M-learning in education: practical assessment of a new education tool in Open University Education

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INTRODUCTION

• The latest mobile and wireless technologies offer a wide range of possibilities in academic sectors.
• In current technological era most of the students depend on smart phones to gain information related to their studies.
• Educational researches show that mobile learning is a rapidly growing method of learning that utilizes mobile devices to deliver content.
• This research work is oriented to measure the acceptance of mobile learning as blended learning tool in Arab Open University (AOU), Bahrain branch.
• AOU uses multiple sources providing academic information to students through various communication sources such as Learning Management System (LMS), SMS messages and emails.
• The researcher demonstrates a mobile application prototype which provides an instant and direct access to the services to AOU students instead of accessing required information through various resources and websites.
• AOU is one of the technologically advanced universities, students need of information about their university life to be accessible and available to them at anytime and anywhere also not to rely too much on the Internet to extract the information or relying on traditional computers to obtain information.
METHODOLOGY

• The purpose of this study was to assess the effectiveness of the M-Learning mode of education against Face-to-Face mode.
• The study was also designed to determine the extent to which students accepted the M-Learning education delivery approach.
• The main objective of this study is to explore the perceptions of students about using mobile communication tools in web-based instruction.
• The objectives of the research are:
  – To evaluate the scope of use mobile learning by Open University education.
  – To determine the perceptions of Open University students about mobile learning technologies.
  – To evaluate the adaptability and performance of the developed mobile application prototype.
• The researcher have used literature research to collect related information about m-learning, analyzed AOU’s IT infrastructure to evaluate the adaptability of m-learning, designed a proposed model for m-learning using mobile application, used a questionnaire survey to evaluate the learners’ perceptions against m-learning.
AOU – IT Infrastructure of blended learning system (including m-learning)

Suggested model for M-learning using mobile application prototype
The Mobile Application prototype

Functional Requirements:

• Login/Logout: The user (Students, Tutor) and the Guest will be able to login and logout.
• Visitor page: can be used to view the general information about the university
• View Profile: The system will allow the User to view his personal information
• View Calendar: The user will be able to view the calendar of exams and assignments date.
• View course schedule: The user (Student, tutor) will be able to see the schedule of registered courses.
• Calculate Current Semester GPA: The Students can calculate current semester GPA (using GPA Simulator).
• Registration: Students will be able to register for new semester during registration period.
• View University Directory which contains contacts for tutors and university departments.
• Broadcast Message: Tutor can send a broadcast message to the registered students in a course.

Non-functional requirements:

• The identified non-functional requirements for the system are Integrity, Usability and Security
  • To ensure integrity the researcher suggest that the system shall make sure that user should have strong passwords.
  • To ensure usability the researcher suggests that the user shall be provided with simple interactive interface and the users shall be able to use the system without training.
  • To ensure security, the researcher suggests that the system should provide login for all types of users, the system should provide messages for wrong validation and all data will be erased from the application when user signs out.

Sample screenshots of the developed system
Data Analysis and Results

Mobile facilities used in the mobile device:
- Short messages: 120
- Internet browsing: 100
- Sending and receiving emails: 80
- Playing games: 60
- Others: 50
- Total: 330

Connecting to social network through mobile device:
- Yes: 94%
- No: 6%

Agreed on Using M-Learning:
- Yes: 590%
- No: 30%
- I don’t know: 0%

Showing interest in m-learning as a new learning technique:
- Yes: 92%
- No: 8%
- I don’t know: 0%

Readiness of the university in using m-learning purposes:
- Yes: 70%
- No: 25%
- I don’t know: 5%

Ready to upgrade the mobile for m-learning purposes:
- Yes: 3%
- No: 10%
- I don’t know: 87%

Showing interest in integrating mobile learning in class in addition to face-to-face meetings in the class:
- Yes: 60%
- No: 25%
- I don’t know: 5%

Difficulties may face in dealing with m-learning at your university:
- Network access inside the university: 10%
- Don’t have m-learning at your university: 90%
- Internal issue: 0%

Advantages of using m-learning at your university:
- A new method of learning: 6%
- Easy way to learn at any time: 6%
- More learning according to your pace: 10%
- Allows communication users learning with other users: 10%
- Increases using the learning material: 10%
- No additional cost: 10%
- I don’t know: 10%

Enhancement to university learning facilities by the Mobile Application prototype:
- Yes: 17%
- No: 11%
- I don’t know: 72%

Security of the Mobile Application prototype:
- Yes: 17%
- No: 11%
- I don’t know: 72%

Ease of the Mobile Application prototype use:
- Yes: 6%
- No: 1%
- I don’t know: 93%
SUMMARY AND CONCLUSION

- The evolution of handheld portable devices and wireless technology has resulted in radical changes in the social and economic lifestyles of modern people.
- Mobile learning will be regarded as a core pedagogical activity in higher institutions of learning due to the advancement of digital technologies.
- Mobile learning helps learners to improve their literacy and to recognize their existing abilities.
- Mobile learning can be used to encourage both independent and collaborative learning experiences.
- Mobile learning helps learners to remain more focused for longer periods.
- The researcher evaluated and proved:
  - the scope of use mobile learning by Open University education
  - the perceptions and positive attitude of Open University students about mobile learning technologies
  - adaptability of the developed mobile application prototype among students and received positive attitude towards accepting the new application.