Exemplary Use of Technology in k-12 Education in Saudi Arabia: Dar Al-Fikr Private School

Abdulrahman Kamal
Kansas State University
2215 Prairie Glen Pl
Manhattan, KS 66502
USA
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Introduction

Educational technologies are rapidly changing teaching and learning environments in developing countries (US Fed News Service, 2008). Saudi Arabia is an example of a developing country that has accelerated the implementation of educational technologies (Al-Abdulkareem, 2008; Al-Yousif, 2008). While Saudi Arabia pledged 26 percent of its budget since 2006 for building 2,600 K-12 schools (Al-Faisal, 2006), little has been written about K-12 education in Saudi Arabia outside of the Kingdom.

Research about K-12 education in Saudi Arabia has been limited. Only two dissertations were written on K-12 education years ago (Al-Hareky, 1983; Issa-Fullata, 1982). As a result, the present state of K-12 education in Saudi Arabia is largely unknown in the United States and the West, in general, since the Kingdom does not provide much information on the subject (Prokop, 2003). This presentation will discuss some of the barriers to improving the use of technology in K-12 education and show the reality of implementing educational technologies in Saudi Arabia through some initiatives that have been established by the Ministry of Education. It also demonstrates an exemplary use of educational technology at the Dar Al-Fikr private school in Jeddah. It is hoped that this presentation will provide a basis for understanding the many changes that are taking place in Education in Saudi Arabia, as a result.

Curriculum Development

In 2002, the Ministry of Education has established “The General Project for Curriculum Development” to reconstruct and improve curricula for different subjects. One of the project’s aims emphasizes the importance of implementing technology in this reconstruction process.

Providing effective methods accomplishes educational policy with integration. This is done by effectively interacting with new educational technologies, benefiting from experiences of others, specifying required skills to be learnt by students at every educational level, linking information with general life, developing critical thinking methods, and developing required skills and essentials for productive work (curriculum development in S.A, 2006, Para. 3).

The Ministry of Education’s ten-year strategic plan was established in 2004. It stated that its Information and communication technology (ICT) goal is “to develop the infrastructure of information and communication technology and its employment in education and learning” (Computer and Information Center, 2008, Para. 1).

Dissertations on Saudi Arabian K-12 Education

A recent search of the ProQuest database of Dissertations and Theses on February 16th, 2009, found only few studies conducted on higher education e-learning in Saudi Arabia. Two studies were conducted on implementing educational technology in k-12 education. Al-Hareky(1983) studied the effectiveness of modern educational technology on the mathematics performance of elementary students in Saudi Arabia (instructional TV, computer based instruction). The study found that there was significant difference in the total mean of achievement scores was higher for the computer group than the control group. Also, the total mean of achievement scores of television group was significantly better than the control group. The study also concluded that there was a positive attitude among the majority of students and teachers toward computer-based instruction and instructional television. The study also found no significant difference between the total mean achievement scores for males and females in each group.
Issa-Fullata (1982) studied the impact of modernizing instruction through educational technology on students’ achievement in Saudi Arabia. Four instructional treatments were used: a control group; a regular teaching method with a classroom teacher, an experimental group 1 with an assisted tape/slide instructional program with the classroom teacher, and experimental group 2 with a self-contained instructional tape/slide program without the classroom teacher participation. Two instruments were used to measure students’ achievement: a paper-pencil and a visual/tape format. Analysis of Variance showed that only experimental group 1, the paper-pencil subgroup showed a significant difference at P < .05. Teachers also showed positive attitudes toward educational technology and instructional design.

Barriers to Using Technology in Saudi Arabia

There are several barriers that need to be overcome to reach the desired implementation and spread the benefits of implementing educational technologies to touch all the Saudi students. These barriers include:
- Weakness of infrastructure especially communication infrastructure.
- Need for technology specialists.
- Lack of technological knowledge and skills among teachers and administrators.
- English language barrier (for example, most web 2.0 tools are in English).
- High cost of technology. (Al-Abdulkareem, 2008)

With this lack of information about the current reality of implementing educational technologies in Saudi Arabia educational system, as well as these barriers, more studies are needed to investigate the reality of implementing educational technologies and to help in overcoming these barriers.

New Educational Programs in Saudi Arabia

In order to fulfill the goal of implementing technologies in K-12 education, the Ministry of Education has started different projects. For example:

Obikan & Intel Project:

Obikan Research and Development Company (ORD), in cooperation with Intel, has developed an e-Learning portal using Intel's School Learning Software, called 'skoool' to support school curriculum in Saudi Arabia. Skoool concentrates on secondary Math and Science curricula. “It includes a wide range of interactive educational resources that aim to complement students' schoolwork and home study by showing them how to save time and improve their academic performance” (Saudi company Obeikan to develop e-learning portal utilizing Intel’s school learning software, 2005, Para. 2). Abdullah Obikan, an engineer at ORD, said that “by adapting our interactive learning and supplementary material to the Arabic language, we hope to help increase technology literacy and academic achievement in the Kingdom” cited in ((Saudi company Obeikan to develop e-learning portal utilizing Intel’s school learning software, 2005, Para. 4).

King Abdullah Project for Educational Development (KAPED):

The largest and the most recent program is “King Abdullah Project for Educational Development”, which has a budget of about $ 2.4 billion and aimed to guarantee the availability of a highly skilled and motivated work force in the future. The project will “begin with creating a high-tech classroom environment in the Kingdom in six years. More than 400,000 teachers will be trained to handle classes in the high-tech style” (Ministry of Education in S.A, 2008).

Figure 1: (KAPED) logo, (Tatweer, 2008)

The project has started since the last academic year by assigning fifty high schools among the country (25 male and 25 female schools) as a pilot schools to implement the project. These schools have been equipped by the
required advanced technologies to facilitate what is called the smart classrooms. These facilities include smart white board, one-one laptop, data projector, digital video camera, and high speed internet (Tatweer, 2008). Each school is also equipped with access to virtual laboratories and museums, digital library, and the required facilities for the extra curricula activities (Tatweer, 2008). Also, the project adopts the project based learning (PBL) as a learning strategy to support the student-centered education (Tatweer, 2008). In addition, these changes in the learning strategies require change in the assessment tools to be used as “assessment for learning” instead of “assessment of learning”. Therefore, the project adopts the authentic assessment tools such as performance assessment instead of the standardized tests (tatweer, 2008). Finally, the professional training for teachers and school principals (male and female) to prepare them for the skills that are required to implement the project properly plays important role in the aimed success for this project. Last year during the summer vacation 1700 teachers and principals were trained for the use of the new technology and the new learning and assessments strategies (Ministry of Education in S.A, 2008).

The K-12 Dar Al-Fikr Private School is considered to be an exemplary model of implementing educational technologies K-12 in Saudi Arabia. The school curriculum is based on IT-assisted interactive learning. All subject materials are computerized and loaded onto the school network. The school teaches additional subjects that are not taught at Saudi public schools, such as Life Skills, Design & Technology, Thinking Skills, and Community Service. One unusual aspect of Dar Al-Fikr’s curriculum is that the teaching is done in both Arabic and English, which makes students benefit from technological resources and tools more easily, since many web tools are in English. Moreover, the school uses a full electronic administrative system. This is unusual for public schools in Saudi Arabia. (Dar Al-Fikr private school, 2008)
Figure 4: Inquiry Learning activity (Science class) at Dar-Al-fikr

Figure 5: Science lab

Figure 6: Art class at Dar Al-Fiker Girl School

Figure 7: Quran class
References