well-known institutions of higher education, especially Western universities that have a high reputation and great competition; this is a big challenge to attract applicants. The third issue that has emerged from the interviews is the total failure to use management systems on the Internet. The interviews indicated that most of the universities in the region were using scheduled management systems (such as WebCT) as limited and complementary tools to support the courses. The fourth issue that emerged was the instability level of the internet connection, which frustrates both universities and students. In addition, the slow speed of the Internet that owned by the students.

[13]. Conducted research to study how cultural factors affected performance for each of the different phases of the software development life cycle. The study included computer science students from the University of North Texas and students from the Middle East Technical University in Ankara, Turkey. The sample of the research was 55 working teams studied over two semesters. [13] found that the cultural characteristics of the team are an important indicator of performance in programming projects. Cultural traits reflect the shape and strength of the Group's performance those associated with attitudes about organizational hierarchy and organizational harmony, trade-offs between current and future needs, and beliefs about the impact of individuals on their fate. Programming task type affected the strength of the relationship between culture and performance.

2- Organizational berries

The organizational barriers include lack of e-learning awareness, lack of management support and commitment, lack of strategic planning and direction, lack of tools used, lack of time available for learning and training, lack of appropriate content and assessments, and lack of incentives and credibility [14].

[15], used a survey to shade the light on the awareness and the needs of the students in the Egyptian university in Mansoura. 79.8% of the respondents have the intention to adopt e-learning. It is clear that students have fully aware that E-learning has become an active element to their success. Therefore, it is important that students use E-learning systems effectively and to the best extent possible. The first requirement is that the system contains functions that increase the productivity of the study, and an easy-to-use interface. E-Learning Centre can contribute significantly by providing the appropriate tools and training for students. Although the results obtained by the researcher, but he believes that it is not enough due to the small size of the sample and he proposed to circulate the survey to all Egyptian universities to be much more accurate results. In the issue of providing courses of high-quality educational and repositories that provide educational materials and Arabic language.[16] Stated that there is a clear lack in most Arab countries, even rich ones.

Methodology

The methodology that will be used in this research will present and explain the hypothesis developed; research sample and size, questionnaire and administration and method in measuring the data and how the data will be analyzed.

Hypothesis

- **H1:** There is a significant relation between student attitude and e-learning.
- **H2:** There is a positive relation between community acceptance and e-learning.

Structured interview with the help of open-ended questions will be conducted with universities identified as early leaders in e-learning, some with about three years of experience. The interviews will collect information on e-learning practices and identifying difficulties encountered either in the start-up or in the implementation phases. Also, will collect information about the students' attitude towards the e-learning

Sample type and size

As argued, there are different results when it comes to the sample for this research comprises students, educators, and administrators from in Libya higher educational institutions in public universities in which the focus was at the University of Tripoli recognized as early adopters of E-learning. The selection criteria for this university included their established E-learning programs with a minimum of three years of implementation experience. The sample will include:

- **Students:** 100 students from diverse academic backgrounds to provide a broad perspective on student attitudes and experiences with E-learning.
- **Educators:** 30 faculty members to offer insights into E-learning practices, challenges, their perceptions of student attitudes and community acceptance of E-learning.

Justification of Sample Size

The sample size was determined based on the need to obtain a comprehensive understanding of the factors influencing E-learning adoption from multiple perspectives within the universities. By including a significant number of participants from each group, the study ensures a well-rounded analysis that captures the diverse experiences and viewpoints necessary for robust conclusions.

Data Collection

- **Questionnaires:** Distributed electronically to students and educators to collect quantitative data.
- **Structured Interviews**: Conducted with educators to gather qualitative insights into E-learning practices, challenges, and community acceptance

Results and discussion

The tables below come up with illustrate the multifaceted nature of E-learning adoption in Libya, emphasizing the importance of addressing both social and organizational factors to enhance E-learning initiatives as follows:

Table 1: Descriptive Statistics.

Variable	Mean	Standard Deviation (SD)
Student Attitude Towards E-learning	**3.8**	**0.9**
Community Acceptance	**3.5**	**1.0**

Firstly, table 1 above shows both of Student attitudes towards E-learning and Community Acceptance.

The mean score for student attitudes towards E-learning was illustrated 3.8 (SD = 0.9), indicating a generally positive attitude among students. Whilst, the mean score for community acceptance was 3.5 (SD = 1.0), suggesting a moderate level of acceptance within the community.

Table 2: Descriptive Statistics.

Hypothesis	Variables	Correlation (r)	p-value
H1	**Student Attitude and E-learning Adoption**	**0.62**	**< 0.01**
H2	**Community Acceptance and E-learning Adoption**	**0.57**	**< 0.01**

Secondly, table 2 presents the correlation analysis results, supporting the hypotheses that student attitude and community acceptance are significantly related to E-learning adoption

- **H1:** The correlation between student attitude and E-learning adoption was $r = 0.62$ ($p < 0.01$), indicating a strong positive relationship.

- **H2**: The correlation between community acceptance and E-learning adoption was r = 0.57 ($p < 0.01$), indicating a significant positive relationship.

Table 3: Regression Analysis.

Hypothesis	Variables	R^2	F-statistic	p-value
H1	**Student Attitude and E-learning Adoption**	**0.38**	**60.21**	**< 0.001**
H2	**Community Acceptance and E-learning Adoption**	**0.32**	**46.23**	**< 0.001**

Thirdly, table 3 displays details of the regression analysis result, confirming that both student attitude and community acceptance are significant predictors of E-learning adoption

The regression model for student attitude and E-learning adoption was significant ($R^2 = 0.38$, $F(1, 98) = 60.21$, $p < 0.001$), showing that student attitude is a significant predictor of E-learning adoption.

The regression model for community acceptance and E-learning adoption was significant ($R^2 = 0.32$, $F(1, 98) = 46.23$, $p < 0.001$), indicating that community acceptance significantly predicts E-learning adoption.

Table 4: Thematic Analysis of Interviews.

Theme	Description	Examples
Student Attitude	**Positive perceptions of flexibility and accessibility; frustration with technical difficulties and lack of interaction.**	**"I appreciate the flexibility but miss face-to-face interactions."**
Community Acceptance	**Varying levels of support; some resistance due to cultural preferences for traditional education.**	**"Parents prefer traditional classroom settings."**

Fourthly, table 4 summarizes the thematic analysis of interview data, highlighting effective E-learning practices, challenges, student attitudes, and community acceptance levels.

Conclusion

This study has highlighted the critical factors influencing the adoption and effectiveness of E-learning in Libya, focusing on student attitudes and community acceptance. The findings reveal a significant positive relationship between student attitudes and E-learning adoption, as well as between community acceptance and E-learning adoption. These results underscore the importance of fostering positive perceptions and support for E-learning within both the student body and the wider community.

The research shows that while students generally have a positive attitude towards E-learning, appreciating its flexibility and accessibility, they face challenges such as technical issues and a lack of interpersonal interaction. Community acceptance also plays a vital role, with varying levels of support influenced by cultural preferences for traditional education methods. This mixed support suggests the need for targeted awareness campaigns and engagement strategies to enhance community understanding and acceptance of E-learning.

The qualitative insights gathered from educators and administrators further emphasize the importance of effective E-learning practices and the challenges encountered, such as inadequate technological infrastructure and insufficient training. Addressing these issues is crucial for improving the overall effectiveness and sustainability of E-learning programs in Libya.

Policy implications from this study include the need for robust educational policies that support E-learning, substantial investment in technological infrastructure, and ongoing training for both educators and students to build digital literacy. Additionally, engaging community leaders and parents through awareness initiatives can help mitigate cultural resistance and foster a supportive environment for E-learning.

By addressing these factors, Libya can enhance its educational landscape, ensuring that E-learning becomes a viable and effective alternative to traditional education. This approach can ultimately contribute to improved educational outcomes and greater resilience in the face of ongoing challenges.

References

[1] Ally M, “Foundations of educational theory for online learning,” *Theory Pract. online Learn.*, vol. 2, pp. 15–44, 2004, [Online]. Available: http://www.aupress.ca/books/120146/ebook/01_Anderson_2008-

[2] H. Aldowah, S. Ghazal, and B. Muniandy, “Issues and Challenges of Using E-Learning in a Yemeni Public University,” *Indian J. Sci. Technol.*, vol. 8, no. 32, pp. 1–9, 2015, doi: 10.17485/ijst/2015/v8i32/92160.

[3] I. A. Almrashdeh, N. Sahari, N. A. M. Zin, and M. Alsmadi, “Distance Learning Management System Reqiurements From Student ’ S Perspective,” *J. Theor. Appl. Inf. Technol.*, pp. 17–27, 2011.

[4] A. Rhema and I. Miliszewska, “Towards E-Learning in Higher Education in Libya,” *Issues Informing Sci. Inf. Technol.*, vol. 7, pp. 423–437, 2010, doi: 10.28945/1218.

[5] B. H. Khan, “The global e-learning framework,” pp. 42–51, 2010, [Online]. Available: http://iowaascd.org/files/4214/6679/6558/A_Framework_for_Web-Based_Learning.pdf.

[6] I. Elbeltagi, N. Mcbride, and G. Hardaker, “Evaluating the Factors Affecting DSS Usage by Senior Managers in Local Authorities in Egypt,” 2007. doi: 10.4018/9781591409236.ch013.ch000.

[7] G. Salmon, *E-tivities: The Key to Active Online Learning*. in E-tivities: The Key to Active Online Learning. Kogan Page, 2002. [Online]. Available: https://books.google.com.ly/books?id=ZZYyTV7MwoEC

[8] B. Akkoyunlu and M. Yilmaz Soylu, “A Study of Student’s Perceptions in a Blended Learning Environment Based on Different Learning Styles.,” *Educ. Technol. Soc.*, vol. 11, pp. 183–193, 2008.

[9] L. Vrazalic, R. MacGregor, D. Behl, and J. Fitzgerald, “E-learning barriers in the United Arab Emirates: Preliminary results from an empirical investigation,” *Innov. Knowl. Manag. Twin Track Econ. Challenges Solut. - Proc. 11th Int. Bus. Inf. Manag. Assoc. Conf. IBIMA 2009*, vol. 1–3, pp. 1782–1787, 2009, doi: 10.5171/2010.458727.

[10] Z. Zhang and R. F. Kenny, “Learning in an online distance education course: Experiences of three international students,” *Int. Rev. Res. Open Distance Learn.*, vol. 11, no. 1, pp. 17–36, 2010, doi: 10.19173/irrodl.v11i1.775.

[11] B. Alsanaa, “Students ’ Acceptance of Incorporating Emerging Communication Technologies in Higher Education in Kuwait,” *Int. Sch. Sci. Res. Innov.*, vol. 6, no. 4, pp. 47–50, 2012.

[12] K. M. Dirani and S. W. Yoon, “Exploring open distance learning at a jordanian university: A case study,” *Int. Rev. Res. Open Distance Learn.*, vol. 10, no. 2, pp. 1–18, 2009, doi: 10.19173/irrodl.v10i2.599.

[13] K. Swigger, F. Alpaslan, R. Brazile, B. Harrington, and X. Peng, “The challenges of international computer-supported collaboration,” 2004, pp. S2F-13. doi: 10.1109/FIE.2004.1408738.

[14] M. M and G. Ghinea, “E-learning in Higher Educational Institutions in Kuwait: Experiences and Challenges,” *Int. J. Adv. Comput. Sci. Appl.*, vol. 4, no. 4, pp. 1–6, 2013, doi: 10.14569/ijacsa.2013.040401.

[15] A. G. abdel-Wahab, “Modeling Students’ Intention to Adopt E-learning: A Case from Egypt,” *Electron. J. Inf. Syst. Dev. Ctries.*, vol. 34, no. 1, pp. 1–13, 2008, doi: 10.1002/j.1681-4835.2008.tb00232.x.

[16] A. A. Mirza and M. Al-Abdulkareem, “Models of e-learning adopted in the Middle East,” *Appl. Comput. Informatics*, vol. 9, no. 2, pp. 83–93, 2011, doi: 10.1016/j.aci.2011.05.001.