

The Implementation of E-Learning in Al-Quds Open University

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ABSTARCT

Al-Quds Open University (QOU) is the largest academic institution in Palestine with around 42,000 students (in a variety of fields) and 1031 academic supervisors, all spread across the West Bank and Gaza. QOU follows the open education system and is one of only a handful of Arab universities following the open system. To further its educational efforts, the university is currently involved with a number of projects that seek to adopt E-Learning and proliferate its use among students and staff. On one hand, it represents Palestine in the Avicenna Project [Avicenna1] which is an ambitious project that aims at creating new community of universities sharing best practices and pedagogical innovation through a network of E-learning centers across the Mediterranean. On another hand, it utilized the technological know-how and expertise at the ITCC (Information Technology and communication center at QOU) to build an Academic Portal for the university whose first release has gained wider approval and satisfaction. The ITCC is also has a multimedia section where educational material is produced and distributed to students on CDs.

KEY WORDS: *Open education system, e-learning, QOU*

OVERVIEW OF AL-QUDS OPEN UNIVERSITY

Al-Quds Open University (QOU) is a higher education institution dedicated to the provision of university- level studies which reach beyond access-restricting barriers. The services provided by the University establish more equalizing educational opportunities for all Palestinian and Arab adults who possess the general secondary school certificate.

The University is committed to excellence in teaching, research and public services. It is also committed to a high degree of relevance between its academic programs and the developmental needs of the Palestinian society and the whole Arab region.

The University was established in the West Bank and Gaza in 1991. Now, it operates twenty four study centers in major cities. To realize its objective of extending its services to the Arab World, the University established two study centers in the United Arab Emirates (UAE) in 1994, and another two study centers in were established in Saudi Arabia in 2002. The University's student population now stands at about 42,000 students (it has already graduated 2822) students and has a

total of 1031 academic supervisors of which 305 are full-time staff (the others are part-time and work in other educational institutions).

QOU awards the bachelor's degree in eleven specializations. This degree is essentially equivalent to its counterpart in conventional universities. It is awarded upon completion of the required number of credit hours and meeting the specific requirements of any given specialization.

QOU needs to provide the best possible service to these students and supervisors, through the following targeted objectives:

- Provide opportunities and facilities for good quality higher education and advanced training in various fields of study to meet the needs of the largest possible number of Palestinians and Arabs, particularly those whose economical, social and geographical conditions prevent them from attending traditional universities.
- Contribute to solving problems arising from the inability of conventional universities to cater for the massive increase in the number of students who are qualified for and interested in higher education.

ITCC

The Information Technology and Communication center (ITCC) is a support organization of the university dedicated to providing state-of-the-art information technology and communications to students, faculty, and staff for instruction, general research, administration, and public service in support of the University's plan for excellence.

Towards that end, ITCC provides a myriad of computing and communication services to the University and some other educational entities and the local community distributed across the country and in the QOU branches abroad. The continuing goals of ITCC are to meet the changing and expanding computing and communications needs of the University and to provide outstanding service to all its constituents.

With 26-member staff divided into four divisions, the core central services provided by the ITCC include operating systems, applications development, and communications services activities. The ITCC team has developed applications in the fields of student registration, personnel, accounting, payroll, and inventory and in other areas. They are involved in the daily administration, planning, and coordination of these systems which had to work through a large WAN established for this purpose.

The ITCC also helps in feasibility studies, needs assessments, equipment-purchasing assistance, and planning. Consulting services are provided for all QOU offices requesting technical computer assistance. Its activities also reach the community via organizing training sessions for different local institutions. Furthermore, it attempts to project a positive image of the University and increase its visibility.

MOTINATION FOR E-LEARNING IN PALESTINE

Motivation for learning in Palestine is very high compared to other neighboring countries [PCBS]. E-learning has the potential of minimizing the effect of some constraints.

Due to the political situation, movement and travel for Palestinians within Palestine and the outside world is restricting. Many young students have never been outside the borders of their cities or its immediate vicinity. Yet the world is fast moving towards 'globalization.' E-learning

is an important tool for connecting people together and exposing them to other cultures, thoughts, ideas and to promote openness.

The problem of geographic location and mobility is a clear obstacle to current and would-be Palestinian students, an obstacle that e-learning could help to resolve. In addition, a large percentage of the Palestinian population lives in rural areas, and movement between cities and villages, especially after specific hours, become very difficult. E-learning offers potential solutions to the issue of providing facilities for gender-separated teaching (particularly prevalent in Gaza) as well as for the physically handicapped (many of them injured during the Intifada or the uprising). E-learning also offers a solution for the specific problem of the non-contiguity between the West Bank and the Gaza Strip, which effectively prohibits Gaza Strip students from attending West Bank universities unless they move to the West Bank permanently or semi-permanently (legally or illegally) – and vice versa. Some Universities in Palestine offer very similar courses but rather than being shared, resources are inefficiently distributed throughout the Palestinian educational system.

Almost all Palestinian educational institutions are facing a chronic human resources problem. At the school level, issues like problem solving, critical and creative thinking and group work/dynamics are not addressed. Two significant contributing causes are the teachers' relatively low pay scale and lack of incentives. At the level of higher education, Palestinian universities are facing a serious problem of brain-drain, mainly due to chronic financial problems resulting in a limited number of outstanding teachers among the various universities. The more economically significant the sector is on a global level - for instance, technology and business - the more of a brain-drain universities are facing in the departments related to these sectors. Among other problems, updating and managing curricula and materials, especially in technology related fields, is costly due to their constantly changing nature. E-learning can be used to allow academic institutions – especially higher education - to share teachers, development of curricula and other resources. Connecting schools on-line and providing students with a specific e-learning curriculum and materials will compensate to some extent for shortages in resources and materials. E-learning could also be a tool to enrich the working environment for local faculty members, creating more of an incentive to stay within the teaching profession.

Web enabled technologies in the West Bank and Gaza are still in their infancy but are quickly gaining ground. Specialized web based applications are spreading with the proliferation of know-how. Although Palestinian communication infrastructure has its own problems and slowly disengaging from the Israeli control, a high increase in the Broad band subscription for the internet users has been recently noticed.

E-LEARNING AT AL-QUDS OPEN UNIVERSITY (QOU)

QOU has nearly 42,000 students who constitute 39% of Palestinian university students [MOH]. Most of those students do not regularly attend classes or visit the campus.

E-Learning is a key part of QOU development strategy. Communicating with those students via an E-Earning system would of great benefit both to the students and the university. It would also save university unnecessary costs and overhead including managerial as well as student guidance.

This paper sheds light on Al-Quds Open University experience with the issue of E-Learning and how it has been implemented.

E-Learning at the university is moving in three tracks:

- Academic Portal
- Avicenna Virtual Campus Project
- Production of Multimedia contents

Academic Portal

The aim of the portal is to make learning student-centered, increase productivity, and make better use of human effort and energy. Its usage would be of greater benefit to students and staff but has to cope with growing numbers of users and current network performance problems.

It is planned to emphasize first on the content, and then focus on institutional processes, services, technology applications, and process integration. The last phase is to integrate data, voice, and video on a variety of platforms (such as handheld computers), perhaps over wireless networks. The Portal currently planned main Functions include:

- Student Information System.
- News & Bulletin Boards.
- Course Learning Management.
- Online Admission & Registration.
- E-Learning Modules.
- Other Activities.

The first release (May 2004) includes the student information system and the news and bulletin boards. Additional functionalities are being continually added to enrich the portal and expand its usage.

The Student Information System is basically an entry point for students that allows them to access their academic records and other additional information pertaining to their study at the University (i.e. obtaining grades, status, download assignments etc.)

The New & Bulletin Boards section provides an online gateway for portal users like students, academic supervisors, and registrars to electronically publish news or bulletins rather than posting static texts on the university website.

The Course Learning Management allows students to access all details relating to the courses they are taking during a semester which includes course plan, course schedule, instructor, material, assignments, etc. alongside with a calendar and announcements sections. Its objective is availing all course related information at any time to the students and enhancing the learning process through greater interactivity. For instructors and administrator this should allow upgrading course information, check and adding grade information etc.

The online Admissions provides an online gateway for students whereby they can electronically conduct the admission process. Under this heading, the process of student application and acceptance/rejection is conducted. A prospective student is allowed to apply for the first time to the University. Online Registration category involves the students' registration for courses and the add/drop process. Registration changes made by the user will be immediately reflected. However, this part has been delayed due to some special database issues to be explained later.

E-learning Modules is a section that provides the student with an approach to get course material with Interactive content. It is similar to the course learning management but with advanced self-learning tools involving multimedia, radio broadcasting, video documentary of classes, etc. Same

as with the course learning management, the material is considered supportive to the student's Learning process and book material but not as a replacement.

Implementation and usage of the portal by student and staff

Due to the geographical distribution of the university which includes 25 study centers across the country, the usage of the portal has been phased in some areas for two reasons. The current server hardware would not be able to cope with the large number of students; on another hand, some of the functionalities may require online database replication that has yet to be implemented. The portal is now accessible to 14,000 students and 500 tutors in 3 educational regions (Bethlehem, Beit Sahor and Jenin). Students have a registration page to activate their accounts.

Users have expressed satisfaction of the system and some of them used the included polling and feedback tool to express opinions with the respect to the content and the performance of the system.

Technical Specifications of the System

The System has been developed using Java Language and cutting-edge open source Java tools such struts and hibernate. Oracle Database is used as the backend database where the legacy student information system is built.

Avicenna Virtual Campus Project

Avicenna Virtual Campus is an ambitious project that aims at creating new community of universities sharing best practices and pedagogical innovation through a network of E-learning centers across the Mediterranean. It involves 15 countries including Palestine which is represented by AL-Quds Open University (QOU). The project is named after Ibn Sina (981-1037 Ad) the most famous philosopher of his time.

The AVICENNA project is dedicated [Avicenna] to accelerating the adoption and best use of ICT-assisted Open Distance Learning (ODL) in 11 Mediterranean non-EU Member States (MNMS). Demand for ODL in the target Universities and societies already exists. The project aims at establishing adequate local infrastructures and to transfer best practice and professional know-how within target universities.

It will be stimulated and met by the sensitive engagement of some of the EU's leading Open Universities and ODL providers, under the aegis of UNESCO. Together with European universities they will form a network of 15 "AVICENNA Knowledge Centres" (AKC). Adequate expert support, intensive training of key personnel in "AKCs", content sharing and translating, will create the conditions for a successful take-up of ODL within the target universities and countries, while reducing the cost of such an initiative.

AKC Palestine has been among the most active members of the project. It has one of the first countries to install the E-Learning platform on its server and has been actively involved with the production of courses to be put online. By the end of the 2004 two online courses in Arabic would be hosted by the AKC platform.

The AKC – Palestine is ambitious to enlarge the Avicenna network in Palestine by including other Palestinian universities in the project and thus building a local network of AKCs.

Multimedia Section

This Section or Division within the ITCC is involved with the production of some multimedia coursework that is distributed to students on CDs as an additional help and guide to learn. The content includes audio, video and animations.

A committee of educational experts oversee the work of the division and help with enhancing the production standards.

The ITCC is in the process of expanding the work of this section to assist with the production of courses of Avicenna Project where expertise in the development of online courses could be used and tailored to meet the demands of the Open Distance Learning (ODL) standards of the Avicenna.

OBSTACLES

There are a number of obstacles that lay ahead and could derail the implementation of the E-Learning Projects. One of these issues is the continued Israeli occupation and control of 4 million Palestinians in the West Bank and Gaza. This political instability has negatively affected all aspects of the Palestinian life.

The financial problem is another annoying issue where many Palestinian universities nearly pay salaries to employees and allocate very few resources to research and usage of modern technologies.

The Palestinian communication infrastructure has problems keeping pace with the latest advancements in the field partly due to Israeli restrictions. The geographical distribution of the university necessitated the establishment of a wide area network that links all its centers. Data and information in these centers are not immediately synchronized with the headquarters due to slow and sometimes unacceptable network performance. This has adversely affected the development of the Academic portal. Diagnosis revealed that such problem is attributed to two factors: Palestinian communication infrastructure and lack of hardware capabilities at the university.

CONCLUSIONS

Al-Quds Open University mission is to improve the quality of teaching and services provided to students, staff and the local community. To fulfill this mission, QOU is fully embracing the E-learning as a key strategic option that will have significant positive impacts. It hopes that the projects it is involved with will bear fruits and will expand to reach other university constituents.

Efforts are being made to overcome the obstacles and provide resources and expertise for these projects. The University is also approaching international donors to help in this field.

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