Lecturers' Conceptions of E-Learning Use at the Higher Institute of Water Affairs, Ajilat (Libya): A Qualitative Case Study
A Qualitative Case Study (Interview-based)

Prepared for: Higher Institute of Water Affairs, Ajilat

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Abstract:

This qualitative case study investigated how lecturers at the Higher Institute of Water Affairs in Ajilat, Libya, conceived, experienced, and evaluated the use of e-learning in their teaching practice. Using semi-structured interviews as the sole data collection tool, the study explored lecturers' understandings of e-learning, perceived benefits and challenges, and contextual factors affecting adoption. Thematic analysis revealed three key themes: positive but cautious perceptions of e-learning, institutional and infrastructural challenges, and the need for professional development and strategic support. Findings suggested that while lecturers were generally open to e-learning, issues such as inadequate infrastructure, limited technical skills, and a lack of institutional policy hindered effective integration. The study concluded that e-learning in Libyan higher education requires coordinated policy, capacity building, and infrastructure improvement to realize its full potential.

1. Introduction

E-learning has become a central component of educational reform worldwide, offering new opportunities for flexible, technology-enhanced learning. In Libya, e-learning adoption increased rapidly after the COVID-19 pandemic, highlighting both the potential and the challenges of digital education in a developing context. The Higher Institute of Water Affairs in Ajilat represents a specialized technical institution where e-learning integration remains limited. Understanding lecturers' conceptions of e-learning is essential to inform effective strategies for digital transformation. This study investigated how lecturers at this institute perceived and experienced e-learning, focusing on their beliefs, attitudes, and the contextual barriers influencing their teaching practices.

2. Literature Review

Research on e-learning in higher education has shown that lecturer attitudes, technological readiness, and institutional support are key determinants of adoption (Venkatesh & Davis, 2000; Garrison & Anderson, 2003). In the Libyan context, several studies have emphasized the slow but steady progress of e-learning implementation. Rhema and Miliszewska (2010) found that Libyan universities lacked the technological infrastructure required for sustainable e-learning adoption. Elzawi (2017) reported that limited bandwidth and lack of digital literacy among staff were major barriers. Similarly, Yahya, Abdullah, and Masuwd (2024) highlighted persistent challenges related to socio-political instability and policy inconsistency. Shaouf and Elwalda (2022) found that

lecturers' attitudes toward e-learning were generally positive, although technical challenges reduced their motivation. Ghwela (2023) examined EFL lecturers' use of technology at Al-Asmarya University and observed enthusiasm for e-learning but inadequate institutional support. Masoud, Isdayrah, and Mohammad (2024) concluded that acceptance of e-learning was influenced by social attitudes and community readiness. Despite these insights, few studies have explored lecturers' conceptions in technical and applied higher education institutions such as the Higher Institute of Water Affairs. This study therefore addressed that gap through an in-depth qualitative case study.

3. Methodology

This research employed a qualitative case study design to explore lecturers' conceptions of e-learning at the Higher Institute of Water Affairs in Ajilat. The study focused on capturing rich, contextualized data about lecturers' experiences and perspectives.

3.1 Participants

Twelve lecturers from different departments at the institute participated in the study. Participants were selected through purposive sampling to ensure variation in teaching experience, discipline, and familiarity with e-learning tools. Participants' teaching experience ranged from 3 to 20 years, with most reporting limited formal training in digital education.

3.2 Data Collection

Data were collected through semi-structured interviews conducted in Arabic between April and May 2025. Each interview lasted approximately 50 minutes and was recorded with consent. Interview questions focused on lecturers' definitions of e-learning, perceived benefits, challenges, institutional support, and recommendations for improvement. Interviews were transcribed verbatim and translated into English for analysis.

3.3 Data Analysis

Data were analyzed thematically following Braun and Clarke's (2006) framework. The researcher read each transcript multiple times, generated initial codes, and grouped them into candidate themes. Three dominant themes emerged from the analysis, reflecting lecturers' conceptions and contextual realities. Trustworthiness was established through member-checking, peer debriefing, and detailed documentation of analytic decisions.

4. Findings and Discussion

Thematic analysis revealed three key themes: (1) Positive but cautious perceptions of e-learning; (2) Institutional and infrastructural challenges; and (3) Professional development and future prospects.

Theme 1: Positive but Cautious Perceptions of E-Learning

Most lecturers expressed generally positive attitudes toward e-learning, acknowledging its flexibility, accessibility, and potential to enhance student engagement. One lecturer noted, 'E-learning helped

me continue teaching during difficult times, especially when students could not attend physically.' However, others emphasized that their enthusiasm was tempered by doubts about students' readiness and the effectiveness of online teaching in technical subjects.

Theme 2: Institutional and Infrastructural Challenges

All participants referred to infrastructural and institutional barriers that hindered effective e−learning implementation. Internet connectivity issues, limited access to digital devices, and lack of institutional policy were among the most cited challenges. As one lecturer explained, 'Sometimes we lose connection in the middle of an online class; it is frustrating for both teachers and students.' Another added that 'without proper technical support, e−learning remains an idea more than a reality.'

Theme 3: Professional Development and Future Prospects

Lecturers emphasized the need for structured professional development and technical support to improve e−learning practices. Several participants indicated their willingness to learn new digital tools but lacked formal training opportunities. They also called for clearer institutional strategies and investment in e−learning infrastructure. This finding aligns with earlier Libyan studies (Shaouf & Elwalda, 2022; Ghwela, 2023), which stressed that continuous training and institutional vision are essential for sustainable e−learning adoption.

5. Conclusion and Recommendations

The study concluded that lecturers at the Higher Institute of Water Affairs in Ajilat held positive yet cautious conceptions of e−learning. While they recognized its potential, infrastructural deficiencies, insufficient institutional support, and limited training hindered effective adoption. To strengthen e−learning implementation in Libyan higher education, the study recommended: (1) improving ICT infrastructure; (2) providing regular training and professional development; (3) establishing clear institutional policies; and (4) promoting a culture of digital innovation within technical institutes. Future research should explore student perspectives and evaluate pilot programs to measure long−term e−learning effectiveness in technical education.

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Appendices

Appendix A: Interview Guide

1. How do you define e-learning in your teaching context?

2. What are the main benefits of using e-learning?

3. What challenges have you faced in implementing e-learning?

4. What kind of support do you receive from your institution?

5. How could e-learning be improved in your department?

Appendix B: Participant Consent Form

I have read and understood the information about this study. I consent to participate and agree that the interview may be recorded. I understand that my participation is voluntary and I may withdraw at any time without penalty.

Appendix C: Sample Transcript Excerpt

Participant 05: 'E-learning is good for theory lessons, but in our field, students need to be in the lab. Still, I think it can help them review material at home.'

Appendix D: Coding Framework

Codes included: Definition of e-learning, Benefits (flexibility, access), Barriers (infrastructure, training), Institutional support, Attitudes, and Recommendations.